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DEPARTMENT OF STATE  
AGENCY FOR INTERNATIONAL DEVELOPMENT  
Washington, D.C. 20523

CAPITAL ASSISTANCE PAPER

Proposal and Recommendations  
For the Review of the  
Development Loan Committee

513-T-066

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CHILE - NUTRITION DEVELOPMENT

AID-DLC/P-2079

DEPARTMENT OF STATE  
AGENCY FOR INTERNATIONAL DEVELOPMENT  
WASHINGTON, D.C. 20523

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AID-DLC/P-2079

May 12, 1975

MEMORANDUM FOR THE DEVELOPMENT LOAN COMMITTEE

SUBJECT: Chile - Nutrition Development

Attached for your review are the recommendations for authorization of a loan in an amount not to exceed five million United States dollars (\$5,000,000) to the Government of Chile (GOC) for the use of the National Council for Food and Nutrition (CONPAN), a semi-autonomous interministerial body of the GOC, to assist in financing the United States dollar and local currency costs of a program ("Program") to enable the GOC to create an effective nutrition planning process on the national level.

This loan proposal is scheduled for consideration by the Development Loan Staff Committee on Friday, May 16, 1975; please note your concurrence or objection is requested by bringing your vote to the meeting. If you are a voting member a poll sheet has been enclosed for your response.

Development Loan Committee  
Office of Development  
Program Review

Attachments:

Summary and Recommendations  
Project Analysis  
ANNEXES I - IV

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May 12, 1975

CHILE

NUTRITION LOAN

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SECTION I - SUMMARY AND RECOMMENDATIONS

A. Borrower

The Borrower will be the Government of Chile (GOC). Signatories for the GOC will be the Executive Coordinator of the National Council for Food and Nutrition (CONPAN), a semi-autonomous arm of the Ministry of Health, and the Minister of Finance. CONPAN will be the implementing agency.

B. Amount and Terms of Loan

The Loan will not exceed US\$5.0 million. Of this, the local currency component is expected to be \$3.5 million. Terms will be 40 years repayment including 10 years grace, with 2% interest during the grace period and 3% thereafter.

C. Objectives

While there is potentially enough food in Chile to provide an adequate diet for all, over one third of the population consumes only 80% of its minimum daily acceptable calorie levels. The average worker regularly employed at the minimum wage cannot provide his family with the minimum acceptable diet even if his entire wages were spent on food. One-fifth of all Chilean workers do not even earn minimum wages. Unfortunately, in the short run, this malnutrition problem will likely worsen. The GOC is attempting to reduce inflation through fiscal cutbacks and a slow-down in the growth of the money supply. These measures will result in increased unemployment and lower real incomes for Chile's poor to buy food.

The ten-year goal of GOC nutrition efforts and likewise of this Loan Project is to reduce the malnourishment rate among the target group by 50%. The target group consists of children 0-15 years old and pregnant and lactating women in the lowest one-third income grouping. The GOC currently is spending \$100 million a year on national feeding programs aimed at two groups:

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a milk distribution program for pregnant and lactating women and 0-6 year old children; and a school feeding program for children of 6-15 years. These funds are having only limited impact. Many of the poorest are not included in the programs. Infant mortality rates are high and birth weights are low, largely due to malnourishment among pregnant and lactating women. Current GOC programs need to be made more efficient in the short term to address the deteriorating nutrition situation.

For the longer term, the GOC needs to institutionalize a nutrition policy planning, implementation, and evaluation process. Besides redirecting existing programs, the process must collect information, analyze policy alternatives at various intervention points, test innovative ideas through pilot projects, and formulate and implement a comprehensive inter-sectoral nutrition policy. The purpose of this A.I. D. Loan Project is to assist the GOC in this process.

D. Background

CCNPAN was founded in March, 1974, by GOC decree. It has widespread powers to enable it to carry out its mandate to "define, propose, and coordinate a national nutrition policy in accord with the country's social-economic development plans." CONPAN has the right to utilize the services and manpower of any GOC public sector entity, and has done so a number of times since its inception. It is able to implement its policy recommendations both because of the high level and inter-sectorial composition of its Board of Directors and because of its voice in the social advisory council at the highest level of the GOC.

From the conception of CONPAN, A.I. D. has provided support, first through short-term advisors, invitational travel, and the like, and later through grant funded technical support. Considering the Chilean fiscal situation, CONPAN has received and is receiving extraordinary budget support from the GOC. In its first year, CONPAN has made several substantial accomplishments in matters of policy, initiation of pilot activities, and initiation of a nutrition information system. It has also begun to coordinate the

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diverse activities taking place in nutrition in Chile: the two nationwide feeding programs, the activities of three private voluntary agencies, the programs of international donors, and the research and development taking place at universities and within the private sector.

E. Project Description

The Loan will provide CONPAN with the funds and the technical assistance to enable it to create an effective planning process on the national level. The process will allow it to evaluate, experiment with, and suggest policy changes for the national feeding programs; analyze, select, and implement new projects and programs; and generate new project proposals. The Loan will contain three distinct, but integrated, elements: technical assistance, to enable CONPAN to establish an effective planning process; consulting or other professional services of primarily local public and private entities, to collect and analyze data, including crop specific studies and baseline data for measuring the effectiveness of programs; and the services of such entities to carry out pilot projects, so as to identify and field test the most cost-effective and innovative means of intervening in the nutritional system.

F. Financial Plan

The total amount of project funding will be \$9.0 million, of which \$5.0 million will be provided by A.I.D. and \$4.0 million from CONPAN funds. Of the A.I.D. contribution, it is estimated that \$825,000 will be available for consulting services to provide CONPAN with technical assistance in establishing the planning system, \$1,550,000 to fund services required by CONPAN on a one time basis for specific data collecting, measurement or analytical activities, and \$2,625,000 to provide goods and services for pilot projects selected in a scientific manner to field test programs and projects which might be suitable for implementation on a national scale. Disbursements are projected as follows:

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TABLE I  
PROJECTED DISBURSEMENT SCHEDULE  
(000 of \$)

	<u>Year I</u>	<u>Year II</u>	<u>Year III</u>	<u>Year IV</u>	<u>Total</u>
<u>A. I. D. Contribution</u>					
Technical Assistance to CONPAN	225	275	225	100	825
Professional/Consulting Services	325	450	425	350	1,550
Pilot Projects	<u>150</u>	<u>675</u>	<u>900</u>	<u>900</u>	<u>2,625</u>
Total	700	1,400	1,550	1,350	5,000
<u>Chilean Contribution</u>					
CONPAN Operational Costs	100	100	125	125	450
Professional/Consulting Services	500	450	275	300	1,525
Pilot Projects	400	450	600	575	2,025
Total	<u>1,000</u>	<u>1,000</u>	<u>1,000</u>	<u>1,000</u>	<u>4,000</u>
Total Project	1,700	2,400	2,550	2,350	9,000
<u>G. Alternate Sources of Financing</u>					

IDB, IBRD, and the EXIMBANK are not planning financing in Chile of projects of this nature. Private local and foreign institutions are not appropriate sources of financing for a project of this type.

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H. Statutory Criteria

All statutory criteria have been met. (See Annex IV, Exhibit B.)

I. Issues

None.

J. Recommendations

On the basis of the conclusions of the Capital Assistance Committee that the project is technically, economically, nutritionally, socially, and financially justified, it is recommended that a loan to the Government of Chile for the use of CONPAN for an amount not to exceed \$5,000,000 be authorized, subject to the following terms and conditions, in addition to those indicated in Sections A and B above:

a) Goods, services (except for ocean shipping), and marine insurance financed under the Loan shall have their source and origin in Chile and countries included in Code 941 of the A.I.D. Geographic Code Book. Marine insurance may be financed under the Loan only if it is obtained on a competitive basis and any claims thereunder are payable in freely convertible currencies. Ocean shipping financed under the Loan shall be procured in any country included in A.I.D. Geographic Code 941.

b) United States dollars utilized under the Loan to finance local currency costs shall be made available pursuant to procedures satisfactory to A.I.D.

c) Prior to the first disbursement or the issuance of any commitment documents under the Loan, Borrower shall submit to A.I.D. in form and substance satisfactory to A.I.D.:

1) contracting procedures to be followed by CONPAN in soliciting and obtaining goods and services locally, including formats with standard clauses for incorporating applicable GOC and A.I.D. requirements, and setting forth the criteria under which other GOC entities may be contracted, including a provision to insure that loan funds are not used to cover the salaries of regular employees of the GOC except insofar as they are detailed from their normal duties to the purposes of a specific activity contracted by CONPAN.

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2) a plan detailing how the executing agency for the Project (CONPAN) will monitor the various activities financed under the Loan; and

3) a plan for annual evaluation.

d) Prior to the first disbursement or issuance of any commitment documents under the Loan, and prior to further disbursement or issuance of any commitment documents every year thereafter, Borrower will submit to A.I.D. in form and substance satisfactory to A.I.D. an implementation plan for activities to be carried out during the following twelve months. Such plan will include the names and titles of the individuals responsible for the implementation and supervision of each activity and will demonstrate the adequacy of CONPAN's administrative staff to the volume of activities.

e) Prior to the issuance of any commitment document or any disbursement under the Loan for any individual pilot project, the Borrower shall submit to A.I.D., in form and substance satisfactory to A.I.D., a detailed description of such pilot project, including a justification, budget, and implementation plan for it.

f) Borrower shall covenant that the Project is consistent with GOC policy objectives of redistributing nutrition resources to the poorer members of society specifically defined as children 0-15 years of age, pregnant women, and lactating women, all in the lower one-third income group.

g) The loan shall be subject to such other terms and conditions as A.I.D. may deem advisable.

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Composition of Capital Assistance Committee

Working Committee:

Chairman Clifford Belcher, USAID/Chile, Multisector Officer  
Deputy Michael H. Hirsh, USAID/Chile, Capital Development  
Officer IDI  
Loan Officer Paul W. Fritz, USAID/Chile, Capital Development  
Officer

Reviewed and Approved By:

Mission Director Stuart H. Van Dyke, USAID/Chile  
Controller Russell L. Hale, USAID/Chile  
Program Officer Richard G. Frederick, USAID/Colombia  
(TDY to Chile)  
Project Manager Charles R. Mathews, USAID/Chile  
Regional Legal Advisor Norman R. Williams, USAID/Peru (TDY to Chile)

In addition to the working committee listed above, the following provided major inputs: Drs. Dean Wilson and Barton Burkhalter of Community Systems Foundation; Dr. Carlos Schlesinger, Executive Secretary of CONPAN; and James Unti, Agricultural Economist, USAID/Chile.

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## SECTION II - PROJECT DESCRIPTION

### A. Definition of Project

1. Operational Features. The project will develop a comprehensive planning system for improving the nutritional well-being in Chile. The planning function will be located in CONPAN, the National Council for Food and Nutrition Planning. The GOC created CONPAN in March, 1974, to "define, propose, and coordinate a national nutrition policy in accord with the country's socio-economic development plans." CONPAN's Board of Directors consists of the Ministers or Chief Officers of a number of GOC agencies, and it has been given broad powers to cross sectoral lines to obtain the assistance it needs to plan, design, and implement projects and policies. (See Section IV-B for details of CONPAN's structure and attributes.) To discharge its mandate effectively, CONPAN must develop a planning system relevant and responsive to Chile's nutrition problems.

The planning system, which is expected to be fully operational by the final loan disbursement, is visually depicted in Chart I on the following page. The system's basic design is appropriate for dealing with the existing elements and problems within the nutrition situation in Chile. The most notable are:

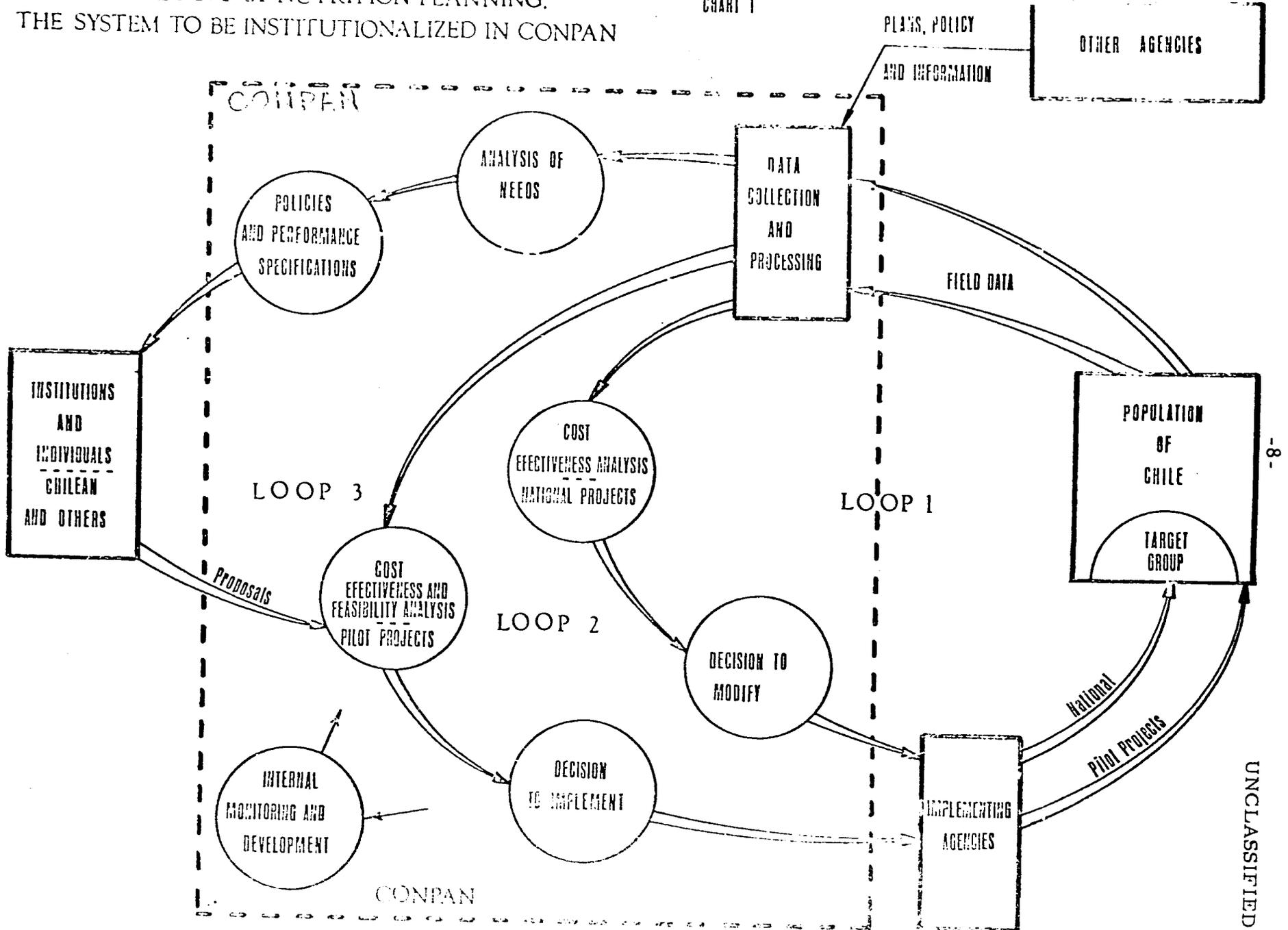
a) There exist in Chile large, costly, and increasingly expensive institutional feeding programs which, while improving the nutrition status in general, are not reaching the most vulnerable and most malnourished part of the population. There is clear need for modification and rationalization of these programs.

b) A considerable body of nutrition and nutrition-related information exists in Chile but it is scattered, incomplete, out-dated, or unanalyzed. Additional data

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THE THREE LOOPS OF NUTRITION PLANNING,  
THE SYSTEM TO BE INSTITUTIONALIZED IN CONPAN

CHART 1



are required as well. The need for a system to collect, compile, and analyze these data upon which projects could be based is obvious.

c) CONPAN currently has before it over 50 nutrition-related project proposals from a number of different private and public sources. A system which provides CONPAN with a rational basis on which to sort out these projects for either rejection or further action is also a clear requirement.

The planning system is depicted as having three categories of processes or loops, all of which represent constantly continuing efforts. Loop #1 deals with the on-going feeding programs. Field data on the nature and causes of malnutrition in the target group as related to the on-going programs are to be collected and analyzed. Upon this will be based a decision to modify the programs, halt them, or leave them unaltered. The programs will be constantly subjected to this type of scrutiny to improve them and to detect and adjust to changing situations.

Loop #2 concerns the selection and implementation of new projects from among several unsolicited proposals. To test feasibility and cost-effectiveness, pilot projects will in many cases be initiated and evaluated. Here again, data are to be collected and analyzed, and on this basis decisions will be reached whether to abandon projects or to expand and implement them on a broader basis. This process is of extreme importance for it is here that CONPAN will be examining new or different proposed nutrition interventions and deciding which of these will be most effective in reaching the sector goal of reducing malnutrition in the target groups by 50% in 10 years. While the first loop calls for a certain amount of GOC interagency cooperation, the second loop activities will require CONPAN to expand considerably its reach across sectoral lines to request assistance from other GOC agencies. This is where CONPAN will be calling into question plans, projects, and policies of other GOC entities. While activities in Loop #3 will also result in pilot projects, Loop #2 will generate more of such projects in the shorter run.

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Loop #3 is longer in term and involves generation of new project proposals from various Chilean entities. The same data collection and analysis and pilot project activities will occur, resulting in policy and national level project implementation decisions, but Loop #3 will require a CONPAN capacity to articulate performance specifications and with these solicit projects from other organizations. This loop will also include dealing with crisis situations.

It is to be noted from Chart I that all activities of each loop lead back to the target group. Hence, the proper functioning of the system assures that the nutrition problems of the poorest, most vulnerable groups are being focused upon and being solved.

All project activities will operate within the framework of the nutrient flow concept, more fully discussed in Annex I. Briefly, this concept states that food flows from a production source to the final consumer, and the nutrient value of this food is affected, for better or worse, at definable points along the way: food exports and imports, storage and transport, distribution, processing and preparation, environmental sanitation, and other conditions affecting nutrient assimilation by the final consumer. (A diagram of the nutrient flow concept is presented as Chart III in Annex I.) At each of these points, and between them for that matter, interventions can be made that will favorably affect the nutrition status of the final consumer in the target group. Hence, within the parameters of this concept, CONPAN will identify and select activities and projects to be carried out through the pilot project stage. Once a particular problem is identified, CONPAN will prepare requests for proposals on approaches to overcome the problem if unsolicited proposals are not already on hand. Proposals will be requested mainly from local research institutions, Chilean public entities including universities, and private firms, although some proposals may be suitable for foreign institutions. CONPAN will evaluate responses, select which

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entity will perform the analysis, and if warranted, will arrange for a pilot project or an operational program to be carried out on a limited scale under controlled conditions. Results from these projects and programs will be fed back into the continuous system, and policy recommendations for larger scale nutrition interventions will be made to GOC decision-making levels. It is emphasized that research and pilot projects are to be oriented towards problem solving.

2. Use of A.I.D. Loan. The Loan will finance the dollar and local currency costs of a contract with an outside consulting firm to provide technical assistance to CONPAN, of services arranged by CONPAN for specific activities, and of pilot projects executed locally.

a) Technical Assistance to CONPAN. Consulting services are required to assist CONPAN to build and strengthen the various functions of its planning system. Annex II contains a proposed scope of work for the technical assistance consultants. A total of 156 man/months is estimated to be required, broken down as follows:

(i) Three full-time advisors in design of experiments and management of field projects will be assisting CONPAN and leaving behind them a Chilean expertise in these areas. Three advisors will be assisting the first three years, phasing down to one in the fourth. It is anticipated that some of the individuals will be changing as different specialties are needed. A total of 120 m/m are estimated, though this may lessen if an earlier and more gradual phasing down is warranted.

(ii) The remaining 36 m/m will be short-term advisors (one to two months each) in field measurements, data processing, and evaluation, related to the specific project areas which CONPAN will be undertaking.

b) Professional/Consulting Services. Local consulting and other services under CONPAN's supervision will be required for two broadly defined categories: (a) data measurement, and policy and program analyses; and (b) crop specific studies.

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These activities are to be undertaken by contracting with local firms, individual specialists, universities, research institutes, and other entities to carry out particular problem solving, investigative, or analytic tasks. The contractual arrangements will call for specific performance against well defined scopes of work prepared by CONPAN. Annex I describes the type of activities included in this category. Some examples follow:

(i) Measurement - No reliable or complete base-line data from a nutrition point of view exist on the poorest 1/3 of the Chilean population (the target group). These data are necessary to permit CONPAN to reach priorities for nutrition projects. CONPAN draws up specifications for the data required: geographical distribution, potability and quantity of water used, sewage collection and disposal facilities, personal sanitary habits, nutrient purchases, consumption and losses in the home, intrafamily nutrient requirements and distribution, income levels, and percent of income spent on food. CONPAN also sets up standards on data accuracy and reliability, the frequency with which measurements are required, and cost limits per family for data collection. Proposals are requested locally and the selected entity carries out collection of data, which are processed and analyzed and then fed into the planning system along with other data collected. From this CONPAN makes a policy or program recommendation to GOC decision makers.

(ii) Crop specific study - Potatoes are known to be liked and consumed by the poor, grow well in Chile, are a source of calories (which are in short supply), are relatively cheap, but much of the crop is believed to be lost because of poor storage and transport. CONPAN designs a study to determine what varieties are grown; hectares in production; yields; production costs; level of technology; transport and storage costs, alternatives, and losses; processing costs; and distribution of both potatoes and those products produced with processed potatoes, such as potato flour.

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Similar data are collected on the basic crops consumed by the target group. Comparisons from a nutrient point of view are then made on cost/benefits among the different commodities grown, as well as what intervention can be made to increase the nutrient value of the crops. Hence, it could be found that potatoes produce more nutrients per dollar invested than corn, for example, and additionally that one variety of potato provides far more nutrients per pound than another. It could also be found that losses in storage and transport are negligible from the nutrition viewpoint. With this knowledge specific pilot projects can be planned as part of CONPAN's continuing planning function.

c) Pilot Projects. This type of activity can range anywhere from field trials to controlled and limited interventions. Research is also included, provided that such research has practical applications, is approved within the parameters of the nutrient flow concept, and demonstrates its positive effects on the sector goal within the time frame.

One illustrative pilot project of considerable magnitude is improvement of water quality. Contaminated water and the diseases it carries drastically reduce nutrient assimilation in individuals. CONPAN's information system indicates that in much of Chile drinking water is inadequately treated, at least during part of the time. Additionally, CONPAN believes that potable water is becoming contaminated from its source to its consumption place, e.g., is being carried in dirty containers from the corner pump to the home. A pilot project is needed to determine what intervention can be undertaken at greatest cost effectiveness. Studies are made of a number of areas where contamination is known to be a factor in malnutrition, and the malnutrition in these areas is measured. Once the studies determine what major factors exist that relate malnourishment to contaminated water, a series of test pilot activities are designed and implemented. Such activities examine the

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cost benefit of introducing chlorination or other chemical treatment, the effects of filtration, the improvement of existing treatment systems that are working inefficiently, the effect of education in personal hygiene related to all of these, and so on. The pilot activities produce the information required to raise water quality improvement from the pilot project level to a national program.

Another example of a pilot project is improvement of packaging and preservation of low-cost nutritional foods distributed in poor areas. CONPAN's information system indicates that one or more of the following might be happening: the products distributed in feeding programs are not being used because the packaging makes them appear undesirable to the target population; the product is being wasted in the opening of the container; the product is spoiling before first usage; or the product is spoiling between first and final usage. CONPAN designs a project with the following elements: study the situation in greater depth; do research on appropriate new packaging designs and/or preservation technologies; and test the new packaging or product in controlled areas. From the pilot project would come the information necessary to improve the situation on the national level.

As can be seen from both examples, CONPAN's data collection leads to pilot projects. These test the hypotheses and at the same time produce further data which are fed back into the system. The results are policy and investment decisions on national levels. See Annex I for a further description of the types of pilot projects expected to be undertaken.

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3. Coordination with GOC Objectives. The Project will contribute to the program goal of reducing malnourishment in the target group by 50% within 10 years, the target group being defined as those children 0-15 years old and those pregnant and lactating women in the poorest one-third of the Chilean population. The program goal has been defined by CONPAN as a realistic response to the GOC's long term objective of eliminating malnourishment in Chile and to its objective of directing resources toward the poorer elements of the population. Such redistribution of resources is being and will continue to be carried out in the case of nutrition through redistribution of nutrients to the poorer groups in the most cost effective manner to eliminate malnourishment. A statement of covenant by the GOC to the effect that it continues to support the above objectives will be included in the Loan Agreement.

TABLE II

ESTIMATED DISTRIBUTION OF PROJECT  
DOLLAR AND LOCAL CURRENCY COSTS  
(in 000's US\$ and Equivalents)

	<u>A. I. D. Loan</u>			<u>GOC</u>	<u>Total</u>
	<u>L/C</u>	<u>\$</u>	<u>Total</u>		
CONPAN Operations Costs	-	-	-	450	450
Technical Assistance to CONPAN	125	700	825	-	825
Professional/Consulting Services	1,400	150	1,550	1,525	3,075
Pilot Projects	1,975	650	2,625	2,025	4,650
Totals	3,500	1,500	5,000	4,000	9,000

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B. Background

1. Historical Perspective. Until March, 1974, no effective systematic and coordinated means existed in Chile for dealing with nutritional problems. Feeding programs for infants up to the age of 6 years were under the jurisdiction of the Ministry of Health, whereas those for school children between 6-15 years were under the jurisdiction of the Ministry of Education. The nutritional impact of agricultural and economic policies was rarely considered by the ministries responsible for such decisions, and likewise there was no entity to recommend or critique agricultural and economic policies from a nutrition-benefit point of view. Both the private and public sectors developed new foods often without mutual knowledge and often duplicating each other's efforts. No controls over private industry existed to enforce truthful advertising of the nutritional benefits of foods it produced and marketed.

Chile, like most emerging nations, had regarded nutrition as a welfare-type problem to be dealt with through institutional feeding programs. As a result, a total of nearly 3,000,000 people were being fed by 1974 at an annual cost of over \$ 100 million. The biggest such program in Chile is the National Program of Complementary Feeding (PNAC) which has been in existence for some 20 years. It is sponsored by the National Health Service (SNS), part of the Ministry of Health. Milk is distributed to children up to age 6 and to pregnant and lactating mothers. In 1974, for example, some 25.6 million kilos of milk were distributed to about 50-60% of the total children in Chile and to about the same proportion of the pregnant and lactating women. To date no effective evaluation of this program has been performed by the GOC or by any other organization. Though the SNS itself keeps statistics on malnutrition of the children receiving free milk (of whom 15.4% were malnourished in April, 1974), it is not known whether their condition is caused by poor nutrient utilization (e.g. diarrhea), by diverting the milk away from the intended recipient through sharing it with other family members, by selling the milk received by the family, or by other reasons. The essential question of whether the PNAC is a worthwhile investment from a nutrition standpoint, as compared with other possible uses of the funds spent each year, has never been studied. Likewise, the optimal mix and amount of product to various recipient subgroups has never been thoroughly analyzed.

The second biggest program has been the school feeding program, which has been in operation for over 15 years and concentrates on students from 6 to 15 years old. In 1974 some 1.4 million children were given breakfast or tea rations daily, and of those, some 550,000 of the most needy also received a daily lunch. Once again, until 1974 no in-depth analysis had been performed to determine the nutritional effectiveness of the program or its benefits as related to costs. Additionally, in neither the PNAC nor the school feeding program was any analysis made until early 1975 on whether or not the most needy economic groups were getting the food.

Other nutrition activities in Chile up to 1974 were carried out mainly by universities (in research) and international donors. The three U.S. Private Voluntary Organizations (PVOs) active in Chile (CARE, CRS, SAWS)<sup>1/</sup> have had large programs, reaching 2 million beneficiaries in 1966 with 100 million pounds of commodities, some of it in support of the school feeding program. By 1974 the program had fallen to 37% of the 1966 level. Several international donors (WFP, UNICEF, PAHO, DIAKONIA, IDB, IBRD)<sup>2/</sup> and the Peace Corps have had small nutrition programs, generally uncoordinated with each other until recently. Their current activities are described later.

In short, until March 1974, though substantial funds were being spent in Chile on nutrition (the PNAC and the school feeding programs together are estimated to cost about \$100 million a year), there was a lack of coordination and evaluation in the field. Malnutrition continued to exist at estimated levels of 15 to 20% of children, the infant mortality rate continued to remain above 65 per 1,000, and the number of underweight births continued high. Rising costs of food imports, threatened world food shortages, and the seemingly endless expansion of these programs had intensified GOC concern as to whether continuation of existing programs as they were was the optimal way to use funds and

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<sup>1/</sup> CARE = Cooperative for American Relief Everywhere  
CRS = Catholic Relief Service  
SAWS = Seventh Day Adventist World Service

<sup>2/</sup> WFP = World Food Program (of the United Nations)  
UNICEF = United Nations Children's Fund  
PAHO = Pan American Health Organization  
DIAKONIA = Ecumenical Assistance and Development Organization  
IDB = Interamerican Development Bank  
IBRD = International Bank for Reconstruction and Development (The World Bank)

whether other activities might be tried to solve the persistent malnourishment problem.

2. Establishment of CONPAN. The need for national nutrition planning for Chile is not a new phenomenon. Top officials and professional circles have endorsed the concept that nutrition is a developmental as well as a welfare problem for about the last four years. USAID has been of assistance whenever and wherever possible to further Chile's access to the latest thinking of this field and to encourage Chilean planning efforts.

In 1971, USAID sent the Director of the SNS Nutrition Section to M.I.T. for a short course in nutrition planning. A year later his staff was instrumental in having the GOC set up by decree a nutrition planning body, the National Commission for Food and Nutrition (CONAN), located in the GOC's Planning Office (ODEPLAN). CONAN was to be a coordinating body to advise the various ministries on nutrition policy. USAID was able to provide technical support to CONAN and was CONAN's major source of foreign assistance. The general political chaos of the times, however, reduced the effectiveness CONAN might otherwise have had. With the turmoil immediately before and after the coup d'etat in September, 1973, CONAN effectively ceased to function.

One month later, a noted Chilean nutritionist organized a three-day workshop to discuss the future of nutrition planning in Chile. USAID participated and a number of international experts attended, several under A.I.D. invitational travel orders. The workshop ended with a call for the reactivation of the nutrition planning process in Chile, but in a form more effective than CONAN. USAID supported this idea and provided the interested people with information and some small financial support in individual projects. This Chilean initiative led to the creation of the National Planning Council for Food and Nutrition, CONPAN, on March 18, 1974.

An initial strategy was developed by CONPAN and USAID that centered around: (a) immediate improvement in the nutritional impact of PL 480 Title II food through fostering closer relationships between CONPAN and the U.S. voluntary agencies operating in Chile; and (b) longer term development of a sound planning capacity within CONPAN, able to influence GOC policy

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and operational decisions in ways that would contribute to nutrition goals. It was recognized that the latter effort would require substantial resources, and an A.I.D. development loan was tentatively programmed at \$5.0 million for this purpose. Subsequently, a \$3.0 million environmental sanitation component was added to the loan, recognizing that the situation in Chile was such that a relatively minor investment could have significant results in the quality of the drinking water of an important share of the population. An IRR for an \$8.0 million loan was approved by the DAEC in its meeting of December 13, 1974 (See cable in Annex III). However, the Intensive Review concluded that there were inadequate data to demonstrate satisfactorily that the proposed water quality improvement component, in its current design, would directly support this Project's objectives. This component, accordingly, has been reduced to a pilot project activity so that basic design questions can be tested and conclusions reached about nutritional impact.

During this time USAID continued to support CONPAN where it could, in such ways as providing short-term advisors, funding local studies, and sponsoring the attendance of two CONPAN employees at the Fourth Western Hemisphere Nutrition Conference. Nutrition was a major USAID program emphasis, and some systematic, orderly way to provide funding for these types of supporting costs was necessary and appropriate.

3. A.I.D. Grant Project. In December, 1974, a grant project entitled "Child Nutrition" was presented to AID/W. It was approved on February 3, 1975, as project No. 513-15-560-271, with A.I.D. funding of \$555,000 over a three year period. The project entails three distinct elements, all contributing to a single project goal and purpose. The first element is to fund USAID Food for Peace and certain other nutrition program monitoring, support, and evaluation activities. (Such funding theretofore had been charged to TS and MOB funds.) 22% of the grant funds are to be used for this first element, and funding will remain rather constant over the three years of the project.

The second element will assist U.S. PVOs and their private sector counterpart agencies in Chile to broaden their participation in the Chilean nutrition development effort, particularly to direct better their Title II inputs toward solving priority nutrition problems

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of the target group. These activities are described in the following sub section. A.I.D. grant funding was considered essential in order to bring about immediate redirection of the programs. CONPAN has been involved in this effort and will continue to play a coordinating role. 30% of the grant funds will support this element. About half of the funds are to be spent the first year, consistent with the objective of providing an immediate impact.

The third element, representing 48% of the funds, will directly assist CONPAN in assessing sector needs, establishing priorities, and taking the initial steps toward setting up a national nutrition planning system. This element, called in the Project Paper the "most important to the ultimate success of the project," provides essential support to CONPAN's activities until such time as this proposed Loan Project is approved and functioning. At the time of this writing, two U.S. contract nutrition experts are already in Chile under the grant to assist CONPAN, and several other activities under the Project Agreement are ready to be funded. Almost 60% of the funds will be spent in FY 1975, with a gradual phasing down as the Loan Project becomes operational. Only 16% of the funds are scheduled for FY 1977, the final year of the grant project.

In short, while the grant has provided important interim funding, the proposed Loan Project represents the ultimate step in a continuous process of A.I.D. support for a national nutrition planning process in Chile.

4. Other Donor Activities. Though a number of international organizations have nutrition activities in Chile, all are on a small scale and are generally grant funded. The IBRD has granted \$ 50,000 for a breast feeding education program. It has also made \$ 100,000 available to the GOC's Development Corporation (CORFO) for research and test production of high nutrition foods. The IDB is considering programs in day-care, in rural water supplies, and in rural health, which will have nutrition tie-ins. The Ford Foundation has helped fund the National Continuous Nutrition Survey (ECEN) and the milk acidification project. The Peace Corps has provided several volunteers in the field of nutrition to various SNS projects. The Ecumenical Assistance and Development Organization (DIAKONIA) has established a nutrition center in a zone with one of the highest malnourishment rates in Chile, and is developing a project whereby high nutrition foods can be produced in Chile using

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local materials.

The World Food Program has several feeding programs serving hospitals and specialized vocational schools. In addition, it has an \$ 957,290 project, coordinated with CONPAN and the SNS, to develop, manufacture, and distribute fortified food products to children 2-6 years old as part of the PNAC program. UNICEF has provided 46 rural centers with equipment and information on nutrition. The Pan American Health Organization (PAHO) has been providing approximately \$ 50,000 per year in technical assistance in consultants and scholarships in support of nutrition planning, research, and existing nutrition programs in Chile. In addition, the PAHO has had several health programs in Chile with nutritional components.

The International Telephone and Telegraph Company has recently announced that it will establish a \$ 50 million research center in Chile concentrating on nutrition research and electronics engineering research. The center will do work in basic foods research in support of the private food industry. For example, it will be involved in introducing a new process for manufacturing macaroni from corn, soy, and other base materials as a substitute for more expensive wheat. It is not known at the moment how much of the \$ 50 million will be earmarked for nutrition research nor what will be the operational particulars of the center, but CONPAN is keeping informed as the plan for the center progresses. Indeed, this may become an opportunity for CONPAN to influence private sector research so that it better serves public sector needs.

There are three PVOs active in Chile: CARE, CRS, and SAWS. Over the past 10-15 years the efforts of these agencies have been heavily weighted toward management of Title II commodities, the bulk of which go for school feeding programs. For example, CARE in 1974 distributed 7,250 tons of food to some 1,000,000 children in some 7,000 primary schools while only 600 tons of food went to 130 centers for preschool children. CARE also distributed certain equipment, such as ovens for school kitchens. CRS distributed 3,645 tons of foodstuffs in 1974 to 137,212 school children, 23,125 institutionalized children, 45,680 children in summer camps, 6,515 adults in institutions, and 4,019 workers in self-help ("Food for Work") projects. CRS also distributed clothing, blankets, and medicines in Chile and had several small active development projects. SAWS distributed 1,705 tons of food in

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1974 to 37,500 children. 16,500 of the children were in the school lunch program, 5,200 in day care centers, 1,300 in institutions, and 14,500 in orphanages. SAWS also has a program to aid 4,000 malnourished children in SNS centers.

Each of the PVOs will be redirecting its programs more towards the target group during 1975 and following years. SAWS, for example, has completely dropped its school feeding program and is concentrating its effort in MCH programs. Second and third degree malnourished children will be fed back to health through SNS clinics while their mothers receive elementary nutrition education. CRS will, in CY 1975, expand its highly successful but very small pilot project in encouragement of breast feeding (begun with A.I.D. assistance) in CY 1974. While CRS has not significantly reduced its feeding programs for 1975, this pilot project activity is a step in the direction in which the PVOs should be moving. CARE is reducing its school feeding programs somewhat in CY 1975 and may be able to get more deeply into the MCH programs. CARE will be making a detailed study of its feeding program in CY 1975 with a view towards further focusing on the neediest school children.

In each of the new activities being taken up by the PVOs in the first steps of redirection of their programs, there is a large element of information gathering and analysis. This was deliberately done for the dual purpose of focusing Title II programs on priority areas and assisting the national nutrition planning process, since the information will be fed to CONPAN.

In short, there is a substantial number of nutrition oriented activities taking place today in Chile. As food costs increase, funds available for such programs decrease; and as the malnourishment problems persist or worsen, the need for an effective coordinating and policy body grows ever greater.

### SECTION III - PROGRAM JUSTIFICATION

#### A. Economic Setting

1. Introduction. The economic well-being of a country and the nutritional health of its people are undeniably intertwined. While often not precisely definable in economic terms, their causal relationships to each other are clear; and the effect of national planning and policies should be recognized as important for progress in both areas.

A country's agricultural resources and the foreign exchange earned by the entire economy determine a country's ability to produce and/or import basic foodstuffs. National welfare is therefore clearly of primary importance in a nation's level of food consumption and in determining its nutritional situation.

Of equal importance with the total supply of food is a nation's ability to provide all families with the basic real incomes necessary to obtain the required types and quantity of food. A country's success in this area is determined by its absolute wealth or productive resources, the size of the population, and the economic, political, and social programs which determine how the factors of production are divided among the population.

The benefits to a country's national economy directly related to a sound, effective nutritional policy can often be physically measured in terms of greater human efficiency or labor productivity. Less tangible but possibly more important are the human and social welfare benefits derived from providing a nation's people with one of the most basic of rights -- the right to food and nutritional health. Achieving such a goal however, is difficult, intertwined as it must be with agricultural, economic, and social programs and objectives. In addition, the finite limits of a country's natural resources and production process do not permit complete, direct, or simultaneous achievement of all desired goals.

2. Overview of Chile. Chile is a country which has substantial human and physical resources. It has experimented

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extensively in the fields of social and economic welfare and has progressed a long way in developing the basic foundations to deal decisively with issues such as education, health, and nutrition.

Similarly Chile is comparatively well endowed with natural resources, considering its land base and its relatively small population (about 10.3 million). Mineral wealth - nitrates, iron, and copper - have long contributed to Chile's economic development. Export earnings of these basic commodities and related international credits have provided Chile with much of the income necessary to make capital investment in infrastructure and industry; provide an extensive network of social programs such as education, housing, health, and social security; and provide the foreign exchange required for those supplemental food imports needed to serve the large urban population (73% of the total population).

Some of the development results have been outstanding when compared to other Latin American countries: average per capital income is \$ 700 - \$ 800, one of the highest in Latin America; literacy is an exceptionally high 90 percent; and a large percentage of population is reached by social programs of housing, health, and social security. However, economic growth has been slow because of certain fundamental flaws in some sectors of the economy such as agriculture, development policies based on short-term economic and political expedients, and heavy dependence on the ups and downs of world economy and trade. These factors have severely complicated achievement of Chile's nutrition and other social/economic objectives.

3. Agricultural Situation. Although Chile has the resources for substantial agricultural production, long-term growth in agricultural output has not kept pace with population. One source indicates that between 1952 and 1972 population grew at a yearly rate of 2.5%; domestic demand for food increased at 3.3%; but domestic food production increased at only 2.2% per year. Low farm prices have discouraged production while

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increasing consumer demand, particularly in the urban sector. This has greatly increased Chile's dependence on food imports to meet consumer demands. Recent agriculture import/export data for Chile are indicated below.

TABLE III  
FOOD IMPORTS/EXPORTS IN CHILE  
(millions of dollars)

	<u>1970</u>	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>
Imports	235	340	450	607	472
Exports	29	27	13	16	48

Source: 1970-73 U.S. Agricultural Attaché Reports, 1974 ODEPLAN

While higher international prices account for some of the increases in cost of food imports, there was also an absolute increase in total imports due to the drastic reduction in domestic production during the previous government (1970-73).

The current Government is considerably revising Chile's agricultural policies in an effort to stimulate local production and cut the heavy foreign exchange drain for food imports. The 1973-74 agriculture sector responded to these new policies by increasing output of most major crops by 20-30% over 1972-73 crop year, and by the end of the 1974-75 crop year it is hoped that production will be back to pre-1970-71 levels. While the GOC still plays a role in maintaining ceiling prices on certain basic food items and uses public sector channels for the import, processing, and distribution of certain other items, most food prices have been freed from controls and most production, processing, and distribution are in the private sector. It is planned that this new free market policy will help increase production at a rate at least as fast as the demand for food. It is clear, however, that for the foreseeable future, real food prices will be higher than in the past and much more susceptible to commercial market pressures than to social welfare needs.

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4. Other Economic Factors. According to the 1970 census, 21 percent of the population, or over 1.9 million persons, were living in 'extreme poverty', meaning that they were unable to provide themselves with minimum adequate food, shelter, and the other necessities of life. Of the total, about 1.3 million were in urban areas and 600 thousand in rural areas. Between 1970-73 Chile experienced a major economic and social transformation. During this period, resources and incomes of most banks and many industrialists and land owners were transferred to the state. Consumption increased, investment declined, and serious economic dislocations occurred.

The present Government took over an economy which in addition to depending inordinately on the international market for food and fuel, faced other severe economic problems. Inflation has historically been a chronic problem, but more recently it reached the runaway stage. The official consumer price index, for example, increased 163% in 1972, and 508% in 1973. The trend was reversed only slightly in 1974, when the increase was 376%. For the near future, the GOC plans to deal with inflation through stringent monetary and fiscal policy. This will require substantially more belt-tightening by the general populace. The more marginal economic groups in the population, with limited employment opportunities and negligible savings, will be the ones most severely hurt in the short run by anti-inflation policies. Estimates indicate that unemployment in the greater Santiago area was about 3.6% in 1972, but by early 1975 may have reached 15.0%. The marginal, and poorer, workers are usually the hardest hit in such a situation.

Another grave problem faced by Chile is a severe balance of payments situation. Even with generous debt rescheduling, a balance of payments gap of over \$ 500 million is projected for 1975. To help cope with this crisis, the GOC has recently been devaluating the currency at a rate faster than the rise in CPI. The effects will be to raise the price of imported food, stimulate exports, and possibly lower the quantity of food available in the country.

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5. Conclusions. Most analyses have indicated that while Chile's long term economic outlook is basically sound, it faces a difficult short and medium term future. The fiscal and monetary stringencies, the balance of payments crisis, the dependence on imported foods and fuels, the continuing high inflation rate, and the growing unemployment all adversely affect the economy in general and the poor in particular, and it is likely that the number of those in the "extreme poverty" class may have begun to expand again and will continue to do so in the short term. For those in the marginal economic classes, real food costs will certainly continue to rise. Large scale public feeding programs will face budgetary pressures.

At this point in time, public nutrition planning and programming can fill a vital need in insuring that the stringent economic policies do not wipe out all the gains previously made in the social sphere. Nutrition planning can operate as a cost-effective arm in overall economic planning in redirecting such policies as agriculture production, food imports, and feeding programs, to make them more efficient and more effectively targeted to the neediest groups.

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B. The Nutrition Situation in Chile

1. Identifiable Problems. Though there is no comprehensive diagnosis of the precise nature and extent of the nutritional situation in Chile, the information available suggests that while there may be an adequate overall nutrient availability at the market-place to meet the nation's nutritional needs, other deficiencies in the human nutrition syndrome are causing certain identifiable nutrition problems. These problems include a rather severe caloric malnutrition in the low-income population in general, protein malnutrition in children, and vitamin/mineral deficiencies in various groups of the population and in selected geographic areas of the country.

The most dramatic indicator and consequence of malnutrition in Chile is a relatively high incidence of infant mortality. Over 65 out of each 1,000 live births in Chile end in death before the age of one year, according to 1973 figures. Undoubtedly this rate is considerably higher among lower income groups; various authorities estimate the figure at over 100 per 1,000 births, and higher in certain geographic areas. One limited study indicated a rate of 128.5. Approximately two thirds of the infant deaths in Chile are due to diarrhea and parasitic diseases. Surveys indicate that malnutrition is directly associated with the majority of these infant deaths. Indeed, in a study of one typical hospital, 83.2% of all infants who died over a four year period were malnourished.

Low birth weight, generally indicating malnutrition at birth, may be a factor in the high rate of infant mortality. Twenty-seven percent of infant deaths in Chile occur within the first 28 days, and about three-fourths of those infants have birth weights of less than 2,500 grams. In Chile the incidence of such births is high, at least 15%, and is due to poor nutrition of pregnant women. In a representative survey of 800 such women, average caloric intake was 2,130, compared with a norm of 2,600.

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Average intakes of protein, calcium, and iron were also more than 25% below norms.

A significant percentage of the children who do survive also suffer the effects of malnutrition. For example, in a study of over 500 urban children born with normal weight and in good health, 15% were malnourished by the age of one year and 19% at the age of 18 months.

There are indications that the malnourishment rate of children is increasing. The following chart shows the percentage of malnourished children out of some 575,000 measured in the PNAC milk distribution program. It is surmised that children not in the PNAC program have at least as high a rate of malnutrition and probably much higher.

TABLE IV  
Malnourished Children within the PNAC Program

<u>Age Group</u>	<u>1973</u>	<u>1974</u>
0-11 months	14.0%	15.6%
12-23 months	18.2%	19.8%
2-6 years	12.6%	13.9%

18.9% of the malnourished children in Table IV are 2nd degree and 4.8% are 3rd degree malnourished.

The above data are based on a weight for age chart which has been standardized for Chile. If the child is 10 to 25% below normal weight, he is classified as 1st degree malnourished; 26-49% below, as 2nd degree; 50% or over, as 3rd degree. Since the first signs of malnutrition are weight lag for age, this is a valid, easy, and inexpensive method of determining the probable incidence of malnutrition. However, more recent data collected by the SNS on a trial basis used height for age as an indicator of malnutrition, believing height to be a more accurate indicator of malnutrition than weight for children beyond infancy. Using this method for children under 6 years of age, the data indicated that 31.5% of the urban and 46.2% of

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the rural children in this study were malnourished. In a similar study of children 6 to 12 in a poor area, over 60% of both urban and rural children were 10% or more below the normal height for age.

There are significant regional variations in the child malnutrition rate. While the SNS study using weight as an indicator in relationship to age found malnutrition to average 15.4% throughout the country, in some provinces, such as Atacama and Coquimbo, the figures rose to as high as 19.9%, and in some towns and cities, such as Yumbel, to as high as 32.7%.

It is most likely that the malnourishment rate is significantly higher among children not covered by the SNS. The SNS estimates, for example, that it covers only about 10% of Chile's 600,000 Mapuche Indians; the malnourishment rate among these people is thought to be very high. There may also be regional variations in type of malnutrition. In a study in the north of Chile of children one year of age, 95.5% were receiving sufficient proteins, whereas only 17.0% were receiving sufficient calories. Studies of infant deaths in Santiago, on the other hand, show that protein deficiency may be common in that region.

In short, though exact data are not available on the malnutrition of the target group, data from existing studies show that the rate must be considerable and the causes diverse. USAID attempts to estimate the rate for children in the poorest third income group have produced figures as high as 70% in the heavily populated central part of the country.

There are also indications that there are other nutrition problems in Chile, although existing data are inadequate. Data on iron anemia are not sufficient to give the actual prevalence in the population as a whole, but the limited figures available show that 70% of children have values of iron serum below 40mg. and 30% can actually be considered anemic. In one regional study of children one year of age, less than 1% were receiving

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the minimum daily requirement of iron. Vitamin A deficiency appears to be a problem; isolated studies have shown 49.6% of children, 23.1% of adult women, and 12.7% of adult men with the deficiency. Thiamine and riboflavin deficiencies appear to exist in the lowest socio-economic groups in certain areas; studies have detected these deficiencies in Santiago, Quillota, Antofagasta, and Calama. Finally isolated studies have detected above normal incidences of diabetes, obesity, arteriosclerosis, and goiter in certain areas and among certain groups, which may be due to improper or deficient diet.

2. Factors Affecting Nutrition. There are five principal factors that are significant in a review of the nutritional situation of any country. Together they interrelate to form the overall picture which the data then indicate. These factors are: (a) food availability, (b) food distribution/family income levels, (c) feeding habits, (d) environmental sanitation, (e) cultural/educational levels.

a) Food Availability. Food balance sheets indicate that there is enough good quality food available in Chile to meet the nutritional requirements of the population, and that there is an upward trend in these overall per capita food availabilities. The following chart summarizes the results of the FAO food balance sheets for the past ten year period.

TABLE V  
Calorie and Protein Availability per Person per Day

	<u>1965-1969</u>	<u>1970-1973</u>	<u>1974</u>
Calories	2,254	2,285	2,408
Protein Total	69.9	69.5	70.0
-animal	(28.4)	(29.5)	(26.7)
-vegetable	(41.5)	(40.0)	(43.3)

(Source: SNS and ODEPA)

These figures, however, represent overall averages; they tell us nothing about the distribution (economic, geographical,

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seasonal), preparation, consumption, and biological utilization of these nutrients.

b) Food Distribution/Family Income Levels. The recently published "Map of Extreme Poverty" reveals that slightly over 21% of the Chilean population is in "extreme poverty", based on 13 indicators including housing, sanitary facilities, literacy, and attendance of children at school. Slightly over 50% of the family members of this group are children up to the age of 16. It is estimated that substantial additional numbers of families, while not living under conditions which would cause them to be defined as living in extreme poverty under this study, have income and other resources at a level so low as to affect the nutrition of the family members. It can be concluded then that probably the single most important cause of malnutrition in Chile is the lack of economic capacity of low income groups to purchase the food commodities necessary for a minimum diet.

Numerous studies over the past several years have confirmed this problem. For example, in a study of a poor neighborhood in Santiago, it was found that 12 year old children were 4 inches shorter than in a comparable neighborhood of high incomes. Another study, prepared by the Land Tenure Center of the University of Wisconsin, analyzed the consumption of essential foods by the Chilean population by income strata, based on 1968-1969 data. The foods studied represented about 83% of the Chilean diet, presumably of all income levels.

TABLE VI  
Calories/Proteins Obtained from Essential Foods,  
by Income Level

	<u>Lowest</u> <u>Level</u> (54%)	<u>Level</u> <u>II</u> (26%)	<u>Level</u> <u>III</u> (8%)	<u>Level</u> <u>IV</u> (3%)	<u>Highest</u> <u>Level</u> (9%)
Calories	1,593	2,074	2,149	2,214	2,645
Proteins (grams)	38.6	51.7	56.9	64.9	83.8

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The same study divided the essential foods into 12 categories, looking at amounts consumed per person per month. Beans comprised the only category in which the poorest groups consumed more per month than the rich, and even this difference was slight. Even in cereals, potatoes, and sugars, the rich consumed more per month than the poor. As to high quality foods, the differences were great. The average wealthy person consumed 13 times as much in milk products, 6 times as much meat, 4 times as much in fruits and vegetables, 3 times as many eggs, and twice as much fish and cooking oils as his poor counterpart.

Preliminary data of the National Continuous Nutrition Survey (ECEN) also confirm the basic problem. They show that almost 70% of surveyed urban persons do not consume accepted minimum calorie levels (2,500 per day) and 38% consume less than 2,000 calories per day. Sixty-one percent of surveyed rural persons do not consume accepted calorie levels, also with 38% consuming less than 2,000 calories a day.

As to protein, 38% of the urban population is consuming less than the minimum accepted level (60 grams per day), with 11% consuming less than 40 grams per day. Of the rural population, 30% is consuming less than the minimum accepted level of protein per day, with 7.6% consuming less than 40 grams per day.

A recent computer model run by the University of Chile under a CONPAN contract indicates that the economic problems of the lower half of the population are serious, particularly in regard to nutrition. Although only preliminary results are available at this moment, they indicate that an average unskilled manual laboring family cannot satisfy its minimum calorie requirements even if it uses 80% of its income to buy the most inexpensive food-stuffs on the market (a diet based purely on beans, potatoes, bread, and pastas).

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A study from March, 1974, to March, 1975, in a working class town just outside of Santiago compared the cost in that area of the least expensive minimum diet with the average wages received by the populace. In 5 of the 12 months measured, the cost of the minimum diet was above that of the earnings, as much as 21.4% above. In the other months, the minimum diet ranged from 71.4% to 98.6% of the wages. And these families are in the upper part of the target group, for they are not among the 21% of the population classed as in "extreme poverty", who are mostly unemployed or not regularly employed persons living in shanties.

In a country-wide study based on GOC data, the average salary of an unskilled worker was compared with a market basket of 96 items that cost 66.8% of his income in 1969. By the first two months of 1975, the market basket cost more than his monthly salary.

Finally the worsening situation is illustrated by a table prepared by the GOC statistical and planning agency (ODEPLAN), comparing how much of various items an unskilled worker with steady income could purchase in a month if he spent all of his income on each item. Though as indicated in the footnotes, the existence of a black market in January, 1973, makes the comparisons less than completely valid, the Table, nonetheless, indicates a serious deterioration of the buying power of a minimum wage worker.

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TABLE VII  
How Much of Each Item Could Be Purchased  
if a Worker Spent his Entire Monthly Salary on It    1/   2/

<u>Item and Measurement</u>	<u>Jan. 1973</u>	<u>Dec. 1974</u>	<u>Feb. 1975</u>
Bread (kilos)	597.2	281.2	233.4
Cooking Oil (liters)	193.4	70.9	53.6
Sugar (kilos)	310.6	121.9	89.7
Tea Bags (boxes)	277.6	403.5	291.0
Beans (kilos)	172.7	213.9	151.5
Potatoes (kilos)	131.6	931.9	502.4
Pasta (packages)	041.5	394.0	257.6
Rice (kilos)	544.2	142.2	118.1
Milk (liters)	880.6	652.3	372.8
Eggs (units)	740.0	1,739.6	233.4
Coffee (tins)	106.7	63.3	41.7
Cooking Kerosene (liters)	7,728.2	1,304.7	708.4
Liquid Gas (kilos)	1,521.3	847.2	624.1
Electricity (KWHs)	4,954.0	2,836.3	1,620.0

1/ It would be misleading to make comparisons between the December 1974 and the February 1975 figures. Wages are indexed in Chile every three months. Prices, on the other hand, generally rise at much more frequent intervals, both those that are fixed and those that are free market. December was the first month of a readjustment period; February was the last. Thus the two sets of figures are shown not to have comparisons made between them but to illustrate how both a "best" and "worst" month today compare with a fairly typical month two years ago.

2/ The economic distortions in January 1973 caused some items to be in short supply at the fixed prices on which the table is based, causing a black market to develop in which the items were sold at higher prices. Nonetheless, since the majority of the items in the table were available in poorer neighborhoods at the fixed prices, the table is considered essentially valid for comparison purposes.

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As discussed in Section III.A. above, the GOC is employing stringent economic measures to cope with hyperinflation, balance of payments, and other economic difficulties in Chile. These policies are bringing special pressures to bear on the lower income groups, particularly in the form of rising unemployment. Unless special consideration is given these groups, their nutritional situation will likely worsen over the next several years. And long run improvement will also be difficult through economic means alone, barring a substantial economic boom, as occurred in Japan, or a complete radical distribution of income, either of which is considered to be most unlikely. Furthermore, while increased money income and more equitable income distribution are undoubtedly important factors, they cannot per se, satisfactorily improve the nutrition status of the country, and particularly of the vulnerable groups. For example, the above mentioned Wisconsin study compares the 1968-1969 data with 1971, when extensive redistribution of income took place. Though there was some improvement in the nutrition of the poorest group, the major part of the population remained seriously deficient in calories, and the poorest group continued to be deficient in proteins. Improved income may mean that people spend more on food, but not necessarily eat better.

c) Feeding Habits. Although not a problem unique to Chile nor to the developing world in general, studies indicate that deficient feeding habits and inadequate use of limited food resources available to low income families contribute to the malnutrition problem. Certain habits, such as the refusal of many Chileans to eat the inside section of bread, result in the waste of nutrients to the society as a whole.

The changing pattern of breast feeding is probably the most significant of the deficient feeding habits of the lower income groups. CONPAN and the SNS are aware of the deleterious effect of premature weaning and poor weaning practices on the health of infants and children. Despite the fact that contaminated water supplies and poor hygienic practices in preparing infant food make premature weaning

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especially hazardous in Chile, at the present time only 60% of the mothers breastfeed their children at birth and only 33% continue up to the third month, representing a major decline in the last three decades.

Nutritional deficiency between the age of 28 days and five months is far less prevalent in breastfed children. 1972 figures on deaths from nutritional deficiency showed that while only 15% of the infants were never weaned, 35% were breastfed for less than one month, and 50% were never breastfed. In another study of infant deaths, only 17.5% of the infants continuously breastfed showed nutritional deficiencies at time of death whereas about 45% of those never breastfed or breastfed for less than one month showed malnutrition.

A further dramatic example of these effects comes from two cities where breastfeeding habits differ substantially. In a city where 71% of the children are still breastfed at the age of 10 months, there is virtually no instance of subnormal weight, height, or cranial circumference at that age. In the other community, where only 5% of the children are breastfed up to 10 months, 37% of the children show subnormal height at that age, 42% show subnormal weight, and 20% show subnormal cranial circumference.

d) Environmental Sanitation. Lack of potable water and of adequate sewerage systems, as well as the irrigation of truck gardens with untreated sewage, are thought to be principal factors in the incidence of diarrheal diseases. These lead to malnutrition in infants and children through loss of appetite, vomiting, and malabsorption of the nutrients ingested. As indicated above, these factors weigh heavily in infant deaths.

Virtually every resident of cities and towns in Chile has access to a public water supply, some 80% through direct house connections. Although all water supplies are chlorinated, much of the equipment is old and functions only sporadically. PNAC data over a several year period show a significant seasonal

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increase in the malnutrition rate occurring every summer, when water-borne diseases are most prevalent and when contaminated fresh fruits and vegetables are on the market.

e) Cultural/Educational Level. GOC authorities believe that several educational and cultural factors affect nutrition in Chile. These include a general lack of knowledge of basic sanitation and personal hygiene, child care, and the nutritive value and proper preparation of food products. In a study of 860 low income families, 53% of the mothers did not know how to prepare powdered milk properly. 90% of the mothers were not familiar with the differences between the basic food groups.

3. Conclusion. It is evident from the foregoing that malnutrition is a particularly severe and growing problem among the poorer income groups. A significant amount of resources and time will be necessary to solve the underlying causes of this malnutrition in Chile. Real wage increases, changes in dietary habits, improvements in environmental sanitation, and improvements in general educational levels are all long-term high investment undertakings. In the meantime, there are short-term measures that can be taken to neutralize or alleviate the effects of the basic problems. For example, targeted free food distribution can compensate in part for low family income. Education campaigns to promote proper dietary habits, stress the importance of personal sanitation, and teach adequate food preparation can improve eating practices and help overcome deficiencies in environmental sanitation.

GOC authorities recognize the potential significance and importance of such short-term measures; on-going activities include massive nutrition intervention programs going back some 10-15 years. The extensive institutional infrastructure and significant annual financial support to programs of this nature give testimony to the GOC's commitment. The recently established national nutrition planning effort is a major step toward rationalizing and making more efficient and effective these short-term efforts while creating policy to deal with the long-term problem.

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C. Goal Statement

The nutrition sector goal is to reduce protein-calorie malnourishment in the target group, defined as children in the age group 0-15 years and in pregnant and lactating women within the poorest one-third of the Chilean population, by 50% within 10 years.

Protein-calorie malnourishment is the most widespread, debilitating, and difficult to eradicate form of malnourishment. It is found primarily in children, and there is evidence that a significant proportion of low-income Chilean children suffer from protein-calorie malnourishment. Approximately 60% of Chilean children aged 0-6 years participate in the National Program of Complementary Feeding (PNAC), which provides free milk and measures nutritional status of participating children. The malnourishment rate of these children is over 15% and increasing. No survey is currently available which estimates the malnourishment rate of 6-15 year olds in Chile. Nevertheless, it is appropriate to include them in the target group because early adolescence is typically an age of vulnerability to protein-calorie malnourishment in lesser developed countries. Moreover, the GOC currently has a significant financial commitment to a national school feeding program, the stated purpose of which is to improve nutrition in the 6-15 year age group. The program may or may not be continued. If it is continued, it is important to measure and improve its effectiveness. If it is not continued, then it will be important to measure the detrimental effects, particularly on the poor, and plan to solve the problems thus created.

Pregnant and lactating women are very vulnerable to protein-calorie malnourishment. The high malnourishment rate in pregnant and lactating Chilean women is indicated by the relatively high percentage of infants with low birth weights, the relatively high infant mortality in Chile, and by various studies as discussed in the above section.

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In the nutrition sector, it is only sensible to focus on the poorest one-third of the population. That appears to be where most of the malnourishment is concentrated. Indeed, one argument as to why malnutrition has received insufficient attention in the past is that, unlike most diseases, the rich and influential have never experienced it.

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## SECTION IV - PROJECT ANALYSIS

### A. Project Purpose and Rationale

The purpose of the project is to create a nutrition planning process in CONPAN on a national basis, responsive to Chilean requirements and problems. The development of a national nutrition planning process is the best approach to achieving the program goal and solving Chile's malnourishment problem. The rationale for this approach compared to the likely alternatives rests on two arguments.

1. Planning vs. Direct Nutrition Interventions. Chile has two expensive examples of the failure of direct nutrition intervention to solve the malnourishment problem due to the absence of planning. The PNAC and the School Breakfast and Lunch Program combined cost an estimated \$100 million in food value alone in 1974. They are probably among the largest and most costly nutrition interventions in the world today. With Chile's population expected to continue to grow and with the trend toward rising food prices unlikely to be reversed, the GOC can look forward to little more than increasing outlays for these programs in the foreseeable future with little or no increased results. Both of these programs, in one form or another, have been in operation for more than 15 years. Both were begun without planning, continued to grow unchecked to today's proportions, and were never examined with regard to their effect on nutrition status. Unquestionably, these programs have had some positive influence, but it is highly doubtful that the nutritional benefits approach the considerable costs. These two large programs need to be directed more sharply toward Chile's continuing nutrition problem through planning and evaluation. To a very large extent, this failure to focus nutrition efforts led to the creation of CONPAN.

One alternative approach to planning is to carry out a one-time intensive investigation of the nutrition problem, in order to design and implement an intervention to correct deficiencies. Both USAID and the GOC have rejected this approach. From the experience Chile has had with its current

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nutrition interventions, GOC authorities have come to realize that what is needed is a dynamic rather than one-time approach. Since malnutrition stems from a number of different, but inter-related sources, it must be dealt with in a systematic fashion over a period of time, taking changes into account as they occur. From A.I.D.'s side, this approach could quite probably result in requests for funding or other resources to support the selected intervention at levels much larger than we could adequately respond to under present circumstances.

The planning system proposed for funding by this loan will produce projects suitable for large scale financing, but A.I.D. will likely not be the primary financing source. Rather, such financing will be the responsibility of the GOC, either from its own funds or from requests to international financing institutions other than A.I.D.

The system to be funded by this loan will not be a blueprint to be followed over a five or ten-year period, such as a "five year plan". Rather it will be a dynamic process which keeps its eye on the goal, anticipates the future as best it can, and adopts to changes as they occur. Planning and implementation will be linked as part of the same process. Indeed, the system responds directly to the concepts and instructions presented in A.I.D. Policy Circular A-996, which says:

"The goal of A.I.D.'s nutrition program is to increase the capacity of LDCs to:

- carry out accurate analysis of the nature and magnitude of their malnutrition problem and of the food production-distribution-processing-consumption pattern;
- determine the most effective methods for addressing these problems through the planning in the relevant sectors; and
- implement nutrition-relevant programs and projects effectively and monitor and evaluate their effect."

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2. Nutrition Planning vs. General Economic Improvement Measures. The development community in general and A. I. D. in particular have recognized that malnutrition is a development problem as well as a welfare problem. Thus some argue that the nutrition problem in developing countries can be solved by steady economic progress, especially that which brings about improved income and income distribution. Under this view, good nutrition is a function of overall planning for development. On the other hand, a growing body of evidence, while recognizing that nutrition and development are closely related, indicates that malnutrition cannot be solved solely by an overall development strategy. Good nutrition is a cause of, as well as a consequence of, development.

Key GOC officials and Chilean professional circles endorse the view that economic advance does not necessarily translate into improved nutrition. Even should income increases occur, accompanied by more equitable income distribution, there is no automatic improvement in the nutrition status of the poor. The newly more affluent status of the poor may result in their being able to spend more on food, but not necessarily eating better. This phenomenon appears to have occurred in Chile. The above mentioned study by the Wisconsin Land Tenure Center revealed that even when extensive redistribution of income took place in 1971, there was only small improvement in the nutrition status of the poorest. However, the major part of the population remained seriously deficient in calories and the poorest groups continued to be deficient in protein. Additional evidence is piling up that malnutrition is related to a number of other factors, such as poor dietary habits, cultural practices, personal hygiene, environmental sanitation, and low educational levels, or a combination of all of these. Such a complex set of factors must be dealt with in a systematic social fashion. The GOC believes a planning system aimed directly at nutrition and closely linked to implementation is a basic requirement to get to the roots of the nutrition problem.

An alternative to a discrete nutritional planning system could be incorporation of nutrition planning into national planning, e.g., in Chile, establishing a nutrition planning section within

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ODEPLAN. Actually, CONPAN is part of the larger planning process. While CONPAN is an independent entity, ODEPLAN officers and other high GOC officials sit on CONPAN's Board of Directors and Technical Advisory Group, assuring close linkages to national planning. But CONPAN goes beyond planning into the linkage between planning and implementation. Indeed, that CONPAN is not an integral part of a larger planning bureaucracy is due to the high priority placed by the GOC on the nutritional well-being of its citizens.

In summary, the GOC views malnutrition as a development problem, caused by a complex set of factors, which can be solved only by a systematic approach. The device selected to implement this approach is the planning system described in Section II.A. above and in Annexes I and II. The system is one that has been designed with specific Chilean nutrition problems in mind and is tailored for specific Chilean needs. It is dynamic, intersectorial in outlook, and has its eye always on the target group and on the goal to be achieved.

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B. Institutional Analysis

1. Legal Authority. CONPAN was created March 18, 1974, by GOC Decree N° 354. The decree mandated to CONPAN the following functions:

- a) Define, propose, and coordinate a national food and nutrition policy in agreement with the socio-economic development plans of the country.
- b) Promote studies on food technology or any other related subject of national interest, as well as establish how nutritional problems affect the individual and society.
- c) Sponsor, orient, and establish priorities for research studies on applied basic nutrition and food technology, using mainly the human and material resources of universities, scientific institutions, and other existing private and public technical agencies.
- d) Establish regulations for the advertising of food products, and appraise and control their enforcement.
- e) Promote a national educational policy on matters connected with food and nutrition, suggesting regulations, encouraging the teaching and divulging of knowledge and techniques on the subject, and participating in the approval of programs, manuals, publications, and other material needed to achieve those objectives.
- f) Establish technical regulations on the nutritional quality and toxicological safety of every food product to be sold to the public or used by government agencies.
- g) Analyze existing institutional, technical, and economic resources for the implementation of the national food and nutrition policy, in the private as well as in the public sectors.

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h) Coordinate and evaluate actions to be undertaken by government agencies and by private enterprises in connection with food and nutrition.

i) Set up regulations with regard to the use of new elements in the manufacture of food for human consumption.

j) Propose and control regulations covering food and nutrition programs, and supervise and assess the results of such programs.

k) Study and check the sanitary food regulations and propose modifications.

l) Stimulate and program the training of professionals and technicians in the different fields of nutrition, by means of scholarships, courses, seminars, etc.

m) Study and approve agreements reached between national and international institutions to undertake specific projects or programs on food and nutrition.

n) Subscribe agreements with institutions and national or international agencies for undertaking specific projects on food and nutrition.

The decree further stipulated that CONPAN itself would not carry out specific projects, but would channel them through other governmental agencies, such as ministries, universities, and state institutions (e.g., ODEPLAN, CORFO). In other words, CONPAN decides policy, defines problems, develops plans, contracts with other entities to carry out research and development programs, finances such programs, monitors and evaluates the program results, and works with appropriate action agencies in wide scale application of policy if such is indicated. By not carrying out programs itself, CONPAN avoids becoming a huge bureaucracy and probably enhances its position within the GOC because of its need for constant cooperation with other agencies.

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2. Position within the GOC. CONPAN is what is known in Chile as a semi-autonomous agency. For support purposes, CONPAN is considered part of the GOC's Ministry of Health. Yet having its own budget and having the legal right to contract for private services give it a high degree of autonomy. Furthermore, three arrangements make CONPAN an effective interdepartmental agency. First, CONPAN's Board of Directors, chaired by the Minister of Health, is composed of the following: the Minister of Economy, the Minister of Agriculture, the Minister of Education, the Minister of Labor and Social Security, the Director of the National Health Service, the Director of the National Commission for Scientific and Technological Research (CONICYT), the President of the Council of University Rectors, and the Vice-President of the National Development Corporation (CORFO). The Controller General is a non-voting member. A review of the Board's minutes indicates that Board meetings are held regularly, are well attended, and that participation is active among the members.

The second arrangement making CONPAN an effective interagency body is its participation in the advisory group which directly counsels the GOC's ruling Junta on social matters. This interagency body is composed of nine ministers and the representatives of several other agencies having social-welfare responsibilities. A review of the minutes of this advisory group indicates that CONPAN is frequently represented and has actively presented its policies to the group.

The third arrangement is that CONPAN has legal access to information and services of all other governmental entities (Article 6 of the Decree). Some personnel from other agencies are detailed to CONPAN on a semi-permanent basis as part of its Technical Advisory Group while others are detailed to it for specific assignments. In practice, CONPAN has frequently requested the use of such personnel from other GOC agencies, and CONPAN has paid the other agencies for such services. These arrangements enable

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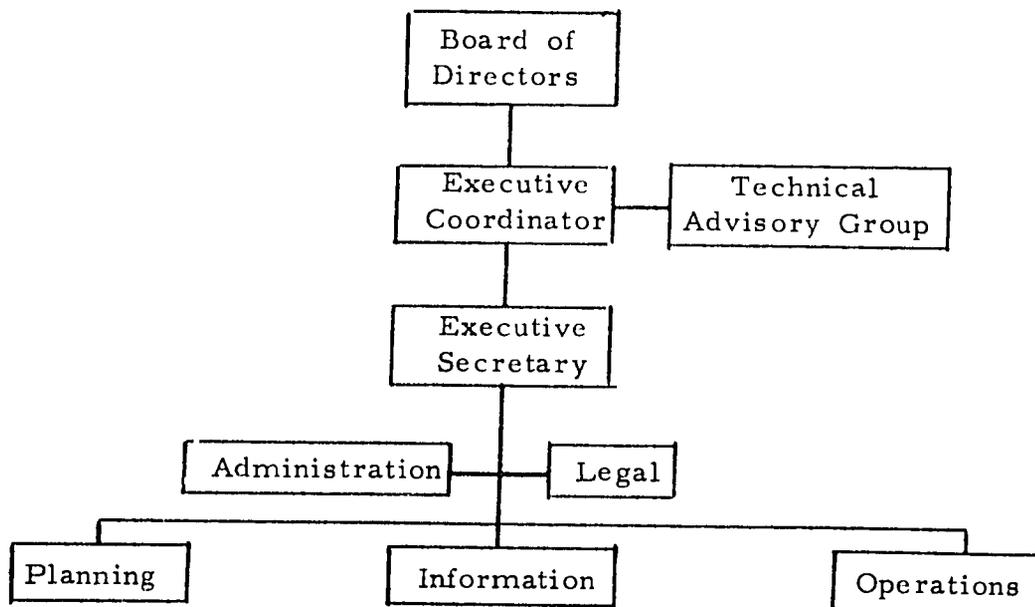
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CONPAN to obtain needed staff and services through force of law. CONPAN currently has over 100 persons working for it from other agencies, including the SNS, CORFO, and the university system. These people, exposed to national nutrition planning, later help CONPAN in its dealings with the various governmental entities. Likewise, if the GOC ruling Junta approves a CONPAN policy recommendation, CONPAN can make other agencies responsible for its enforcement.

3. Organization and Staff. CONPAN currently has ten employees, of whom six are professionals and the remainder clerical. As discussed above, there are also more than 100 persons whose services are being utilized by CONPAN on a full time or regular part time basis. CONPAN's organization chart is the following:

CHART II

CONPAN's ORGANIZATION CHART



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The Executive Coordinator relays policy to and from the Board of Directors, negotiates CONPAN's budget with the GOC and represents CONPAN in its dealings with various GOC and private entities. The position is currently held by a nutritionist of renown, a man who holds a Ph.D. in biochemistry as well as an M.D.

Advising the Executive Coordinator is a Technical Advice Group. It is composed of 15 persons, all selected and appointed by the Executive Coordinator, of whom three are from CONPAN, three from the SNS, one from the Ministry of Agriculture, one from ODEPLAN, one from CORFO, two from the Ministry of Education, three from the university system, and one from the Ministry of Economy. Though paid by their respective organizations, they spend from half to full time actually working for CONPAN and provide valuable working services. For example, at present one working subgroup is drafting a new food act CONPAN is to present while another is coordinating the National Continuous Nutrition Survey.

The Executive Secretary runs CONPAN on a day-to-day basis. In addition to having an administrative and legal staff, he is responsible for the three line offices which formulate policies and carry out CONPAN's operations. The position is currently held by a man with a Ph.D. in chemical engineering from a U.S. university and with management experience.

Each of the three line offices has its own budget. The Planning Office develops all medium and long term nutrition policies for Chile. The Information Office brings together all nutrition and other data necessary for the fulfillment of all of CONPAN's planning, control, and evaluation activities. The Operations Office works in conjunction with implementing agencies.

In order to avoid becoming a large bureaucracy, CONPAN intends to keep its permanent staff small. Each activity is headed by a project manager, who is one of the persons detailed to CONPAN from other

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governmental agencies or contracted from private institutions. The project manager reports to the head of one of CONPAN's three line offices as appropriate, although on an oversight, not a day-to-day basis. CONPAN's Legal and Administration staff offices provide the necessary contracting and financial support. USAID considers CONPAN's staff to be exceptionally well qualified and adequate to handle the anticipated workload. This will be reviewed annually, however, in the required implementation plan and the formal annual review.

4. Budget. During FY/CY 1974, CONPAN's budget was equivalent to roughly \$ 200,000. For FY/CY 1975, CONPAN's budget is 3,343,000,000 escudos, equivalent to approximately \$ 1.0 million<sup>1/</sup>, or about a 5-fold increase. Of this amount, 92.6% is budgeted for projects, i.e., for the costs of contracting services from public and private entities and for goods needed to carry out nutrition programs. Only 3.9% of CONPAN's budget is for direct personnel costs. 0.7% is for capital expenditures (office machines, furniture). The remaining 2.8% is for other costs of operation (rental, utilities, postage, supplies, etc.).

5. Accomplishments. At the time of this writing, CONPAN has been in existence only one year. Nevertheless, its accomplishments to date have been impressive, and a review of them indicates the type of authority CONPAN in practice wields within the GOC. These have been:

a) First steps in the conceptualization and formulation of a nutrition information system for Chile (to be further elaborated under the proposed A.I.D. Loan Project). In addition to formulation of the ideas presented elsewhere in this paper, these steps have included working with the National Health Service and the University of Chile to develop the National Continuous Nutrition Survey, which the latter two groups have carried out on a sample basis;

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<sup>1/</sup> Though the brokers' exchange rate has climbed from E° 1,800/dollar January 1 to E°3,900 at the time of this writing, CONPAN managed to change a substantial portion of its 1975 budget to dollars early in the year when the rate was more favorable, and continues to be able to change escudos to dollars at the bankers' rate of E° 3,500/dollar. \$1.0 million is thus a realistic estimate of CONPAN's real budget for the year.

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developing a project proposal for the use of the ERTS satellite in gathering agricultural data; and working with CORFO to develop a census of all food processors in Chile, including capacity, production, efficiency, quality, and future plans for investment and expansion.

b) An in-depth study of the milk distribution program, which has led to the following changes: an increase in butter-fat content from 12 to 26% in milk distributed to infants 0-2 years old; a change in packaging, resulting in a decrease in damaged containers from 12% to less than 1% and in greater acceptability of the product by the consumer; a pilot project carried out by the University of Chile with A. I. D. grant assistance to determine the feasibility of acidification of milk to prevent its use by adults; a pilot project to determine the feasibility of adding iron salts to milk, since an estimated 70% of Chilean infants suffer from iron deficiency (the results were favorable); and a formulation of a project to add high protein non-milk additives to milk for 2 to 6 year olds, to begin in early 1975. In addition, CONPAN carried out a study on the efficiencies of the milk distribution, finding several weaknesses which will be the subject of 1975 pilot projects. CONPAN also began a study of what additives might be included in the milk distributed to pregnant and lactating mothers.

c) Development of a project proposal for day-care centers in the poorest urban neighborhoods, in conjunction with the other members of the Junta's social advisory group.

d) initiation of a pilot project, in conjunction with the National Health Service, to see to what degree already mal-nourished rural children can recuperate their physical and mental well-being. As part of this program, the University of Chile is developing methodologies for the affected rural families to produce nutritious foods in gardens to prevent further malnutrition within the families. The rural development arm of the Ministry of Agriculture is cooperating in the education and production aspects. The U.S. PVO, SAWS, is collaborating in the feeding and education portions.

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- e) Development of a plan by which the estimated 5,000 infants under 2 years old with the severest third-degree malnutrition can be treated outside of the existing hospital system, which is generally too costly and inaccessible to them.
- f) A complete evaluation of the School Feeding Program, leading in 1974 to substantial cuts and to restructuring the program toward the neediest groups. In 1975, these trends will be continued under CONPAN's direction in collaboration with CARE. Furthermore, CONPAN is studying methods of centralizing the preparation of the meals to reduce costs, ensure more sanitary preparation, and control nutritional content.
- g) Preliminary planning for nutritional education in Chile, on four levels: short television courses on nutrition, to begin in 1975; pamphlets and courses to be given at Mother's Centers, in conjunction with the University of Chile; courses on nutrition at the primary and secondary school level, in conjunction with the Ministry of Education; and consumer education, relating calories, proteins, and prices, in conjunction with the University of Chile.
- h) Initiation of a program to encourage breast feeding, including use of television and radio commercials in conjunction with the U.S. PVO, CRS, and its local counterpart, CARITAS/Chile; initiation of a pilot project in conjunction with the National Health Service in a poor urban area to train pregnant women in the benefits of breast feeding; and experimentation through the Obstetrics Departments of the University of Chile and the Catholic University with drugs which stimulate lactancy, in conjunction with an AID/W centrally funded project with Johns Hopkins University.
- i) Recommended to the GOC the institution of a decree requiring all weaning foods to be enriched to acceptable levels. The GOC passed the decree; CONPAN

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delegated its enforcement to the SNS; and CONPAN, through the universities, is demonstrating appropriate technologies to food plants so their products will conform to the law. USAID has supported this effort through provision of soy flour to use in the fortification experiments.

j) Initiation of a pilot project, in conjunction with the University of Chile, to enrich sugar with vitamin A, in an area of Chile where over 80% of the population suffers from vitamin A deficiency. The results of this project have been extraordinarily satisfactory.

k) Preliminary planning of a campaign to enforce the law requiring salt to have iodine additives, and to study the incidence of goiter in certain areas of Chile.

l) Formation of a commission, in conjunction with the National Health Service, to revise the National Food Code.

m) Initiation of pilot projects and feasibility studies in utilizing potato flour as a flour extender for bread, in producing cooking oils from grape seeds, in extracting sugar from potatoes, in new packaging for dairy products to encourage greater milk production in Chile, and in utilizing soy and other vegetable products as meat extenders. These studies are particularly relevant because of Chile's need to import wheat, cooking oils, sugar, milk, and meat. If Chile could become self-sufficient in these products or if locally produced products could be substituted for them, their cost would be more in reach of the poorer members of the population. This alone would have substantial nutritional benefits.

n) Initiation of studies to encourage new agro-industries, in order to stabilize markets, increase food production, and lower food prices to the consumer. CONPAN has coordinated the formation of a team of nine universities and institutes, which will be able to give technical assistance to new agroindustries as they are formed and to reorient existing agroindustries toward better nutritional points of view.

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Through CORFO, CONPAN has surveyed all existing agro-industries in Chile, to determine capacity, production, quality, and future plans for expansion. Based on this study, CONPAN has planned a symposium during 1975 for various universities, institutes, and governmental agencies, to discuss the problems of Chile's food industry, how the food industry might be coordinated into Chile's nutritional programs, and what new agroindustries would be useful from a nutritional and developmental viewpoint.

o) Initiation of the first steps in setting up a symposium with other Andean nations, in order to discuss nutritional problems of mutual concern and the possibility of joint projects.

6. Future Plans. The proposed Loan will somewhat more than double the funds CONPAN has available over the next four years for nutrition planning activities and projects. As discussed above, CONPAN believes its current staffing pattern and levels adequate for its expanded operations. CONPAN realizes, however, that there may be increased work loads in respect to contracting, financial management, and oversight activities concerning the additional pilot projects and the information system. CONPAN intends to add to the staff of its Administration, Legal, and possibly its line sections as the workload increases. These needs will be evaluated in the required annual implementation plans. But as far as implementation of individual activities is concerned, CONPAN will continue to contract with the public and private entities to provide manpower to implement its projects and activities.

The question may arise as to whether CONPAN's responsibilities outside the Loan Project scope, such as its regulatory responsibilities, might not grow to a point where they might impede the implementation of the activities under the Loan Project. It is expected that this will not be the case. Since CONPAN is not an executing agency, it will provide policy and coordinate implementation, but will not actually carry out the regulating function. For example, CONPAN recommended to the GOC that all weaning foods

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have a certain minimum protein content, and the GOC passed this recommendation into law. That law states that the SNS is to be the agency responsible for actual inspections and testing. The SNS must report its findings to CONPAN on a regular basis and CONPAN will then advise the GOC as to whether it believes the law is being complied with. If CONPAN wants to test to see what nutritional impact this policy has had, again it will contract with the SNS or some other organization to test and provide data. In short, none of CONPAN's responsibilities will involve a substantial incremental workload.

7. Summary. Nutrition is not an area that can be approached in a vacuum. CONPAN has been organized to work in an intersectorial manner. It not only has close and constant contact with other GOC entities through its Board of Directors and through participation in the Junta's social advisory committee, but it has the legal right to call on any other GOC body for information and for services in carrying out projects and programs. CONPAN has purposely kept its staff small to avoid creating a bureaucracy; yet its staff, its budget, and its legal clout are adequate for it to fulfill its responsibilities of formulating policies and overseeing those actions, implemented by other agencies, necessary to carry out such policies. CONPAN works not only in theory but in practice. From the list of its first year's accomplishments, one can see that it has a knowledgeable and creative staff, and sufficient power and authority to accomplish the tasks it has been mandated; and USAID believes that it will continue to be able to do so in the future.

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C. Financial Analysis

1. Project Costs. The estimated distribution of project costs is shown in Table VIII on the following page. The GOC contribution to the Project has been estimated based on the continuation of GOC budget approvals for CONPAN at approximately the same levels in dollar terms as for 1975. The operational costs of CONPAN include the logistic support costs of the technical assistance consultants, i.e., office space, furniture, equipment, utilities, and secretarial and clerical support staff. Because of the nature of and purpose of the Loan, it is reasonable to include on-going CONPAN salary costs as part of the GOC contribution. Contributions for local service contracts and pilot projects will be made in the form of actual cash payments for work performed. The \$ 4,000,000 contribution is equivalent to 44.4 percent of total costs.

Because it is impossible to predetermine all the activities to be undertaken during the course of the project, an accurate dollar/local currency breakdown cannot be made. Roughly, however, it is estimated that \$ 1,500,000 of the Loan will be spent for dollar costs, comprised of \$ 700,000 for technical assistance provided by U.S. consultants, \$ 150,000 for those professional/consulting services involving dollar components, and \$ 650,000 for dollar costs of projects, such as the costs of imported equipment, materials, and foreign services.

2. Financial Feasibility. The typical criteria for capital assistance activities are not applicable for the assessment of this Project's financial feasibility. The Project is a technical assistance activity for establishing a planning capacity and has some elements of a feasibility study project loan. The judgement of whether project cost estimates are adequate and appropriate for achieving the Project purpose is centered around two factors: (1) the design of the package of technical assistance for CONPAN; and (2) the nature and number of special study activities (e.g., measurement, policy and program analyses, crop specific studies) and pilot projects.

The technical assistance estimates were developed only after basic decisions were made about the planning system that CONPAN will seek to install. Annex II discusses the planning system and the relationships of the technical assistance inputs.

TABLE VIII

ESTIMATED DISTRIBUTION OF PROJECT COSTS BY YEAR  
(000's of \$)

	<u>Year 1</u>		<u>Year 2</u>		<u>Year 3</u>		<u>Year 4</u>		<u>Total</u>	
	<u>AID</u>	<u>GOC</u>	<u>AID</u>	<u>GOC</u>	<u>AID</u>	<u>GOC</u>	<u>AID</u>	<u>GOC</u>	<u>AID</u>	<u>GOC</u>
CONPAN Operational Costs	-	100	-	100	-	125	-	125	-	450
Technical Assistance to CONPAN	225	-	275	-	225	-	100	-	825	-
Professional/Consulting Services	325	500	450	450	425	275	350	300	1,550	1,525
Pilot Projects	150	400	675	450	900	600	900	575	2,625	2,025
<b>TOTAL</b>	<u>700</u>	<u>1,000</u>	<u>1,400</u>	<u>1,000</u>	<u>1,550</u>	<u>1,000</u>	<u>1,350</u>	<u>1,000</u>	<u>5,000</u>	<u>4,000</u>

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The design described is not necessarily in its final form. Refinements and modifications will undoubtedly be made as the consulting contract is negotiated and during actual project implementation. Nevertheless, the design is sufficiently sound to permit a reasonably firm estimate of the cost of this component of the Project.

Moreover, the estimates in this document are not intended to establish a rigidly fixed distribution of costs within the Loan total of \$ 5,000,000. Financial adjustments between the technical assistance elements and the other Project components of special studies and pilot projects will be permitted as necessary and appropriate. Any such redistribution of funding levels of the individual components will be subject to USAID approval and reflected in implementation letters. The evaluations expected annually during Project implementation will be useful in helping to determine appropriate redistribution of Loan funds.

Determination of the nature, number, and costs of the special studies and pilot projects that CONPAN must undertake during the four-year implementation period in order to achieve the Project purpose (i. e., establishment of a planning capacity) must be made on a subjective basis at this point in time. Annex I illustratively lists the types of activities that will be undertaken. The items on this list represent the current best judgments of CONPAN, USAID, and several technical consultants. Those indicated for first year implementation are, of course, in a much more definitive form than for subsequent years. Also, the initial year activities are largely devoted to gathering basic data needs for the planning and information system which will consequently enable decisions to be made about the types of pilot projects to be financed and their performance specifications. Generally, during the course of the Project, the activities accomplished during any one year will tend to determine, or at least influence, the actions programmed for the following year. Obviously, in such a situation a complete and definitive listing of the nature and costs of these components of the Loan (beyond the estimates shown in Annex I) would be meaningless and inappropriate. The amount of Loan funding allocated for these activities, then, is based on the level that CONPAN is expected to be able to absorb effectively during the four-year implementation period in view of recent past efforts and expected growth in capacity as a result of the technical assistance provided.

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3. Disbursement Period. During the Intensive Review, CONPAN and USAID considered whether the Project could be carried out within the three-year disbursement period now established as a general A.I.D. policy preference. There is no practical way of dividing the Project into two consecutively phased segments, one to be funded now and one for a future follow on loan. Two other possibilities were considered: compress the implementation timetable by one year; or simply do less, e.g., eliminate the last year's work. Either measure would unduly jeopardize the success of the Project.

The project purpose deals with establishing a certain institutional capacity within a newly created entity. The institutional capacity - a national nutrition planning function - involves an innovative effort. The particular design of the planning system to be installed by the Project is unique to the nutrition sector. The early stages of the Project are heavily weighted toward the gathering of data and getting the information system operating effectively. It is not expected until about the fourth year that the fundamental aspect of having a satisfactory planning capability will crystallize within CONPAN. This is the ability to receive feedback and evaluate and learn from it - to close all three loops, to use the conceptual framework presented above. Certainly, some of this ability will be imparted by the end of the third year, and it is expected that all funds will be committed by the end of the third year; but the continuation of A.I.D. inputs through the fourth year, including technical assistance, is considered essential by CONPAN and USAID to assure that the "learning process" basis of the planning process is well established and that all necessary pilot activities are carried out. To limit the project to three years would require a commitment period of little more than two, which would unduly jeopardize the conduct of several pilot activities which cannot be fully planned until information collected the first year is available.

Accordingly, USAID hereby requests that upon favorable DAEC review, the Latin America Bureau recommend the Administrator's approval of a four-year disbursement period for this loan.

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4. Repayment Prospects. The Government of Chile, as Borrower, will assume full responsibility for repayment of this Loan. As discussed in USAID's recent DAP submission and other recent economic reports, including that of the International Monetary Fund, Chile's long term economic growth and foreign exchange reserves prospects appear favorable. The rescheduling of Chile's foreign debt currently under consideration reflects difficulties expected to be crucial only over the short term. It is not expected that debt payments on any loans with repayment terms such as A. I. D. offers will be rescheduled.

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D. Project Benefits

1. Economic Benefits. The effect of good nourishment on national economic development is linked to considerations of economic return on investment in human capital. The fact that malnourishment adversely affects mental and physical development, lowers productivity, and shortens the span of working years argues for the importance of good nourishment to economic development.

Reducing malnutrition in the target group by one-half should lower the number of individuals requiring costly medical care for second and third degree malnutrition. It should also reduce the incidence of disease in general in Chile, since there is evidence of fewer infectious diseases among wellnourished individuals. (The environmental sanitation pilot project will also contribute to this.) It should also make education more efficient, since well-nourished individuals have a greater attention span and greater retention of what is taught. In all, reducing malnutrition will create a more productive populace in Chile.

Though such factors are difficult to quantify, a limited attempt was made in a 1970 study which analyzed the potential return to the Chilean economy from eliminating severe childhood malnourishment<sup>1/</sup>. The study looked at the effects of poor mental development brought about by malnourishment in early childhood.

The logic of the study was roughly as follows: (a) Early malnutrition leads to intelligence loss in children. (b) Because of their low intelligence on entering school, the retarded children receive somewhat lower "quality" educations, leave school earlier, etc. (c) Thus, when they enter the labor force, they are doubly handicapped, by lower intelligence and less schooling; as a result, they earn lower wages. Analyses of IQ's in well and malnourished Santiago children and of the impact of IQ differences on the earnings of Chilean workers

<sup>1/</sup> Marcelo Selowsky and Lance Taylor: "The Economics of Malnourished Children: An example of Disinvestment in Human Capital", pp.17-30 of Economic Development and Cultural Changes, Vol.22, No. 1, Oct.1973, the University of Chicago Press.

concluded that the earnings of malnourished individuals would have been considerably higher had they been well-nourished. Discounting at 10%, for an annual cohort of 25,000 malnourished children, resulted in an economic loss approximately equal to 1% of Chile's GNP, or roughly \$75 million, over their working lives at present value. How much of this potential could be realized in an economy which is currently beset by high unemployment and is undergoing rapid changes, when the first returns are many years off (when the first cohort enters the labor force), is difficult to predict. Nonetheless, a productivity benefit of even half the above amount would be impressive compared with the costs necessary to achieve such reduction.

A further economic benefit of the Project will be a more efficient use of Chile's resources devoted to social-welfare programs. It is expected that the PNAC, school feeding, and various PVO programs will be modified based on CONPAN study to allocate resources more efficiently and effectively to target groups.

It is difficult to quantify the above benefits. The above mentioned study would indicate that reducing the malnourishment of 150,000 persons would create several hundred million dollars in economic benefits through increased productivity. Millions of dollars more will be saved in increased health. Surely the cost/benefit ratio is extremely high for this \$9 million project.

2. Social Benefits. Economic and social benefits can hardly be separated. Well-being is a state which not only increases one's potential for higher earnings but also increases the satisfaction one can attain from life, whether or not one's earnings potential is ever reached. To quote one of the classic texts on nutrition<sup>1/</sup>, poor families, for all their economic privation, "have the potential for enjoying a wide range of non-economic goods - nature, love, friends, good talk at the coffee or tea stall, the joy of children. It is well-being, not income, that determines whether a man, rich or poor, has the capacity to enjoy these most fundamental sources of human satisfaction."

A number of social benefits flowing from this Project will directly affect the well-being of the target group. These include a reduction in hunger and a reduction in the incidence and severity

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<sup>1/</sup> Alan Berg, The Nutrition Factor, Brookings Institution, 1973.

of disease. Also, there will be an increase in the probability of survival beyond childhood. Chile has a high infant mortality rate relative to other South American countries. Among Chile's poor population, it has been estimated that more than 1 out of 10 children die before they reach one year of age. The recent PAHO study on childhood mortality found that over half the childhood deaths in Chile were linked to malnourishment. This increase in survival probability may lead to a desire for smaller families within the Chilean population.

In addition to reduced hunger, reduced disease, and increased survival, reduction in malnourishment will lead to stronger bodies and stronger minds. Better nourishment in pregnant and lactating women improves the nutritional status of the unborn or nursing infant. In infants, recurring bouts of protein malnourishment produce layered skeletal structures which break more easily than normally developed bones. Malnourishment also causes reduction in brain size, and there is increasing evidence that it is highly correlated with lower intelligence quotients. Well nourished children have higher energy levels, show greater curiosity, and are more responsive to maternal and other stimulation. They perform better in learning motor skills and later on in school.

The Project will also aid women in their roles as mothers. The encouragement of breast feeding, the improvement of infant and maternal feeding programs under the PNAC, the improvement of weaning foods through CONPAN-recommended legislation, the purification of water supplies, and the redirection of PVO feeding programs toward younger children all will make women more effective in this role. In short, the Project will enable the entire family and the total society to benefit from the rewards of healthy, energetic children for whom survival is likely.

A final point is that the Project is likely to influence other Latin American or other developing countries to institute planning processes similar to the one CONPAN will establish in Chile. The approach being taken in this Project is unique and will surely arouse interest in nutrition circles. CONPAN is in touch with the officials concerned with nutrition of the Andean and several other Latin American nations and plans to inform them regularly about the success of the Project. Consequently, the above benefits may well be multiplied several times over.

3. Role of Women in the Development Process. In Chile women traditionally have been more independent than in other Latin American nations. There is little if any discrimination against professional women, and it is expected that women will be employed in various capacities under this Project on an equal basis with men. With an extensive network of day-care centers, with ready access to education for their children from pre-school on, and with non-discriminatory labor laws, women have the opportunity to work on a parity with men in Chile.

In many parts of the world, there is a cultural pattern of giving preference to feeding male children before female children. This does not appear to be the case in Chile, where the mal-nourishment rate is the same for male and female children participating in the National Program for Complementary Feeding. This pattern probably holds true for all segments of the young population. However, if differences are found among the female and male children not participating in the PNAC, then this Project can make a significant contribution to the role of women by working to eliminate that difference. Also, in many countries, males outnumber females in school attendance, particularly in rural areas. If this is valid for Chile, then the school feeding program here could be benefitting males more than females. One activity of this Project will be to look at such possible problems, taking into account factors such as intra-family distribution changes due to having a child in a school feeding program, and to propose solutions if problems are discovered.

CONPAN is aware of and sensitive to the status of women in regard to nutrition. If, for example, it is found that existing maternity benefits or labor legislation is adversely affecting the woman's desire to breast feed, CONPAN would be able to recommend changes to the highest levels of the GOC through its participation in the Junta's social advisory group. If it finds that girls are not participating in certain feeding programs on an equal basis with boys, it is prepared to recommend appropriate changes. In short, an effort will be made during project execution to ensure that both men and women share in the benefits of good nutrition and well-being in Chile.

4. Environmental Considerations. The Project is not expected to have any negative effects on the macro-environment. The project may indirectly encourage increases in the production of certain crops or in the catch of certain fish; it may also encourage the development of certain food processing industries. On the more positive side, the environmental sanitation pilot project will directly improve the purity of water supplies in various communities.

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SECTION V - PROJECT ADMINISTRATION

A. Implementation Plan

1. Timetable. The timetable for key loan implementation events is as follows:

- |  |               |
|--|---------------|
| - Loan Authorization   | June 1975     |
| - Loan Agreement signed and first implementation letter issued | October 1975  |
| - Initial conditions precedent to disbursement met             | January 1976  |
| - Technical assistance contract signed                         | February 1976 |
| - First arrangement for local services made                    | February 1976 |
| - Technical consultants on board                               | March 1976    |
| - First pilot project approved and initiated                   | June 1976     |
| - First loan evaluation  | February 1977 |
| - Loan fully disbursed   | January 1980* |
| - Final evaluation and loan completion report                  | February 1980 |

2. Procurement. Because of the large number of local contract actions involved in loan implementation, the Loan Agreement will contain a condition precedent to initial disbursement requiring the preparation of local contract guidelines. The guidelines will include contract formats with standard clauses for incorporating many of the A.I.D. and GOC requirements applicable to such contracts (e.g. payment documents, reports, books, records, etc.). USAID intends to exercise a right of veto over all local services contracts over \$ 5,000 until such time as a satisfactory contracting

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\* Section IV-C-2 discusses the need for a four-year disbursement period and requests that the appropriate approval be processed.

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experience is demonstrated by CONPAN. As CONPAN gains experience in managing A.I.D. Loan funds, USAID would alter its veto authority accordingly through implementation letters. There could, for example, be an increasing maximum value on contracts below which A.I.D. veto authority would not be necessary. Review of this process will be part of the annual evaluation.

The Loan Agreement will also contain a recurring condition precedent requiring CONPAN to submit a description, budget, and justification for each pilot project selected for A.I.D. financing. USAID will review such documentation and will veto any proposal outside the Loan scope or not in accord with appropriate A.I.D. regulations. The documentation presented would provide a brief implementation and procurement plan for each pilot project. For example, the plan would include drafts of appropriate announcements in the U.S. Commerce Business Daily for procurement of equipment or other goods under the project. Also, the plan would indicate when any future USAID approvals would be appropriate during the course of the pilot projects, e.g., local construction contracts. The details of the review procedures will be stated in Implementation Letter #1. They will be reviewed during the annual evaluations and modified accordingly to reflect increased CONPAN experience and capacity.

Most of the technical assistance to CONPAN will be furnished through a single, comprehensive consulting contract. The contract will provide for all the long term advisors and many of the short term specialists. The contract will be let through normal A.I.D. procurement procedures for technical assistance including soliciting proposals. Other short term specialists will be hired by CONPAN either individually or through

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task order type arrangements with qualified firms or universities. A more detailed description of the specifications for technical expertise is found in Part C of Annex II.

The professional and consulting services contracts will generally be with local universities, private firms, and semi-autonomous GOC technical entities. Occasionally it may be necessary to obtain these services from outside of Chile, particularly where very specialized knowledge or skills are required. Pilot projects will involve a mix of consulting services, imported and local procurement, construction or installation costs, and operational costs. The implementation plan submitted as part of the justification for each pilot project will set forth the specific procurement details on a case by case basis. While CONPAN will have the ultimate responsibility for assuring sound use of the Loan funds, its structure will enable it to utilize the capacities of other GOC entities to assist it with procurement arrangements, construction supervision, technical monitoring, etc.

Contracts for services will be on a lump sum or cost plus fixed fee basis as appropriate. For example, the major technical assistance contract will be cost plus fixed fee in view of its long term frame and the probable need to make refinements in the scope of the services as the Project progresses. Some of the local contracts for professional and consulting services could be on a lump sum basis when CONPAN has gained enough experience to determine with considerable precision the scope of the services and likely costs. Disbursements will be made through the A.I.D. letter of commitment procedure for dollar costs and through the reimbursement procedure for local costs. In the event the letter of commitment procedure is found to be too cumbersome for a particular need (e.g., importing equipment from another Latin American country for a pilot project), USAID will also reimburse CONPAN for dollar costs provided satisfactory documentation is obtained.

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3. Monitoring. A condition precedent to initial disbursement will require CONPAN to establish the guidelines for an internal monitoring system in order to supervise the progress of the various activities under the Loan Project. The system, once in place, will provide CONPAN management with essential monitoring information on a monthly basis. CONPAN will prepare quarterly summaries of these reports for USAID. The summaries will cover all current activities during the reporting period, naming the contractor or agency responsible and providing information on project progress and financial status. In addition, CONPAN and USAID will hold a formal annual review of progress of the project, coinciding with the annual evaluation review.

In addition, CONPAN will receive quarterly progress reports from the technical assistance consultant. These reports will be forwarded to USAID together with CONPAN's own comments and remarks.

B. Evaluation

1. At the Sector Goal Level. The goal of the project is to reduce the malnourishment rate in the target group by half within ten years. At the same time, the severity of those malnourished should not increase, as measured by the proportion having grades II and III malnourishment.

Given the current economic and nutritional realities of Chile, the trend of increased malnutrition will likely worsen during the implementation period of this Loan. The target after four years, however, is to stop the worsening trend and to begin its reversal. Thereafter, interim progress can be measured by comparing malnutrition of the day with a line between the malnutrition rate of the peak point and the malnutrition rate to be achieved at the end of the tenth year (half of the baseline rate). There will also, of course, be significant improvement in the nutrition of those of the target group served by various pilot activities, which will be discussed in the next subsection below.

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The achievement of progress toward the goal will be determined from the following physical measurements. Baseline data will be gathered the first year as one of the activities of the Project (see Activity #6 in Annex I, Part C).

a) In the age group 0-6 years, weight-for-age measurements according to the "Gomez" method.

b) In the age group 6-15 years, a combination of measurement of height, weight, skinfold thickness, arm circumference, and sitting weight according to the "Anthropometric Score" method.

The above two indicators of nutritional status are capable of classifying the entire 0-15 year old population into two groups: well-nourished and malnourished. The malnourished group can be further classified into three grades of malnourishment (I, II, III), as discussed in Section III-B.

c) In pregnant women, low birth weight (below 2,500 grams) or stillbirths will be used as the indicator of malnourishment in the mother.

d) In lactating women, the existence of malnourishment in the nursing infant (according to the Gomez method) is the indicator of malnourishment in the nursing mother.

The Gomez and Anthropometric methods are selected as the best indicators of malnourishment in children for several reasons:

a) They are very sensitive indicators of change in the intake and absorption of protein and calories. Thus, for example, if a child's intake of protein and calories is reduced below the required standard, one of the first consequences in all children is that the body stops growing.

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b) They are widely used, and therefore the techniques are well developed and tested.

c) They have been shown to correlate highly with other indicators of malnourishment.

d) Their widespread use allows for comparison with other experience and theory.

e) The Government of Chile is currently operating a program which applies these measures, thereby establishing baseline data with a minimum of cost and problem.

Low birth weights, stillbirths, and malnourished nursing infants are selected as indicators of malnourishment in pregnant and lactating women because:

a) They are reliable indicators of the most severely malnourished pregnant and lactating women.

b) They are available from existing National Health Service statistics, whereas other measures, such as the use of clinical signs, are quite expensive.

Changes in the malnutrition rate must be considered over a sufficiently long duration of time. Although it is often possible to observe variations in malnourishment rate within any one year, these variations may be tied to various seasonal phenomena, such as wet and dry periods or harvest and growing seasons. Year-to-year change is a more reliable measure of improvement.

The malnourishment rate alone does not account for severity of malnourishment in children. Thus, for example, a population would be worse off if its overall malnourishment rate in children remained the same but a large proportion of its Grade I malnourished children became Grade II or III

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malnourished. Generally, however, this is not what happens. Rather, declines in the malnourishment rate are usually accompanied by a constant or decreasing proportion of Grades II and III malnourished. There is no reason not to expect this to be the case in Chile as well, but this expectation will be tested by obtaining: (a) proportion of Grade II malnourished to the total, and (b) proportion of Grade III malnourished to the total. These proportions should never increase.

Several methods will be used to collect the data which will allow verification of the degree to which the target levels are being achieved. These include the SNS measurements associated with the PNAC program, the Continuous Study of Nutritional Status, and other studies to be carried out under first year Activity #6, further discussed in Annex I.

2. At the Project Purpose Level. The project purpose is to establish in CONPAN a nutrition planning process which (a) improves nutritional cost-effectiveness of on-going projects, (b) generates, selects, and helps to implement new projects, (c) monitors effectiveness, and (d) learns therefrom. It is a continuous process in which "feedback" from the previous experiences is then "fedforth" into the next round of activities. Within four years the capability is to be created; within ten years that capability should achieve a 50% reduction in the malnourishment rate.

USAID believes that five indicators are sufficient to assure that the project purpose has been met and the capability created:

a) Improved On-going National Projects. By the end of four years CONPAN should have demonstrated its capacity to improve the nutritional cost-effectiveness of on-going national projects. It should be able to demonstrate such improvement in the two major national nutrition

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projects in Chile (e.g. the National Program of Complementary Feeding, and the School Breakfast and Lunch Program).

The nutritional cost-effectiveness of a project refers to the reduction in the malnourishment rate of the target population caused by the project, divided by the total cost of the project. Changes in the malnourishment rate for the total target population may be small, and therefore only the target population served by the project will be used rather than the entire target population. Because intra-family distribution of nutrients is well-known to be a problem, reduction in the malnourishment rate in families of the project target group will be used. Thus, for example, the measure will account for changes in the malnourishment rate of the younger siblings of children participating in a school feeding program.

In order to obtain measurements of the change in nutritional cost-effectiveness, baseline measures of the malnourishment rate of project participants and their families will first be made. Then, after modifications have been implemented, special analyses will be made of the changes brought about by the modifications. Causal relationships are difficult to establish, so that careful controls must be built into these studies. More detailed descriptions of some of these measurement projects are given in Annex I.

At this time, the effectiveness of these projects is not known. The true costs are likewise only estimates. First year Activities #4 and #5 will determine the current cost-effectiveness. From this base a determination will be made of what progress might reasonably be attained over the next three years, and progress target indicators will be established.

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b) Pilot Projects. By the end of four years, CONPAN should have demonstrated its capacity to achieve: (a) implemented pilot projects, and (b) pilot project expansion to the national level. We believe such capacity will be demonstrated if at least 80% of pilot projects are implemented according to their implementation schedules by the fourth year and at least one has been expanded to the national level following CONPAN recommendations.

The decision as to whether a pilot project has been implemented on schedule or whether it has been expanded to the national level is straightforward. A consultant or USAID field observer (see Subsection 3 below for details) will be used to determine whether the project is actually underway and is in reasonable correspondence to the project plan, particularly to the contractual elements. Pilot projects should show feedback of results which have been analyzed and appropriate utilization made. Pilot project expansion should show that they have acquired the appropriate budgetary resources and are operating at the national level.

c) Predictive Capability. CONPAN should have demonstrated steady improvement in its ability to predict the nutritional cost-effectiveness of pilot projects over the four years of the project.

Each pilot project is preceded by an analysis which estimates what its nutritional cost-effectiveness will be. Only those proposed pilot projects with a favorable nutritional cost-effectiveness are to be carried out. Then the actual nutritional cost-effectiveness is measured. The absolute difference between the actual and predicted nutritional cost-effectiveness is the predictive error on the project. The average predictive error for pilot projects should become smaller in each succeeding year.

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It would be preferable, of course, to be able to measure the reduction in predictive error in pilot project expansions. The most important predictive task is estimating the nutritional cost-effectiveness at the national level based on the information acquired from a pilot project. Such predictions would also need to estimate the time to achieve various levels of nutritional cost-effectiveness. There will not be a sufficient sample size over a sufficient duration of time within the four years to provide a reliable measure of reduction in predictive error at the national level. However, a demonstrated improvement in predictive capability at the pilot project level of 10% or less will be adequate when taken in context with the other indicators of achievement.

d) Performance Specifications. Within four years CONPAN should have demonstrated its capability to prepare performance specifications that elicit adequate responses from Chilean organizations or individuals. An adequate response is one which meets the performance specifications, is judged to be both feasible and nutritionally cost-effective according to the CONPAN analysis, and is therefore implemented as a pilot or national project. The indicators of achievement are that by the fourth year all the performance specifications are being prepared by the CONPAN staff alone (with only review but no input by the technical advisors) and that at least two-thirds receive adequate responses as defined above.

e) Continuing Capability. At the end of the fourth year, the information system established under the Project will be continuing, in that GOC budget support and the bureaucratic capabilities will be adequate to insure its future continuation. Interim indicators will be the successful completion of first year Activities #6 through #13 and follow-on activities.

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3. Evaluation Procedures. As a condition precedent to initial disbursement under the Loan, CONPAN will submit a formal plan for annual evaluation. The initial evaluation will be conducted approximately one year from first Loan disbursement, and subsequent evaluations will be conducted annually thereafter, including one at project completion. Evaluation will be carried out jointly by CONPAN and USAID, with additional assistance as necessary. CONPAN will provide baseline data at the time of the first evaluation against which future evaluations can be made, and CONPAN will continue to provide further data as necessary for the subsequent evaluations.

C. Conditions and Covenants

As part of the conditions precedent to first disbursement, the Loan Agreement will require submission of:

1. contracting procedures to be followed by CONPAN in soliciting and obtaining goods and services locally, including formats with standard clauses for incorporating applicable GOC and A.I.D. requirements, and spelling out the criteria under which other GOC entities may be contracted, including a provision to insure that loan funds are not used to cover the salaries of regular employees of the GOC except as they are detailed from their normal duties to the purposes of a specific activity contracted by CONPAN.

2. a plan for CONPAN's internal monitoring and reporting system; and

3. a plan for annual evaluations.

An additional condition precedent to first disbursement, to be repeated as an annual conditional precedent to further disbursement, will be the submission by CONPAN of an implementation plan acceptable to A.I.D. for the activities to be carried out during the following twelve months. The plan will include the names and titles of the individuals responsible for the implementation as well as the overseeing of each activity, and will determine the adequacy of CONPAN's administrative staff to the volume of activities.

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Additionally, there will be a recurring condition precedent requiring submission of a detailed description for each pilot project to be financed with A.I.D. funds, including a justification, budget, and implementation plan. This requirement will be reviewed periodically, and will be scaled down through implementation letter as CONPAN demonstrates increased capacity.

The Loan Agreement will covenant that the Project is consistent with GOC policy objectives of redistributing nutrition resources to the poorer members of society, specifically defined as children 0-15 years old, pregnant women, and lactating women in the lower one-third income groups.

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ANNEXES

ANNEX I - PROJECT ACTIVITIES

- A. Introduction
- B. Scheduling of Projects
- C. First Year Projects - Scopes of Work
- D. Tentative List of Activities in Year 2, 3, and 4

ANNEX II - PLANNING SYSTEM DESIGN AND TECHNICAL ASSISTANCE REQUIREMENTS

- A. Planning System Design
- B. Outline of Scope of Work for the Technical Assistance
- C. Specifications for Outside Technical Expertise
- D. Cost Estimates

ANNEX III - PROJECT DOCUMENTS

- A. Logical Framework
- B. DAEC Cable of IRR Approval and Answering Statement
- C. Loan Application

ANNEX IV - REQUIRED LEGAL DOCUMENTS

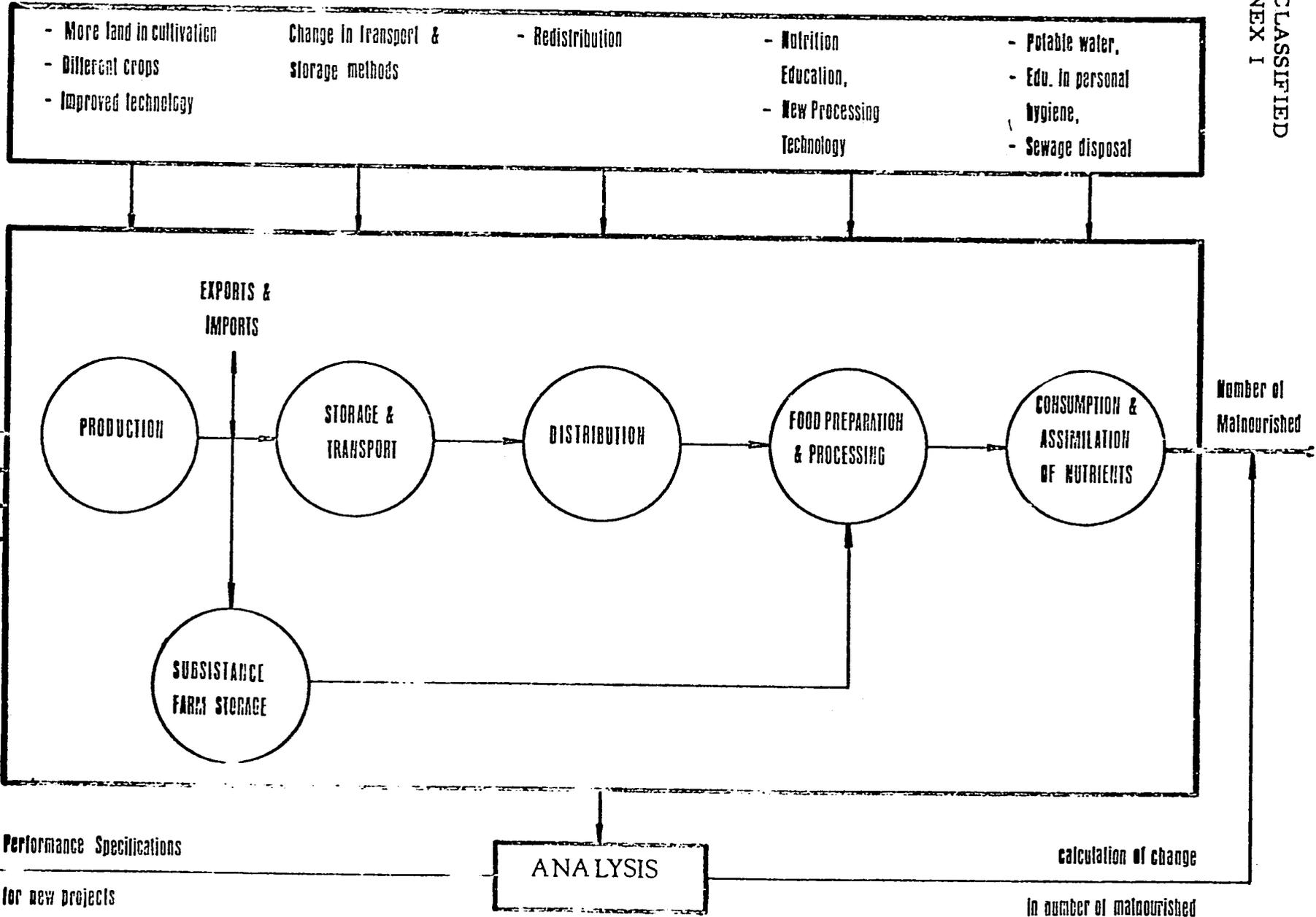
- A. Certification of Mission Director
- B. Checklist of Statutory Criteria
- C. Draft Loan Authorization \*/

\*/ To be distributed at the meeting on Friday, May 16, 1975

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**CHART III**  
**SCHEMATIC OF THE NUTRIENT FLOW CONCEPT**  
**TYPES OF PROJECTS PROPOSED TO CHANGE THE NUMBER OF MALNOURISHED**

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ANNEX I



ANNEX I - PROJECT ACTIVITIES

A. INTRODUCTION

B. SCHEDULING OF PROJECTS

C. FIRST YEAR PROJECTS - SCOPES OF WORK

- Activity #1: Economic Policy Nutrition Effects
- Activity #2: Analysis of Agricultural Policies and Programs
- Activity #3: Analysis of Health and Education Policies and Programs for Nutritional Effects
- Activity #4: Operational Analysis of the National Milk Program
- Activity #5: Operational Analysis of the National School Feeding Program
- Activity #6: Information System - Base Line Measurements of Malnourishment
- Activity #7: Information System - Household Survey
- Activity #8: Information System - Data on Nutrient Production and Prices
- Activity #9: Information System - Data from Commodity Specific Studies
- Activity #10: Information System - Analysis of Nutritional Cost-Effectiveness
- Activity #11: Information System - Feasibility Analysis
- Activity #12: Information System - Analysis of Design of Experiments
- Activity #13: Information System - Analysis of Performance Specifications
- Activity #14: Pilot Project on Planning for Nutritional Emergencies
- Activity #15: Survey of Indigenous People
- Activity #16: Urban Area Water Chlorination Pilot Project

D. TENTATIVE LIST OF ACTIVITIES IN YEARS 2, 3 and 4

Follow-on activities from first year

New Activities

## A. INTRODUCTION

The Loan funds will be the essential input toward achievement of the project purpose. The funds will enable CONPAN to contract with universities, research institutes, industry, and GOC agencies to carry out various tasks, analyses, and pilot projects. During the first year of the Loan, many of the contracted activities will be directed towards establishing data collection, data analysis, and project specifications functions. Some activities will be to modify currently implemented national nutrition projects and to initiate pilot projects.

The nutrient flow concept referred to in above sections plays an important role in deciding:

- 1) What data need to be collected?
- 2) How are the collected data to be analyzed? and
- 3) Which performance specifications should be prepared?

Because of its importance in CONPAN's decision making, a brief description of the Nutrient Flow Concept is presented here.

### Nutrient Flow Concept

The Nutrient Flow Concept is that body of knowledge which relates to the body of malnourished people. The concept is general; it can be applied to the world, a country, a region, or a village. The concept can be applied to predict the change in the malnourishment rate of a population, and it contains an explanation of the causes of the malnourishment. The elements of the concept are:

- (1) Nutrient production (agriculture and sea),
- (2) Nutrient losses in transport and storage of foods,
- (3) The equality of the distribution of nutrients among the population,
- (4) The nutrient losses in food processing and in home preparation, and
- (5) The nutrient losses within the bodies of the members of the population.

The concept quantitatively relates the above elements to each other and to the number of malnourished in the population (see Chart III).

If a project is proposed for changing the technology of agricultural production, for example, implementation of this new technology has an estimated cost, an estimated implementation time, and an estimated increase in agricultural yields. The increase in yield can be converted into an increase in protein and calories. Some of these may be expected to be exported; if so, those are subtracted. Then the losses in terms of calories and protein lost in transport and storage are calculated, resulting in the number of nutrients available to be distributed to the population. Not all foods follow the same distribution pattern among income classes. Members of the richer class do not increase their consumption of cereals if the supply becomes greater or the cost less, but the poor tend to do so. Thus, given distribution patterns by each type of food, the increase in both calories and protein for the poorer 1/3 of the Chilean population can be calculated. Then, given the methods of preparation and accounting for nutrient losses, for reasons of impotable water and the prevalence of infectious diseases, the nutrients absorbed by the bodies can be calculated. The results thus lead directly to calculation of the increase in the nutritional status of the target group. The nutritional effect of the proposed agricultural project has thus been computed. The cost of the project has been estimated. So the cost-effectiveness ratio can be computed and compared to that ratio developed in the same manner for other proposed projects. Thus, the nutrient flow concept is the theoretical basis for the cost-effectiveness calculations and comparisons among competing nutrition projects.

The analysis function of planning determines the data collection requirements of the information system. Standards for performance specifications are established for each of the data collection projects. These standards are not set arbitrarily, but in response to the requirements of analysis. Thus there is both a theoretical and a practical basis for each of the various activities to take place under the Project.

## B. SCHEDULING OF PROJECTS

In Chile today there exist several operational nutrition programs. Some of these are nationwide in scope; others are small area pilot projects. Some of these pilot projects have been selected and implemented by CONPAN during its first year of existence.

The first order of business is to make significant improvements in the planning process of CONPAN. The concept is to start from where CONPAN is and to learn to improve the planning process rather than to have the staff of CONPAN stop their current operations and prepare a one year or a five year nutrition plan. The activities listed in Section C below - FIRST YEAR PROJECTS - emphasize the areas that need the most improvement.

The Section C activities reflect an optimal first year effort; any slippage will be able to be made up during the second year of the Loan. Also, many of the first year projects will continue through years 2, 3, and 4 of the Loan. The analyses during the first year may lead to modifications in the list of projects tentatively selected for the later years of the Loan, enumerated in Section D. Though this is to be expected, such changes in planning must be accompanied by a logical argument supported by evidence from analysis and/or field operations.

A final aspect of project scheduling is where to locate the activities. The information system data will pinpoint areas of specific target group nutritional problems. Typically, though, one nutrition intervention is not sufficient to solve a problem. Increasing distribution of powdered milk in one area and purifying the water in another may each have little effect on solving malnourishment; the synergistic effects of several interventions together must be analyzed. CONPAN, therefore, will concentrate projects in certain areas and will schedule them in a time frame designed to test these multiple effects.

### C. FIRST YEAR ACTIVITIES AND SCOPES OF WORK

In addition to the following activities, technical assistance of \$225,000 will be provided to CONPAN, as discussed in Annex II.

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Activity #1 - Economic Policy Nutrition Effects (estimated cost \$18,000)

#### Purpose

The purpose of this activity is to determine the nutritional impact of the policies, programs, and actions of the economic sector on the nutritional status of the target group. Chile has serious balance of payments difficulties. The Escudo is frequently devaluated, often at a higher rate than the inflation for the period. Each such devaluation encourages exports of goods from Chile. These exports include food and nutrients. At the same time, prices of food to the Chilean population are rising. Incomes are frequently adjusted but tend to lag behind inflation. Only a few foods are controlled with respect to price. Other economic policies and programs add to the complicated economic picture.

From the available data, these economic policies appear to be having great effects in the nutritional status of the poor. This project is to analyze the nutritional effects of these policies and to attempt to have nutrition considered in the formulation of new economic policies, programs, and actions.

Task #1 - Data Collection. To specify the necessary data and the form of the data for the analysis. To obtain that data from the appropriate sources (including the CONPAN information system).

Task #2. To analyze the recent past actions and the proposed future actions of the economic sector for their nutritional impact. For example, the incomes of the poor can be converted to nutrient (protein and calorie) purchasing power at today's market prices for the foods that the poor eat. This nutrient purchasing power of the poor can be compared with the nutrient requirements of those families. The difference between the nutrient purchasing power and the nutrient requirements can be represented as a nutrient gap. The nutrient gap will vary month to month as prices of food change and as adjustments in wages are dictated by the Government; longer term trends will be evident under the influence of Escudo devaluation policies which lead to changes in imports and exports of nutrients.

It is a part of the analysis task to construct well reasoned arguments which can be confirmed by evidence from field collected data (such as the consumption studies of Activity #7). CONPAN, through its voice on the Junta's Social Advisory Council, will attempt to integrate nutrition effects into the practice of economic planning.

Task #3. To determine the foreign trade balance of nutrients. The policies on the export of foods will be analyzed, to determine the outflow of proteins and calories. The policies on the import of foods will likewise be analyzed. The protein and calorie costs of both imports and exports will be determined, to see what Chile is actually purchasing and selling nutrients for.

Activity #2 - Analysis of Agricultural Policies and Programs (estimated cost \$18,000)

Purpose

The purpose of this activity is to integrate the nutrition factor into agriculture policy, programs, and actions. An example of the type of analysis contemplated would be the analysis of the recent A.I.D. Loan to IFICOOP. This loan is to finance subloans to agricultural cooperatives. Many of the anticipated subprojects will deal with food crops. Two competing loan requests for food crops may have equal economic benefits for the producers but have very different nutritional benefits, not only for the producer but also for those throughout the nutritional target group. The purpose of this project is to analyze the proposed subprojects under the IFICOOP program for their nutritional impact and to demonstrate to the IFICOOP management methods of incorporating nutrition considerations into their decision processes.

Task #1. Review the Chilean agriculture sector policies and programs. From this review, select four policies and/or programs for detailed analyses of nutritional effects.

Task #2. Specify the necessary data and the form of data required for the analyses. Obtain the data from the appropriate data sources (including the CONPAN information system).

Task #3. Analyze the four policies and/or programs for nutritional effects. These effects will be in terms of calories and protein availability for the nutrition target group. The analyses will be documented in a form for general distribution as well as for workshop sessions with the appropriate agriculture sector groups.

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Activity #3 - Analysis of Health and Education Policies and Programs for Nutritional Effects (estimated cost \$10,000)

Purpose

The purpose of this activity is to integrate nutrition effects into health and education planning. The Ministry of Health currently is engaged in several programs which ought to have significant nutritional effects. These programs now include immunizations and environmental sanitation, which are expected to have indirect effects on the malnourishment rate in the target group through a reduction in disease. Direct nutrition effects are believed to be occurring through the milk distribution program and through nutrition education. The Ministry of Education also carries out nutrition education programs.

Task #1. To review the Health and Education policies and programs for:

- a) The method of establishing priorities for geographical coverage,
- b) The method of establishing priorities among curative and preventative health measures,
- c) The methods of verifying predicted effects in specific disease morbidity and mortality rates.

Task #2. To analyze and determine the extent to which nutritional cost-effectiveness considerations are explicit in the planning and evaluation processes.

Task #3. To prepare a report which suggests methods of integrating nutritional considerations into health and education planning and evaluation.

Activity #4 - Operational Analysis of the National Milk Program (estimated cost \$40,000)

Purpose

To improve the cost-effectiveness of the national milk program in the reduction of malnourishment in the target group.

Task #1. To collect cost data on the purchasing, distribution, and storage costs of the milk.

Task #2. To implement in pilot regions experiments designed to determine the nutritional effects of changes in the composition of the milk or milk substitutes (Superchil, Fortesan, etc.).

Task #3. To implement in pilot regions trials which have been designed to confirm (or deny) cost reductions in the operation of the milk program.

Task #4. To document each of the field experiments (or trials) in the form of cost-effectiveness arguments for changing or not changing the current milk program.

Task #5. To recommend modifications to the national milk distribution program which are based upon the evidence produced from Tasks 1 through 4 above.

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Activity #5 - Operational Analysis of the National School Feeding Program (estimated cost \$30,000)

Purpose

To improve the nutritional cost-effectiveness of the school feeding program. For over ten years the GOC has financed a program of feeding breakfast (or tea) and lunch to school children between the ages of 6 and 15. The costs of the program are high. The direct nutritional effects in terms of malnourishment rate are unknown.

Task #1. To analyze the procedures by which geographical coverage and the selection of foods are determined. To compare the population covered with the nutritional target group.

Task #2. To determine the contribution of the school feeding program to the reduction in the nutrient gap (the difference between nutrient requirements and nutrient intake) for those members of the target group served by the program.

Task #3. To determine the number of children in the target group who are not covered by the school feeding program.

Task #4. To analyze the distribution methods, costs, and losses, and to recommend modifications in the current operating system which can be tested in pilot regions.

Task #5. To design, implement, and evaluate modifications in pilot regions; and from the data obtained from these pilot tests, recommend modifications in the national program.

Activity #6 - Information System - Base Line Measurements of Malnourishment  
(estimated cost \$350,000)

Purpose

The purpose of this project is to measure the current protein-calorie malnourishment rate in the target group. In so doing, it will establish the system for taking measurements of malnourishment in the future.

The project will identify various characteristics of the individuals being measured, and then relate the malnourishment rate to these characteristics. They include:

- a) Age,
- b) Sex,
- c) Geographic location,
- d) Urban or rural location.

Different methods will be used to measure malnourishment rate, as discussed in Section V. B. of the text, above. In certain sub-populations of the target group total enumeration will be possible, while in others random samples will be taken. There is evidence that the Gomez weight-for-age method provides an accuracy of approximately  $\pm 10\%$  when compared to more extensive clinical evaluations of malnourishment, and therefore this accuracy will be sought from the other methods and samples as well.

Task #1. Upgrade SNS Malnourishment Data. The Chilean National Health Service (SNS) measures malnourishment rate (using the Gomez weight-for-age method) of the participants in its National Program for Complementary Feeding. The program covers approximately half of the age group 0-6 years throughout Chile.

- a) Determine where the SNS measurement techniques are non-functional. It is expected that most of the problems will occur in low-income and rural areas, and that the reasons for being non-functional will include:
  - i) Lack of functioning weighing instruments,
  - ii) Lack of forms for recording data,
  - iii) Lack of a management control function,
  - iv) Inadequate training of workers on the implementation.
- b) Design ways of correcting the problems so that all areas are functional.
- c) Work with SNS to implement the corrections. This effort should include a method for determining whether some areas are becoming dysfunctional again.

Task #2. Poorest Third in SNS Data. SNS obtains malnourishment rates of all participants, not just the poorest third. It does not, at present, obtain income data on participants. This task will develop and implement a method for obtaining the malnourishment rates of SNS participants who are in the target group and for relating these rates to the characteristics mentioned earlier.

Task #3. Malnourishment in non-SNS 0-6 years. Approximately 40-50% of the age group 0-6 years does not participate in the SNS program, and therefore malnourishment rates do not currently exist for this group.

- a) A method will be designed to measure the malnourishment rate for the portion of this group that is part of the target population. Since the income distribution of this group may not be the same as that of the SNS participants, the proportion of this group that is part of the target population may be more or less than one-third. The same is true for the population of SNS participants; this will be accounted for. The measurements designed here will use the Gomez weight-for-age approach and will incorporate the same standards as the SNS measurements, including identical:
- i) Measurement techniques,
  - ii) Data forms,
  - iii) Accuracy,
  - iv) Frequency of measurement,
  - v) Data transport,
  - vi) Management control

The measurement need not be a 100% enumeration; an appropriate sample can be used, the size of which can be determined from the accuracy desired and the characteristics to be considered (for example, age, sex, location).

- b) The measurement method will be implemented and the desired information obtained. It is most likely that this will be accomplished through cooperation with SNS, in order to take advantage of its trained staff.

Task #4 . Malnourishment in age group 6-15 years. A sample survey of 4,800 families is now underway as part of the Continuous Survey of Nutritional Status. It includes a measure of malnourishment among the age group 5-16 years according to the Anthropometric Score method. It will also obtain data which will allow the calculation of malnourishment rates in the poorest third, by the characteristics noted above. This task will make those calculations for the age group 5-16 years. The task will also design a procedure for updating this sample for the target group at appropriate intervals. The first updating will be implemented during the first year. (The measurement system designed under Task #3 may be coordinated with Task #4 as part of the Continuous Survey of Nutritional Status).

Task #5. Malnourishment in Pregnant and Lactating Women. A variety of methods are available for determining malnourishment in pregnant and lactating women, with methods of greater reliability costing more. These methods will be reviewed for reliability and cost, and one, or a combination chosen. Procedures for implementing the method will be designed. It may or may not be best to incorporate these measurements into the Continuous Survey on Nutritional Status, although it is likely that a sample will be used. The procedure will include appropriate repeat frequency. The procedure will be implemented and the desired information obtained.

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Activity #7 - Information System - Household Survey (estimated cost \$150,000)

Purpose

In order to determine the causes of malnourishment in the target group, certain data are required about the households in which they live. These data will be incorporated into the nutrient flow model so that the nutritional cost-effectiveness of various projects can be predicted, and policies and performance specifications designed. The type of data required for each household includes:

- a) Adequacy of water supply (potability, quantity),
- b) Adequacy of sewage disposal,
- c) Adequacy of personal hygiene,
- d) Disease rates (diarrhea, other infectious disease),
- e) Immunization of each family member,
- f) Income,
- g) Percent of income spent on food,
- h) Food types and nutrients purchased, and where,
- i) Composition of family (number, age, sex),
- j) Nutrients consumed by each family member,
- k) Geographical location.

From these data, calculations of nutrient losses in the home and nutrient requirements of each family member can be made.

Task #1. Design the Survey

- a) First, decide on a precise definition of each of the types of data to be obtained. Incorporate these definitions to a survey form.
- b) The frequency for collecting each type of data must be decided. Some items change slowly overtime, such as water potability and location. Others change more quickly, such as income and food purchases. The current rate of economic change in Chile suggests that frequent measurements are required, probably every six months.
- c) Longitudinal data should be obtained on a subset of the household in order to understand causal factors operating within the family. Malnourishment rates and other consequences of malnourishment should be tracked for these households.
- d) Calculate the appropriate sample size and stratification for households in the target population, based on estimates of the sensitivity of changes in the malnourishment rate to various interventions. This may change over time as more experience is gained with the sensitivity of the predictive model.
- e) Develop a system for collecting the sample data. This may require field visits to households in various parts of the country or in selected sub-groups (e.g. the Mapuche Indians). Wherever possible, use should be made of existing resources. The system must include procedures for identifying households to be sampled, initial contact, taking the survey, and follow-up, as well as data transmittal. Appropriate redundancy checks should also be designed.
- f) The design objective should be to collect these data at a cost of no more than \$10 per household.

Task #2. Test and Revise. The systems designed in Task #1 must be tested in a few households, chosen to represent different types of households. The data thus obtained should then be analyzed in regard to their appropriateness for analysis. Revisions may be called for, in the nature of the information being sought, or in the procedures for obtaining it.

Task #3. Train staff. The workers who carry out the survey must be identified and trained. Training procedures will have to be developed.

Task #4. Carry out the Survey. The system designed in Task #1 and revised in Task #2 should be implemented and the required data obtained.

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Activity #8 - Information System - Data on Nutrient Production and Prices  
(estimated cost \$30,000)

Purpose

An analysis of the nutritional effects of agricultural policy and programs or import/export policy requires data on the quantity of nutrients produced and made available to the market, by commodity. The Nutrient Flow Model calculates the proteins and calories made available to the market as follows:

Add: Nutrients in Crops Harvested,  
Nutrients in animals for slaughter,  
Nutrients in fish catch,  
Nutrients in imports.

Subtract: Nutrients in exports,  
Nutrients in animal feed.

Nutrients consumed on the farm must also be taken into account.

Estimates of these data are available from national statistics. However, estimates of the reliability are not currently available and should be obtained for the most important commodities. Commodity prices will also be obtained, both because much of the data are given in financial terms, and because price data can be used to calculate the cost-per-nutrient for different foods to consumers and to compare against income.

Task #1. Obtain national statistics. Identify the various agencies which keep the required data on commodities and prices, and obtain copies of the available data for the past ten years.

Task #2. Reliability check. Define a set of "most important commodities", which includes commodities that:

- a) Provide 80-90% of nutrients in the Chilean diet,
- b) Account for 80-90% of production in Chile, in nutrient terms and in financial terms,
- c) Account for a significant amount of foreign exchange,
- d) Are targeted for significant development and expanded production according to current government policy.

Then analyze the reliability of the statistics on these commodities. In some cases, special studies may already be available, while in others, an investigation of the sources of the data will be required. For example, visits to the first source of the data can be made. Tests of consistency between bulk and money flows will be difficult given the rapid monetary inflation occurring in Chile.

Task #3. System for Continuing Input of Data. These data should be obtained routinely by CONPAN as they become available from the various agencies. Arrangements will be made to accomplish this.

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Activity #9 - Information System - Data from Commodity Specific Studies  
(estimated cost \$20,000)

Purpose

In the agricultural sector, projects and policies typically are directed toward specific crops. This is for good reason: the mix of factors required to produce different commodities is radically different, nutrient potential is very different, prices are different, and distribution mechanisms are often different according to the commodity. Furthermore, efforts to estimate losses occurring during processing, transportation, storage, and all phases of distribution have traditionally proven difficult to accomplish.

Distribution systems are difficult to describe and measure in comprehensive ways, and better success has been achieved on a commodity specific basis (e.g., storage losses in potatoes due to various factors, size distribution of rice mills and losses and pricing as a function of the size). Therefore, certain key commodities will be selected for special study. The purpose of the studies will be to collect data on production, distribution, and potential which can be used to generate policies and projects which will improve the nutritional status of the target group. One or two such studies are anticipated for the first year of the Loan.

Task #1. Select Commodity. Select a commodity for study from the list of "most important commodities" described above. The basic criteria for the selection will be the commodity which would appear to offer the greatest potential for decreasing the cost of calories and proteins in the diets of the target group.

CONPAN has recently completed such an analysis. It selected a study of the potato for the following reasons:

- a) Potatoes grow well in the south of Chile.
- b) Potatoes are well-liked and eaten by poor people.
- c) Potatoes are an excellent source of calories (Chile is in short supply of calories) and contain protein well-balanced in amino-acids.
- d) Potatoes currently sell at a low price per calorie and protein relative to other foods in Chile.
- e) Large storage losses are thought to occur in potatoes.

Other crops tentatively selected for further study are wheat, corn, oats, rye, rice, sugar, oil plants, and beans. Eggs and soya are also under consideration.

Task #2. Collect Data. Various data will be collected by visiting agencies, field stations, farms, and distribution points. Secondary data will be used whenever possible. For example, during the above mentioned study of the potato, CONPAN collected the following data:

Production: Varieties,  
Hectares in cultivation,  
Farm size,  
Yield,  
Production costs,  
Production technology;

Distribution: Transport and storage alternatives,  
Transport and storage costs,  
Losses in transport, storage, processing,  
Processing alternatives,  
Processing costs,  
Import and export substitutability,  
Potato products and marketing.

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Activity #10 - Information System - Analysis of Nutritional Cost-Effectiveness  
(estimated cost \$10,000)

Purpose

To select from proposed new projects those projects which have the highest nutritional effect for cost ratio. To perform this function, the following inputs are necessary:

- a) Appropriate data from the data collection system,
- b) A procedure for analysis,
- c) A trained person or persons to implement the procedure, and
- d) A management control function which evaluates how well the procedure is being carried out.

Task #1. Design a procedure(s) for cost-effectiveness analysis which will accommodate each type of proposed nutrition project.

Task #2. Document the procedure in two forms:

- a) A form for training personnel to implement the procedure, and
- b) A form to be used as a checklist for trained personnel using the procedure.

Task #3. Design a procedure for evaluating the analysis function. Test the evaluation procedure and implement it within the CONPAN planning process. The evaluation of the cost-effectiveness activity is accomplished by a comparison of the costs of projects as predicted by the analysis with the actual costs as measured in the implemented state, and also by a comparison of the predicted nutritional effects with the actual measured nutritional effects in the implemented state of the project.

Activity #11 - Information System - Feasibility Analysis  
(Estimated cost \$10,000)

Purpose

The feasibility of a project refers to the ability to implement the project effectively. For example, a project may be feasible as a small scale pilot project but not as a nation-wide project for lack of appropriate national infrastructure. A feasibility analysis may precede the project as a cost-effective analysis and/or it may follow it. It is important not to spend analysis resources on projects that are clearly not feasible but it is also good practice to recheck the implementability of those projects that prove to be most cost-effective.

A feasibility analysis, in the spirit of the logical framework, is a check on the assumptions for the project, that is, the set of conditions that must hold for the project to achieve its stated goal. Are these assumptions still valid or have conditions changed such that the success of the project is much less certain? Have unforeseen conditions arisen which now jeopardize the implementation of the project?

The feasibility analysis will include the areas of:

- a) Financial feasibility,
- b) Political feasibility, and
- c) Managerial feasibility.

Project activities will be conducted for each of these three areas.

Task #1. Prescribe a method for explicitly stating the assumptions (or conditions) upon which the successful implementation of nation-wide and pilot area projects depends.

Task #2. Prescribe a procedure for acquisition of the necessary information and/or data necessary for the feasibility analysis.

Task #3. Prescribe a procedure for determining the degree of validity of the assumptions and the resulting effect on the successful implementation of the project.

Task #4. Prescribe a method for testing the reliability of the feasibility analyses as developed by the above procedures.

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Activity #12 - Information System - Analysis of Design of Experiments  
(estimated cost \$10,000)

Purpose

As pilot projects are field implemented, measurements will be taken to evaluate the projects' performances in contributing to the reduction in the malnourishment rate. Usually the projects will involve more than one variable (e.g. not only will a change in nutrients available be made but also a change in sanitary habits, and/or potable water, and/or prices of foods, etc.). The purpose of the design of experiments activity is, in addition to determining the effect of each project on the malnourishment rate, to determine the quantitative contribution of each factor (i.e. change in potable water, personal hygiene, increase in nutrients, etc.) on the resulting change in the malnourishment rate. The techniques of experimental design have been well developed in some areas, especially in agricultural experimentation. In principle, the same techniques are applicable to social experimentation (health, nutrition, etc.), except that special considerations need to be taken with respect to the human beings in the social system.

Task #1. Design methodologies, using acceptable experimental design technology for social experimentation, for each of the field implemented pilot projects and also for modification in on-going programs.

Task #2. Analyze the experimental results with respect to new evidence to support modifications of the nutrient flow model.

The activity will be evaluated by experts in experimental design technology, and also through comparison between the predictions and the actual experimental results. Learning within the planning process is indicated as the predictions, over time, converge toward the actual experimental results.

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Activity #13 - Information System - Analysis of Performance Specifications  
(estimated cost \$10,000)

Purpose

The purpose of the activity is to improve the nutrition project proposals submitted to CONPAN by Chilean institutions. CONPAN has received during 1974-1975 some 50-60 proposals for nutrition projects. Very few of these have been prepared properly. It is nearly impossible to determine the potential of a project contribution toward achieving the sector goal. Two proposed projects cannot be compared to determine which would be better to finance.

A performance specification is a methodology the proposer can use, guiding him in:

- a) How the proposals will be evaluated (cost-effectiveness and feasibility of implementation),
- b) Estimates of the costs, nutritional effects, time for implementation, and replicability, which are required to contribute to the solution of the nutrition problem in Chile.

Task #1. Prepare performance specifications for the following measurements to come out of the CONPAN data collection system:

- a) Malnourishment status of children in the 0-6 year range,
- b) Malnourishment status of children 6-15 years old,

- c) Malnourishment status of pregnant and lactating women,
- d) Food production in Chile,
- e) Nutrient losses in transport, storage, distribution, and food processing,
- f) Incidence of nutrition related diseases, and
- g) Water potability and sanitary sewage disposal.

Task #2. Prepare performance specifications for intervention projects in:

- a) Agriculture productivity,
- b) Food storage,
- c) Food processing,
- d) Food distribution,
- e) Environmental sanitation,
- f) Preventative health services, and
- g) Education in nutrition.

Task #3. Prepare performance specifications for projects in the analysis of nutritional effects of policies and programs of sectors other than nutrition:

- a) Agriculture,
- b) Economics,
- c) Health, and
- d) Education.

Task #4. Disseminate the prepared performance specifications broadly among Chilean institutions, and hold seminars and workshops in proposal preparation to meet performance specifications.

Task #5. Develop a method for evaluating the preparation of performance specifications. This method should include some measure of the ability to perform cost-benefit analyses and feasibility analyses.

Activity #14 - Pilot Project on Planning for Nutritional Emergencies  
(estimated cost \$10,000)

Purpose

Nutritional emergencies can arise due to sudden and dramatic events, such as earthquakes and wars, or can arise due to longer term pressures, such as food shortfalls brought on by severe and extended drought or the crushing advance of poverty in a downward trending economy. These emergencies share some characteristics in common: they hit hard and leave lasting effects, particularly on the young and the poor; they tend to occur more frequently than is generally thought; they frequently generate considerable action at the topmost levels of government when they finally come to light; but they are rarely planned for in advance.

The purpose of this activity will be to take the first step in building an advance planning system to: (a) counteract such nutritional emergencies, and (b) to take advantage of the commitment generated during such emergencies to implement more far-reaching policies and programs. The activity, which will be coordinated with the GOC's national emergency program under the Ministry of the interior, will result in the letting of a contract to an outside organization, which will call for:

- a) Designing a nutrition emergency system for Chile, and
- b) Implementing the "state-of-preparedness" which is to be part of the system design.

In other words, this activity is part of Loop #3, which generates policy recommendations and performance specifications and then lets contracts to the organization making the best response to the performance recommendations.

Task #1. Literature Search. This includes:

- a) Review descriptions and analyses of nutrition emergencies elsewhere in the world (e.g. the 1966-67 drought in Bihar, India; the Biafran-Nigerian war). Identify the types of problems, the types of planning done, the types of actions taken, and the reasons for success or failure.

- b) Review the programs and experiences of international and third-country emergency relief organizations (e.g. International Red Cross).
- c) Review general literature on emergency relief planning.

Task #2. Analysis of Chilean Needs. This includes:

- a) Identify past nutritional emergencies in Chile. This will require interviews and newspaper searches.
- b) Classify the past emergencies according to the type of emergency. For example, classify according to the cause of the emergency, the number and type of people involved, the severity of the emergency in nutritional terms, its location in the country, the advance warning.
- c) Identify the types of responses Chile actually made to these emergencies. What level of government took action? How many resources were spent, if any? What actions were taken? What were the points of failing?
- d) Identify the types of actions required to deal with the emergencies which occurred. How many required a food distribution activity? Or an immunization program?
- e) Predict the types of nutritional emergencies most likely to occur in Chile in the future, and the kind of capability required to respond to them, based on the data on past experience in Chile in light of the current situation.

Task #3. Prepare Performance Specifications. The performance specifications will be part of a request-for-proposal which will be sent to outside organizations and will call for: (a) the design of a nutrition emergency system for Chile, and (b) implementing a state-of-preparedness in Chile. Some of the considerations which probably will be included in the performance specifications are:

- a) A surveillance system, to know when an emergency is at hand, what is the nature of the emergency, and when it is over.
- b) The level of governmental awareness and support to meet the emergency.

- c) Involvement of other agencies and organizations.
- d) Food distribution system: What food to obtain and how; Where to store food; Knowing who should receive food; Who should distribute the food for different types of emergencies and in different parts of the country (e.g. health and social workers, PVO's, army, police).
- e) Immunization and disease control system.
- f) Communication system for field workers in an emergency; information to be communicated; mechanisms (e.g. phone, radio, shortwave, written).
- g) Management system during emergency; field procedures; authority for decisions; manuals; coordination with other agencies, organizations, and communities.
- h) Means of securing gains in the aftermath of the emergency; for example, by instituting more permanent policies or programs that have favorable nutritional consequences.
- i) A plan for implementing a state-of-preparedness. This might include such things as writing procedure manuals, making pre-arrangements with food distribution organizations, make pre-arrangements for use of the airwaves, and contacting community leaders.
- j) Establish means for evaluating the adequacy of the plan during the first real emergency, and in subsequent emergencies, and establish means for improving the plan based on the evaluations.

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Activity #15 - Survey of Indigenous People (estimated cost \$90,000)

Purpose

Estimates of the number of indigenous people in Chile range from 600,000 to 850,000 -- 6% to 8% of the population. The overwhelming majority, the Mapuche, live in south-central Chile, but others are also found along the northern borders. Roughly half live on reservations, unintegrated with the rest of Chilean society. There are few government programs that effectively reach them, although an increasing number of young Mapuche are attending Chilean technical schools and universities.

Vital statistics on these people are scarce and unreliable. Nevertheless, knowledgeable observers believe the malnourishment rate is extremely high -- even approaching 100% in children. One informal survey of seven married Mapuche women found that of the 50 children born to them, 29 had died before the age of 6 years. Many of the living children has not yet reached 6 years. The causes of death to the extent determinable were clearly nutrition related -- diarrhea, measles, fever.

The indigenous population of Chile clearly falls within the poorest third. It is likely that its population is younger than that of the rest of Chile. It also appears that a much larger proportion of Mapuche children are malnourished than other Chilean children. Therefore, it is likely that a substantial percentage of the target group are Mapuche. Furthermore, because the Mapuche are of a different culture, with their own language, it is thought that a special project will be needed to obtain data on malnourishment and its causes among the Mapuche, and lay the groundwork for effective countermeasures.

Task #1. Preliminary Investigation. Prior to any formal surveys, a preliminary investigation will be carried out. It will provide general information about numbers and location of all indigenous Chileans, establish relationships with appropriate persons to assist in designing surveys, and acquire general background information. It will also determine the extent the natives are serviced by various government programs, such as the SNS milk distribution program.

Task #2. Establish staff. The staff to carry out a nutritional survey should include, if possible, technically trained Mapuches. Appropriate individuals will need to be identified, and part of the staff hired will assist with the survey design.

Task #3. Design Survey. Based on the knowledge obtained in the preliminary investigation, and working with the Mapuche staff persons, decide on the data to be collected and the means to do it. It will probably include such data as:

- a) Malnourishment rates in the target group,
- b) Mortality and morbidity from nutrition-related diseases,
- c) Diet,

- d) Special food habits,
- e) Agricultural production.

Information on Mapuche views towards health and nutrition, and other related topics will also be collected.

Decisions regarding sample size, stratification by reservation and by non-reservation community, and whether to limit initially to the Mapuche population in south-central Chile will also be made.

Task #4. Collect Data. Data collection may be done in stages, with the survey design being modified as information is obtained. It is expected that teams of Mapuche university students and trained health workers will undertake the field data collection, although this may be modified. Whenever possible, measurement techniques identical to those used for the rest of the population will be used.

Task #5. Analysis. Determination of the extent and causes of malnourishment and of possible solutions will be based on a nutritional cost-effectiveness analysis, but in relation to the cultural setting. For the indigenous people living on reservations under tribal conditions, the feasibility analysis of potential solutions will differ greatly from those for the rest of the population. The tribal organizational structure, the decision making process, and the value systems of the tribes will force special constraints on implementation of solutions.

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Activity #16 - Urban Area Water Chlorination Pilot Project (estimated cost \$328,000, of which \$153,000 in first year).

Purpose

The purpose of this pilot project is to reduce substantially or eliminate those causes of malnutrition and water borne disease attributed to contaminated water, by exposing the causal factors and by demonstrating the most effective elimination of such factors. The methodology of this pilot project pursuant to the above purpose is to determine what approaches in water sampling, analysis, testing, and treatment procedures and methods including chlorination, logistical support, and laboratory proximity and capability scope are most effective, most economical, and generally applicable on a nationwide scale in reducing malnourishment and water borne disease.

Tasks

The above objective will be served by development of a program that will, in conjunction with other investigatory activities under this loan project, determine 1) criteria for selection of community or communities to participate in the pilot project, 2) a definition of before and after conditions most susceptible to statistical analysis, 3) a method for monitoring effects of project inputs, 4) a method for establishing cost-effectiveness of the pilot project, 5) methods of water purification treatment for the various encountered contaminants and pollutants, 6) a plan and recommendations for utilizing the findings of the pilot project in a nationwide program for reducing malnutrition and the incidence of water borne diseases caused by contaminated water.

D. TENTATIVE LIST OF ACTIVITIES IN YEARS 2, 3, and 4

Technical assistance to CONPAN will continue, for a total during years 2, 3 and 4 of \$600,000.

Follow-on Activities from Year 1

1. Continuation of urban area water chlorination pilot project in three areas (estimated cost \$175,000).
2. A pilot project growing out of the survey of indigenous people from the first year. The pilot project will integrate food production, food storage, food distribution, extension of the milk program to remote areas, immunizations, potable water, water disposal, nutrition and health education (estimated cost \$450,000).
3. Emergency Nutrition Planning System Test (estimated cost \$50,000).
4. The operational phase of the Information System, including data collection, processing, and analysis (estimated cost \$1,585,000).

New Activities

1. Pilot project - to establish three consumer food cooperatives in marginal areas (estimated cost \$150,000).
2. Pilot project - centralized preparation of food for school feeding program (estimated cost \$300,000).
3. Pilot project - marketing and distribution of low cost fish products in marginal areas (estimated cost \$200,000).
4. Pilot project - improvement of packaging and preservation of low cost nutritional foods distributed in poor areas (estimated cost \$90,000).
5. Pilot project - storage and distribution of potatoes (estimated cost \$75,000).
6. Pilot project - use of milk whey (estimated cost \$40,000).
7. Pilot project - production and processing of legumes (estimated cost \$350,000).
8. Pilot project - production and processing of grains (estimated cost \$250,000).

9. Pilot project - industrialization of the merluza fish (estimated cost \$225,000).
10. Pilot project - production and processing of oils (both animal and vegetable sources) (estimated cost \$160,000).
11. Extension of breast feeding pilot project, now being carried out by CRS under grant funds, to larger regions (estimated cost \$50,000).
12. Pilot education program for subsistence farmers in the production, storage, preparation, and consumption of food (integrated with potable water, sanitary latrine, immunization, and milk distribution activities) (estimated cost \$125,000).
13. Education program to teach mothers of severely malnourished children how to prepare supplemental foods, in support of the malnourished child program of SAWS (estimated cost \$40,000).
14. Educational project in support of home consumption of soybeans (estimated cost \$25,000).
15. Educational project in support of home consumption of oat products (estimated cost \$25,000).
16. Pilot educational program directed to the target group on how to utilize the services of the national milk distribution program (estimated cost \$50,000).
17. Search for a cost-effective method of measuring agricultural production on a continuous basis. The ERTS satellite is one possible method to be evaluated (estimated cost \$100,000).
18. Search for a more cost-effective alternative method of measuring for malnourished status in target group children (estimated cost \$75,000).
19. Search for Chilean produced grains to substitute for imported grains in food supplements (estimated cost \$125,000).
20. Pilot projects utilizing various methods of purifying water in remote rural areas (estimated cost \$300,000).
21. Search for low cost food storage and preservation methods for rural subsistence farmers (estimated cost \$150,000).

## ANNEX II - PLANNING SYSTEM DESIGN AND TECHNICAL ASSISTANCE REQUIREMENTS

### A. Planning System Design

The planning system will have four predominant characteristics (1) improving nutritional cost-effectiveness of on-going projects, (2) generating, selecting, and implementing new projects, (3) monitoring all activities effectively, and (4) learning therefrom. The system is presented graphically in Chart I of the text, The Three Nutrition Planning Loops. It is a continuing system in which "feedback" from the previous experiences is then "fed forth" into the next round of activities. The Chart reflects this cyclical process by charting the three distinct phases of this process as nutrition planning loops.

1. The First Loop. The first loop deals solely with on-going nutrition intervention projects, such as school feeding or free milk distribution. The function of this loop is to work with the current on-going projects (and project managers) to improve their nutritional effectiveness, or if it is warranted, initiate action to stop them. The activities undertaken as part of this loop are:
  - a) Collect field data about the nature and causes of malnourishment in the target group, and about on-going nutrition projects.
  - b) Analyze the data, seeking possible improvements and comparing actual results of the project against anticipated results.
  - c) Decide to modify, stop, or leave the project alone.
  - d) Take action to help implement the decision with other agencies involved.
2. The Second Loop. The second loop differs from the first in that it concerns the selection and implementation of new projects. Its primary function is to determine from among several proposed projects which ones are both implementable and most nutritionally cost-effective.

and then help to initiate action which will lead to their implementation. In order to test predictions of implementability and cost-effectiveness, pilot projects may be initiated and evaluated. Thus, the activities undertaken as part of this loop are:

- a) Collect field data on nutritional needs of the target population, experience of existing projects, scientific background information relevant to the projects in question, and plans and policies of other operating agencies.
- b) Perform both a feasibility analysis (technical, managerial, financial, political) and a cost-effectiveness analysis of the projects, resulting in predictions of time, resources required, and nutritional benefits for each project.
- c) For each project, decide whether to:
  - do nothing,
  - implement on a pilot basis,
  - expand a pilot program to national level or drop it,
  - implement on a national level immediately.
- d) Take action to help implement whatever path is decided upon with the other agencies involved.

3. The Third Loop. The third loop is longer-term than the first two and involves the generation of new project proposals. It seeks to accomplish this by eliciting project proposals from Chilean organizations. It includes the following activities:

- a) Collect data on nutritional and other trends in the target group, experiences of existing projects, and plans and policies of other operating agencies.
- b) Analyze needs.
- c) Prepare and recommend policy statements and performance specifications.
- d) Disseminate the specifications as a request-for-proposal to outside organizations and individuals, Chilean and other.
- e) Receive and analyze the solicited proposals according to the activities described in Loop # 2.

The function of eliciting proposals from Chilean organizations may require encouragement or even development of organizations to do this. Such development may in fact become a project. An important consideration in preparing performance specifications and in eliciting and evaluating proposals is the ability of the proposing organization to successfully manage the implementation of the project. This loop will also include policy and performance specifications to deal with crisis situations.

The various elements of the planning system which must be institutionalized if it is to be successful are:

1. Method of Analysis. All three loops require analysis. In the first loop, analysis leads to methods of improvement and whether to stop; in the second loop, the implementability and cost-effectiveness of various projects are analyzed; and in the third loop the analysis leads to performance specifications. In all three loops, the analysis is based in part on a concept of the causes of malnutrition which are described as the "Nutrient Flow Concept". The concept allows prediction on the effect that different interventions will have on the malnourishment rate. It also allows prediction of areas of greatest need and the types of intervention which will have the greatest nutritional effect, a property useful in establishing performance criteria. Thus, for example, an estimation can be made on the ultimate effect on malnourishment rate of an agriculture production program which increases the national calorie output by 10%, by accounting for the calorie losses during transport, storage, processing and packaging, distribution, cooking, inequitable distribution, and poor body utilization. This can be compared, for example, against a potable water program that decreases certain diseases and increases protein utilization. If there are insufficient proteins and calories produced in the country (or imported) to meet the requirements of the population even if no losses occur thereafter, then clearly projects are needed in the production area. On the other hand, if an adequate supply of protein and calories are coming in the door of even the

poorest families but some of these family members are malnourished, then environmental sanitation or perhaps nutrition education projects are probably needed.

2. Data Collection and Processing. All three loops require the collection of data. Similar to the analysis, the collection of data is governed by the Nutrient Flow Concept. (See Chart III in Annex I). Thus, in monitoring a project, data should be collected on the different causal variables used to predict its nutritional benefits as well as collecting data on the nutritional benefits themselves. In order to establish specifications, data on the entire causal system and its trends will be collected. These include :
  - a) Agriculture production;
  - b) Imports and exports of food, which is a major consideration in Chile where for instance a 50% reduction in wheat importation equals the total protein requirement for 2 million people;
  - c) Losses in transport and storage, due to such things as spoilage, mice, insects and birds;
  - d) Losses in processing and preparation;
  - e) Distribution among rural-urban and income classes;
  - f) Distribution of nutrients within families according to age or sex;
  - g) Sanitary environment;
  - h) Health services and disease rates;
  - i) The national economic situation.
  
3. Implementation. All three loops feed into a process of implementation. The first loop leads to implementing improvements in on-going national projects; the second loop leads to the implementation of new projects at the national and pilot level; and the third loop elicits proposals which may require developing capabilities for proposal generation. Other organizations and agencies will be responsible for much of this implementation, with the planning agency in a coordinating role. Thus, the implementing agencies should be closely involved in the analysis and learning.

4. Pilot Projects. The second and third loops call for the implementing of pilot projects to test the effectiveness of the projects prior to a national effort. This is a key concept in the operationalization of the learning process. It is expensive to implement projects on a national scale, and Chile cannot afford to spend large sums on projects which do not have a very high probability of success. Thus proposals without sufficient supporting evidence but that attack problems in a particularly vulnerable concentration of the population can be field tested. Moreover, management has the opportunity to learn from the pilot test before facing the more complex administrative problems at the national level, thereby increasing the chances for national success.
  
5. Performance Specifications. This is the key concept in the third loop. Experience in Chile indicates that there is not a scarcity of proposals but that most are either not implementable or not cost-effective. Thus it seems desirable to enrich the quality of the proposals submitted, so that they will be more in line with the sector goal and more in line with the financial constraints of the GOC. For example a preliminary analysis has shown that the poorest one-third of the population cannot afford to pay more than 1/3 ¢ per gram for protein from their present earnings. Such a performance specification would rule out such schemes as meat extenders, fish sticks, and more efficient poultry production as too expensive, but would encourage creative thinking towards projects that would meet such a requirement. The proposals must be responsive to the performance specifications, but they will not all necessarily recommend the same solution. The firm, individual, or institution with the best (most implementable, most-cost-effective) proposal will usually be expected to carry out the pilot project. Thus, competitive bidding occurs in response to the performance specifications, rather than in response to a request for bid on some pre-determined facility or approach, as is traditionally the case in government bidding. The approach described here: (a) takes advantage

of implementing capacity in the private and public sector outside the nutrition planning organization, (b) reduces the need for the planning organization to have a large permanent staff of specialists, and (c) provides an incentive to the research community to make proposals that may lead to pilot projects.

6. Internal Monitoring and Development. It is important that CONPAN monitor its own effectiveness, analyze the causes for its successes and failures, and make internal improvements on the basis of its analysis. In other words, it should apply the same concepts to itself that it applies to other nutrition projects. To do this, performance specifications for each function will be developed and used as a standard.

## B. Outline of Scope of Work for the Technical Assistance

Technical assistance will be required to help CONPAN develop the functioning of the Planning System as follows:

1. Design of an Information System. The types of information required fall into two broad categories:
  - a) Structural information defined as that which is unlikely to change over the short to medium term. Examples are acreage in crops or installed capacity of a certain sector such as transportation, roads, railroads, etc. This type of information defines the framework within which nutrition projects must operate.
  - b) Information needed to formulate and control projects. This category includes baseline data on target groups, data on food and nutrient availability distribution and losses, and data on current on-going nutrition programs in Chile. Also included are data collected from pilot projects that are fed-back into the planning system. For both categories of required data, outside technical assistance will assist CONPAN to identify information flow channels and to set up performance specifications for data accuracy, completeness, currency, and relevance.

2. Design of a System for Data Processing and Analysis. Data collected by the information system must be processed and analyzed. Outside technical assistance will help CONPAN to devise methods and standards of processing and analyzing data to extract from them the kinds and amounts of information needed.
3. Selection and Design of Alternative Nutrition Intervention Programs. A system is required to set standards against which CONPAN can judge and cull out project proposals for nutrition interventions. This includes research and development policies and implementation, project cost-effectiveness standards, bid soliciting and awarding procedures, pilot project design, monitoring, and evaluation. This system also serves to provide a tool over the longer run for CONPAN to actively solicit proposals from other entities, rather than merely waiting for such proposals to be made to it.
4. Design of Controls over Implementation of Projects. This requirement applies to control over pilot projects being implemented by contracts let by CONPAN, it applies to projects raised from the pilot level to the national level by policy decision to do so, and it applies to large and expensive on-going institutional feeding programs where appropriate modifications are required and agreed upon.

C. Specifications for Outside Technical Expertise.

1. Long-Term advisors. Three such advisors are required during the first three years of the project implementation, decreasing to one during the fourth year. Thus, a total of 120 man/months are anticipated. It is estimated that approximately two to three months from the date of meeting the initial conditions precedent to disbursement will be needed to get the advisors on board. The three long-term advisors:
  - a) Should have some experience in contract management, e.g. as Contract Chief of Party and the duties that this position implies;

- b) Should be experienced in designing and working with planning systems;
- c) Should have a broad knowledge of nutrition technology, problems, and interventions;
- d) Should have expertise in working with data, designing data collection programs, processing data, and analyzing data;
- e) Should have experience in design of specifications for pilot projects;
- f) Should have experience and expertise in cost-effectiveness and other basic economic analysis techniques.

Three advisors are deemed to be needed as it is unlikely that all of these attributes could be combined in one or two persons, and also because of the work-load. The senior advisor would be Chief of Party, at an estimated annual salary level of \$ 26-30,000; the other advisors' yearly salary level is estimated at \$ 20-23,000. Three long-term positions are to be established. The individual acting as the Chief of Party will remain over the full course of the Project. The other two slots could be filled by from three to four advisors whose length of tour will be determined by the requirement for their specific skills as the project progresses. It is expected that tours by these latter specialists would not be less than one year.

2. Short-Term Advisors. These are advisors required for periods of six months or less, and would normally be more narrowly specialized in their respective fields than the long-termers. These advisors would be called in to provide specific advice on projects and programs being planned by CONPAN. While 36 m/m of such advisors are estimated to be required, it is not possible to define precisely all of the skills needed at this point in time. Rather, this would depend upon what kinds of projects CONPAN selects as well as on progress of the planning system. For example, CONPAN may find that a pilot project

is required to test the cost-effectiveness of an intervention in agriculture involving testing of potatoes against maize or wheat. Highly specialized technical assistance in such areas as seed varieties, fertilizer application, and control of other growing conditions is required to assure that the project delivers the expected results. The required specialists are called in for 4-6 weeks each to set up the technical specifications for CONPAN for the project and then depart. This category also covers in-country back-stopping and support for the long-term consultants.

D. Cost Estimates

The direct salary costs of the long-term advisors are estimated to be \$ 239,000; as shown in Table IX below:

TABLE IX

DIRECT SALARY COSTS OF LONG-TERM TECHNICAL ADVISORS

	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Total</u>
Chief of Party	26,000	27,300	28,700	30,000	112,000
Advisor	20,000	21,000	22,500	-----	63,500
Advisor	20,000	21,000	22,500	-----	63,500
TOTALS	<u>66,000</u>	<u>69,300</u>	<u>73,700</u>	<u>30,000</u>	<u>239,000</u>

The above estimates assume that qualified individuals can be found at the salary levels indicated. Pay raises of approximately 5% per year are included, though the specific increases will be determined later.

The allowances and support costs of the long-term advisors are estimated at \$ 154,000, as shown in Table X below:

TABLE X

ALLOWANCES AND SUPPORT COSTS OF LONG-TERM TECHNICAL ADVISORS

	<u>Year 1<sup>1/</sup></u>	<u>Year 2<sup>2/</sup></u>	<u>Year 3<sup>3/</sup></u>	<u>Year 4<sup>4/</sup></u>	<u>Total</u>
Quarters	15,000	15,000	15,000	5,000	50,000
Education	12,000	12,000	12,000	4,000	40,000
Air Fares & Per Diem	6,600	4,400	4,400	2,200	17,600
Transportation of Effects	15,000	9,200	9,200	5,000	38,400
Miscellaneous	2,000	2,000	2,000	2,000	8,000
TOTALS	<u>50,600</u>	<u>42,600</u>	<u>42,600</u>	<u>18,200</u>	<u>154,000</u>

- 1/ All three advisors come on board.  
2/ One advisor returns to the U.S. and is replaced.  
3/ Two advisors depart.  
4/ Third advisor departs.

The short-term specialists are estimated to cost an average of \$ 3,000 per month in direct salary expenses, or a total of \$ 108,000 for the project. Allowances and support costs are estimated at \$ 50,000, of which \$ 35,000 will be for per diem and \$ 15,000 for travel costs.

Totalling the salary and support costs for both the long and short term advisors and adding in an overhead and contingency element of 75-80% of the direct salary costs, the total technical assistance package is estimated to cost \$ 825,000. This estimate also includes a \$ 5,000 item for the few direct costs that CONPAN will not be able to cover, such as overseas telephone calls or copying services.

TABLE XI

SUMMARY OF TECHNICAL ASSISTANCE COSTS

Direct Salaries of Long-Term Advisors	\$ 239,000	
Direct Salaries of Short-Term Advisors	<u>\$ 108,000</u>	
TOTAL Direct Salaries		\$ 347,000
Travel and Allowances of Long-Term Advisors	\$ 154,000	
Travel and Allowances of Short-Term Advisors	<u>\$ 50,000</u>	
TOTAL Travel and Allowance Costs		\$ 204,000
Direct Operating Expenses		\$ 5,000
Overhead and Contingency		\$ 269,000
TOTAL		<u>\$ 825,000</u>

PROJECT DESIGN SUMMARY  
LOGICAL FRAMEWORK

Life of Project: \_\_\_\_\_  
From FY 1975 to FY 1979  
Total U.S. Funding: \$ 5,000,000  
Date Prepared: April 15, 1975

Project Title & Number: Chile - Nutrition Loan

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
<p>Program or Sector Goal: The broader objective to which this project contributes:</p> <p>Reduce by 50% in 10 years protein-calorie malnourishment in the target group, defined as children in the 0-15 year age group and pregnant and lactating women within the poorest third of the population. Within the period of the project halt the worsening trend of malnutrition in the target group and begin an improvement in their nutrition status.</p>	<p>Measures of Goal Achievement:</p> <p>Reduce by 1/2 malnutrition in the 0-6 year group using the Gomez Method of measurement. Reduce by 1/2 malnutrition rate of 6-15 year group using the Anthropometric Score Method. Reduce by 1/2 malnutrition rate of pregnant women measured by birthweights of 2500 grams. Reduce by 1/2 malnutrition of lactating women, the malnourishment of the mother measured by malnourishment of the child using the Gomez Method.</p> <p>Keep constant or reduce the percentage of Grades II and III malnourished in the above.</p>	<p>CONPAN Information System including:</p> <p>National Health Service (SNS) records on malnourishment of 0-6 years. SNS Continuous Survey (ECEN) for 6-15 year group. SNS records on birthweights. Special baseline data studies to be carried out under CONPAN auspices during first year of project.</p>	<p>Assumptions for achieving goal targets:</p> <ol style="list-style-type: none"> <li>1. That the food balance sheet for Chile will continue to be favorable.</li> <li>2. That a reasonable measure of political stability will continue such that no drastic political upheavals will result in a change in GOC policy that would reduce the high priority improved nutrition now enjoys.</li> <li>3. That there will be no substantial deterioration in the Chilean economy with regard to inflation, unemployment, or real wage levels.</li> <li>4. That GOC salary levels can be adjusted to assure that CONPAN can hold its highly skilled employees and attract others of high caliber.</li> <li>5. That GOC budgets will allow financing of current national feeding programs at adequate levels; will allow at least one additional pilot project to be raised to the national level; and will allow CONPAN a budget adequate to pursue its activities under the project.</li> <li>6. That no major natural disasters will take place, forcing Chile to alter its priority rating for nutrition.</li> <li>7. That the infrastructure and level of technology in Chile are adequate to achievement of the goal.</li> </ol>

PROJECT DESIGN SUMMARY

Project Title & Number: Chile - Nutrition Loan

Life of Project:  
From FY 1975 to FY 1979  
Total U.S. Funding: \$ 5,000,000  
Date Prepared: April 13, 1975

Annex III Exhibit A

PAGE 2 of 4

NARRATIVE SUMMARY	Easily Verifiable Indicators	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
<p><b>Project Purpose:</b></p> <p>Establish in CONPAN a nutrition planning system responsive to Chile's requirements and problems in the field of nutrition. The system must be able to improve cost/effectiveness of on-going nutrition projects; generate, select, implement, and monitor pilot projects; provide for continuing data collection, processing, and analysis on nutrition; and from these make recommendations to policy-makers in the GOC for nutrition intervention programs at the national level and for appropriate policy changes.</p>	<p>Conditions that will indicate purpose has been achieved: End of project status.</p> <ol style="list-style-type: none"> <li>1. Improved cost-effectiveness of the GOC's two largest institutional feeding programs (PNAC and School Breakfast and Lunch).</li> <li>2. 80% of implemented pilot projects will have been implemented on schedule.</li> <li>3. At least one pilot project will have been raised to the national level.</li> <li>4. CONPAN's predictive capability at the pilot project level will show an error of 10% or less.</li> <li>5. All performance specifications will be prepared by CONPAN staff without outside T.A., such specifications will be standardized and 2/3 of such proposals receive adequate responses.</li> <li>6. Data collection, processing, and analysis are functioning.</li> </ol>	<ol style="list-style-type: none"> <li>1. Improvement measured by a reduction in the malnourishment rate of the target group by the total cost of programs. Baseline data against which to base judgement will be gathered in first year of project.</li> <li>2. Examination of CONPAN records and reports comparing implementation objectives against actual execution.</li> <li>3. Examination of CONPAN and other GOC official documents which clearly trace the path from pilot project to policy recommendation to policy decision to action program on national level.</li> <li>4. Examination of CONPAN records and reports.</li> <li>5. Examination of CONPAN records and reports.</li> <li>6. Observation.</li> </ol>	<p>Assumptions for achieving purpose:</p> <p>The assumptions listed on page 1 apply to both the goal and purpose levels and serve as a link between them.</p>

PROJECT DESIGN SUMMARY  
LEGISLATIVE

Life of Project  
From FY 1975 to FY 1979  
Total U.S. Funding \$ 5,000,000  
Date Prepared April 15, 1975

Project Title & Number: Chile - Nutrition Loan

Annex III Exhibit A PAGE 3 of 4  
IMPORTANT ASSUMPTIONS

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	ASSUMPTIONS FOR ACHIEVING OUTPUTS
<p>Outputs:</p> <ol style="list-style-type: none"> <li>1. CONPAN staff recruited and trained.</li> <li>2. Baseline data collected and analyzed.</li> <li>3. Pilot projects presented to CONPAN are analyzed and selected.</li> <li>4. Pilot projects implemented, monitored, and evaluated.</li> <li>5. Crop specific studies completed.</li> <li>6. Participation of other Chilean entities in pilot project proposals, selection, and implementation.</li> <li>7. Performance specifications prepared.</li> <li>8. Policy recommendations made to the GOC.</li> </ol>	<p>Magnitude of Outputs:</p> <ol style="list-style-type: none"> <li>1. 8-10 staff members.</li> <li>2. 5-8 studies or surveys made (includes structural information).</li> <li>3. 100-200 projects analyzed and 50-75 selected.</li> <li>4. 35-70 projects.</li> <li>5. 10 studies.</li> <li>6. 20-30 private and public.</li> <li>7. 50-100 project performance specifications.</li> <li>8. At least one major policy recommendation in each of the following sectors: Agriculture, Health, Education, and Economics.</li> </ol> <p>Of the above, by the end of the first year those activities spelled out in Annex I and defined in the first year implementation plan will be completed. The indicators of outputs for each subsequent year will be established in the implementation plan for that year.</p>	<p>Observation and review of CONPAN records and reports to USAID.</p>	<p>Assumptions for achieving outputs:</p> <ol style="list-style-type: none"> <li>1. Personnel of sufficient caliber are available in Chile and can be recruited.</li> <li>2. A sufficient number of other Chilean organizations exist and are sufficiently interested in cooperating with CONPAN.</li> <li>3. Facilities and personnel exist to operate pilot projects.</li> </ol>

PROJECT DESIGN SUMMARY  
CONPAN PROGRAM

Project Title & Number: Chile - Nutrition Loan

Life of Project: From FY 1975 to FY 1979  
Total U.S. Funding: \$ 5,000,000  
Date Prepared: April 15, 1975

Annex III Exhibit A PAGE 1 of 4  
IMPORTANT ASSUMPTIONS

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
<p>Inputs:</p> <ol style="list-style-type: none"> <li>1. Funding for outside Technical Assistance.</li> <li>2. Funding for pilot projects.</li> <li>3. Funding for professional/consulting services.</li> <li>4. Funding for CONPAN operational costs.</li> </ol>	<p>Implementation Target (Type and Quantity)</p> <ol style="list-style-type: none"> <li>1.- For Technical Assistance \$ 825,000 from A.I.D.</li> <li>2.- For pilot projects. \$2,625,000 from A.I.D. and \$2,025,000 from GOC.</li> <li>3.- For professional/consulting services. \$ 1,550,000 from A.I.D. and \$ 1,525,000 from GOC.</li> <li>4.- For CONPAN operational costs \$ 450,000 from GOC.</li> </ol>	<p>USAID records. CONPAN records.</p>	<p>Assumptions for providing inputs:</p> <ol style="list-style-type: none"> <li>1. Appropriate outside T.A. of the type and number required can be obtained.</li> <li>2. Local services exist and are willing to participate.</li> </ol>



# Department of State

AID-DLC/P-2079  
ANNEX III  
Exhibit B, Part 1  
Page 1 of 4

## TELEGRAM

INCOMING AMEMBASSY SANTIAGO

**UNCLASSIFIED**

*Classification*

R 031952Z JAN 75  
FM SECSTATE WASHDC  
TO AMEMBASSY SANTIAGO 8478  
BT  
UNCLAS

STATE 001246

AIDAC

E.O. 11652: N/A  
SUBJ: DAEC REVIEW OF CHILD NUTRITION IRR

REF: (A) STATE 281387 (DECEMBER 27, 1974)  
(B) DECEMBER 24, 1974 TELCON (HECHTMAN/VANDYKE)

IN	✓
INFO	✓
LOG	✓
FILE	✓
INDEX	✓
SEARCH	✓
TRAINING	✓
OTHER	✓
C & R	✓
ACTION TAKEN.....	
BY..... DATE.....	

1. THE DAEC REVIEWED THE SUBJECT IRR ON FRIDAY, DECEMBER 13. THE MISSION IS AUTHORIZED TO PROCEED WITH INTENSIVE REVIEW OF PROJECT COMPONENTS 1 (NUTRITION PLANNING AND INFORMATION SYSTEM) AND 2 (PILOT PROJECTS). COMPONENT 3 (ENVIRONMENTAL SANITATION) IS APPROVED FOR PRELIMINARY INTENSIVE REVIEW AS DISCUSSED IN PARA. 3 BELOW. SUBMISSION OF THE CAP IS TENTATIVELY SCHEDULED FOR APRIL 15, 1974.

2. INTENSIVE REVIEW OF COMPONENTS 1 AND 2.

PARTICULAR CONSIDERATION SHOULD BE GIVEN TO THE FOLLOWING:

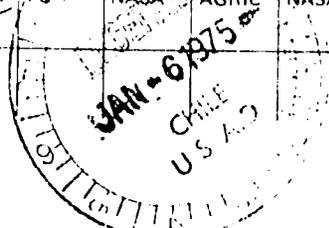
(A) RELATIONSHIP OF COMPONENTS - THE CAP SHOULD PRESENT AN OVERVIEW OF THE CRITICAL VARIABLES IN SOLVING NUTRITION PROBLEMS (E.G. AGRICULTURAL PRODUCTION, DISTRIBUTION AND STORAGE, EDUCATIONAL PROGRAMS). INDICATE THE RATIONALE FOR SELECTING THESE PROJECT COMPONENTS, AND THE REASONS FOR NOT SELECTING OTHER ALTERNATIVES AT THIS TIME.

(B) DEFINITION OF TARGET GROUP - THE CAP SHOULD CONTAIN A CLEAR DESCRIPTION OF THE TARGET GROUP TO BE REACHED DIRECTLY OR INDIRECTLY BY PROJECT COMPONENTS 1 AND 2. AN EFFORT SHOULD BE MADE TO OBTAIN SATISFACTORY DATA ON POSSIBLE MALNUTRITION AND ITS ESTIMATED EFFECTS WITHIN THE 6-13 AGE GROUP, IF

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ACTION	AMB	DCM	POL	POL/R	LAB	USIS	ECON	AID	CONS	DAO	MILGP	ACTION TAKEN
	✓	✓					✓					
	ADMIN	PC	NASA	AGHIC	NASA	IAGS	B & F	GSO	PER	CHRON		
												DATE INITIALS

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p 2 on 71

THIS SEGMENT OF THE POPULATION IS TO BE INCLUDED WITHIN THE LOAN'S TARGET GROUP IN ADDITION TO THE MORE VULNERABLE YOUNGER CHILDREN AND PREGNANT AND LACTATING WOMEN. THE TARGET GROUP SHOULD CORRESPOND TO THE LOWEST ECONOMIC THIRD OF THE POPULATION, AND SHOULD REFLECT THE KNOWN CONCENTRATIONS OF MALNUTRITION WITH PARTICULAR ATTENTION TO DEFINING THE RURAL, AS WELL AS THE URBAN TARGET GROUP. THE CAP SHOULD INCLUDE A PLAN FOR IMPROVING THE FLOW OF BASIC DATA ON MALNUTRITION BY AGE, INCOME, SEX, AND GEOGRAPHIC AREAS THROUGH THE EXISTING NATIONAL HEALTH SERVICE (POLYCLINICS) AND THE NEW ECEN PROJECT TO INSURE IDENTIFICATION OF THE NEEDIEST GROUPS.

(C) CONPAN ORGANIZATION AND AUTHORITY

1. THE CAP SHOULD CONTAIN A DETAILED DESCRIPTION OF CONPAN'S EXISTING STAFF AND THE FINAL PROPOSED STAFFING, INCLUDING A TIME-PHASED IMPLEMENTATION PLAN FOR BRINGING PERSONNEL ON-BOARD. THE PROPOSED STAFFING SHOULD CLEARLY REFLECT THE WIDE ARRAY OF CONPAN'S TECHNICAL AND MANAGERIAL ACTIVITIES, BOTH DURING AND AFTER THE A.I.D. LOAN, E.G. EXPERTISE IN POTABLE WATER SYSTEMS, RURAL NUTRITION PROBLEMS, FOOD TECHNOLOGY, DATA MANAGEMENT, AND RESEARCH AND DEVELOPMENT CONTRACTING. THE LATTER IS ESPECIALLY IMPORTANT IN VIEW OF THE APPARENT NEED TO DEVELOP SOUND SPECIFICATIONS AND SCOPES OF WORK FOR A SUBSTANTIAL NUMBER OF PILOT PROJECTS. STAFFING PROJECTED AFTER THE LIFE OF THE LOAN SHOULD REFLECT THE ROLE THAT CONPAN EXPECTS TO ASSUME WHEN ITS PLANNING AND INFORMATION SYSTEM (LOAN COMPONENTS 1 AND 2) ARE FULLY OPERATIVE.

2. THE CAP SHOULD CONTAIN AS PRECISE AS POSSIBLE A DESCRIPTION OF CONPAN'S ACTUAL OPERATING AUTHORITY. THIS WOULD INCLUDE A DESCRIPTION OF CONPAN'S FORMAL AND OTHER WORKING RELATIONSHIPS WITH ALL ENTITIES, PUBLIC, PRIVATE, OR OTHER DONOR (E.G. PRIVATE VOLUNTARY AGENCIES) WHICH MAY BE AFFECTED BY CONPAN POLICIES AND/OR POLICY RECOMMENDATIONS. THE CAP SHOULD CONTAIN A DISCUSSION OF CONPAN'S ACTUAL AUTHORITY OVER THESE ENTITIES IN TERMS OF ENFORCING ITS POLICY DETERMINATIONS; SEEING THAT NEW PROGRAMS ARE PUT INTO EFFECT; INSURING THAT CORRECTIVE ACTION IS TAKEN ON EXISTING PROGRAMS; AND ABILITY TO MONITOR (OR CAUSE ANOTHER ENTITY TO MONITOR) COMPLIANCE WITH CONPAN POLICY. IT WOULD BE USEFUL TO INCLUDE SOME ILLUSTRATIVE EXAMPLES OF CONPAN'S ACTUAL AUTHORITY (AND THE WAY IN WHICH IT IS EXERCISED) E.G. THE DECISION TO EVALUATE THE GOC'S SCHOOL FEEDING PROGRAM, GETTING THE FAT CONTENT OF PNAC MILK RAISED, AND SETTING MINIMUM PROTEIN STANDARDS FOR COMMERCIALY PRODUCED WEANING FOODS.

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## (D) PILOT PROJECTS

THE CAP SHOULD PRESENT A COMPLETE LIST AND SCLPES OF WORK (INSOFAR AS POSSIBLE) FOR PILOT PROJECTS TO BE FINANCED DURING THE FIRST YEAR OF THE LOAN. IT IS ANTICIPATED THAT THE MAJORITY OF THESE PROJECTS WILL BE IN SUPPORTK OF LOAN COMPONENT 1, PLANNING AND INFORMATION SYSTEMS, FOR THE PURPOSE OF EXPANDING AND REFINING NUTRITIONAL DATA FOR CONPAN'S PLANNING PROCESS. TO THE EXTENT POSSIBLE, THE CAP SHOULD ALSO CONTAIN A FIRMER LIST AND DESCRIPTION OF PILOT PROJECTS TO BE FINANCED IN SUCCEEDING LOAN YEARS. THE THRUST AND DIRECTION OF ALL SUCH PROJECTS SHOULD BE CLEARLY TOWARD SUPPORTING COMPONENT 1 OF THE LOAN OR TOWARD THE TARGETED LOWEST ECONOMIC THIRD OF CHILE'S POPULATION. IN THIS CONTEXT, USAID SHOULD NOTE THAT A.I.D. REGULATIONS CONCERNING COMPETITIVE BIDDING DO NOT APPLY I

PROPOSALS FOR ENGINEERING OR TECHNICAL SERVICES. ANY SUCH PROPOSALS ARE TO BE SOLICITED INITIALLY WITHOUT COST FIGURES IN ORDER TO IDENTIFY THE PROPOSAL WHICH IS TECHNICALLY AND QUALITATIVELY SOUNDEST. IN ORDER THAT USAID AND CONPAN MAY BE ASSURED OF RECEIVING THE WIDEST POSSIBLE SELECTION OF PROPOSALS FOR CONSIDERATION, IT IS RECOMMENDED THAT PILOT PROJECTS BE ADVERTISED IN THE COMMERCE BUSINESS DAILY. HOWEVER, THE MISSION DIRECTOR HAS AUTHORITY TO WAIVE CDD ADVERTISEMENT AT HIS DISCRETION, ON A CASE-BY-CASE BASIS.

## (E) FINANCIAL PLAN

THE CAP SHOULD EXPLAIN THE VARIOUS COST ELEMENTS OF COMPONENTS 1 AND 2 IN SOME DETAIL. THIS WOULD INCLUDE PRECISE COST BREAKDOWNS FOR ALL YEARS AS BETWEEN U.S. AND LOCAL CONSULTANTS TO CONPAN, SHORT-TERM TRAINING FOR CONPAN STAFF, COMMODITIES AND EQUIPMENT, COMPUTER TIME, CONPAN ADMINISTRATIVE COSTS, AND PAYMENTS TO INDIVIDUALS, UNIVERSITIES, OR OTHER INSTITUTIONS FOR DEVELOPING AND/OR CARRYING OUT PILOT PROJECTS. THE FOUR-YEAR DISBURSEMENT PERIOD SHOULD BE JUSTIFIED ALONG THE LINES DISCUSSED IN THE DACC REVIEW OF THE IRR.

(F) THE CAP SHOULD PRESENT AN EVALUATION PLAN DESIGNED TO MEASURE THE EFFECTIVENESS AND EFFICIENCY OF CONPAN'S PLANNING INFORMATION SYSTEM; CONPAN'S EFFECTIVENESS IN IDENTIFYING AND DESIGNING PROGRAMS TO SOLVE THE NUTRITION PROBLEMS OF THE LOWEST ECONOMIC THIRD OF THE POPULATION, IN RURAL AS WELL AS URBAN AREAS; AND THE INSTITUTIONAL CAPACITY OF CONPAN TO CARRY OUT BOTH THIS LOAN PROJECT AND ITS ROLE AFTER THE LOAN HAS TERMINATED.

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3. REVIEW OF COMPONENT 3.

AID/W WILL SEND A TDY ENGINEER TO CHILE ON OR ABOUT 10 JANUARY PER REF A. TO DO A PRELIMINARY INTENSIVE REVIEW OF COMPONENT 3, ENVIRONMENTAL SANITATION, BASING HIS WORK ON A REPRESENTATIVE SAMPLE OF FIVE CITIES OUT OF THE TWENTY PROPOSED FOR CHLORINATION ASSISTANCE. PER REF B. IT IS UNDERSTOOD THAT USAID WILL DETERMINE WHAT DATA ALREADY EXISTS ON THE WATER SYSTEMS INVOLVED, (CURRENT AND PROJECTED POPULATION SERVED, SOURCE AND QUANTITY OF SUPPLY, CHEMICAL AND BACTERIOLOGICAL ANALYSIS OF RAW AND TREATED WATER, TYPE OF TREATMENT, AGE AND CONDITION OF DISTRIBUTION SYSTEM, AMOUNT OF STORAGE, CURRENT AND PROJECTED DEMAND, ETC.) PRIOR TO ARRIVAL OF THE AID/W TDY ENGINEER. ON THE BASIS OF THE ENGINEER'S REPORT (TO BE SUBMITTED BY JANUARY 31) AND IN CONSULTATION WITH USAID, AID/W WILL MAKE AN ADMINISTRATIVE DETERMINATION WHETHER TO AUTHORIZE FINAL INTENSIVE REVIEW OF THIS LOAN COMPONENT. IF AUTHORIZED, FINAL INTENSIVE REVIEW SHOULD INCLUDE PROVISION FOR MAKING THE MINISTRY OF PUBLIC WORKS A CO-SIGNATORY OF THE LOAN. KISSINGER

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The issues raised in State Cable 1246 have been addressed in the Capital Assistance Paper, as referenced below:

2. (A) The rationale for the Project, including arguments as to why the approach chosen was selected over other alternatives, is presented in Section IV-A. The theory behind this rationale is presented in Annex I, Part A, and Annex II, Part A. The specific element of the Project, to be carried out based on the rationale and theory, are described in Section II-A; Annex I, Parts C and D; and Annex II, Part B.
  - (B) The definition of and rationale for the target group is presented in Section III-C. The plan for obtaining better baseline data on the target group is detailed in Annex I, Part C, Activity #6.
  - (C) A discussion of CONPAN's staffing pattern and plans and a discussion of CONPAN's operating authority are both presented in Section IV-B.
  - (D) A complete list including scopes of work for first year activities under the Project is presented in Annex I, Part C. A list of proposed activities in succeeding years is presented in Annex I, Part D. A discussion of procurement procedures for services in support of these activities is presented in Section V-A.
  - (E) A financial analysis, including cost breakdowns insofar as possible and a justification for a four year disbursement period, is presented in Section IV-C.
  - (F) The evaluation plan is detailed in Section V-B.
3. The environmental sanitation element has been reduced from an integral component of the Loan Project to a pilot project. This will enable CONPAN and A.I.D. to gather more data about the efficacy of such a program before proceeding on a larger scale. The rationale for this approach is given in Section II-B. The pilot project is detailed in Annex I, Part C, Activity #16.

Loan Application

CONPAN N° 147

REPUBLICA DE CHILE  
MINISTERIO DE SALUD  
CONSEJO NACIONAL PARA LA  
ALIMENTACION Y NUTRICION  
C O N P A N

ANT.: Programas prioritarios para erradicar  
la desnutrición.

MAT: Solicitud de crédito.

SANTIAGO, 28 de Abril de 1975

DE: Dr. FERNANDO MONCKEBERG B.  
Coordinador Ejecutivo del CONPAN

A: SR. STUART VAN DYKE  
Director  
Agencia Internacional para el Desarrollo  
Misión Económica de los Estados Unidos en Chile.

- 1.- Como es de su entender Chile como todos los países en vías de desarrollo tiene problemas nutricionales que se vienen arrastrando desde hace muchos años.
- 2.- El actual Gobierno, consciente de la importancia del problema ha designado como uno de los prioritarios la erradicación de la desnutrición. Para ello creó el Consejo Nacional para la Alimentación y Nutrición (CONPAN) un organismo interministerial, encargado de elaborar e implementar una política nutricional coherente y técnica.
- 3.- Para lograr este objetivo es necesario desarrollar un sistema de planificación, de gestión y control, de modo de coordinar los programas ya existentes, evaluarlos, elaborar alternativas y motivar la investigación y desarrollo en el campo de la nutrición.
- 4.- Numerosos y muy variados son los factores que condicionan el estado nutricional, es así como existen suficientes alimentos en Chile para proporcionar una dieta adecuada para todos los chilenos, sin embargo una gran masa de la población se encuentra afectada por la desnutrición y más aún niños preescolares.
- 5.- Sin pretender hacer un análisis exhaustivo cabe señalar que el problema no es simple y el abordarlo con posibilidades de éxito significa tener un ente planificador y normador en políticas claras en la producción de alimentos, importación de éstos, preservación y almacenaje, en su comercialización, en la distribución de Ingresos, en la educación nutricional y en el saneamiento ambiental. Esta política de Nutrición y

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Alimentación debe coordinar todos estos diferentes sectores y más aún ensamblarlos dentro de la política de desarrollo social y económico del país.

- 6.- Con este criterio fue como el Supremo Gobierno creó el CONPAN como consta en el Decreto Ley 354 de 11 de Marzo de 1974. El Consejo director de CONPAN consta de Ministros de cuatro carteras y es presidido por el de Salud Pública, además de Directores de seis instituciones que tienen ingerencia en el tema. La ley además provee de un cuerpo técnico que asesora al Consejo y propone a éste las políticas a implementar.
- 7.- La ley es rigurosa y da poder suficiente al Consejo para poder controlar e implementar las políticas que de él emanen.
- 8.- Se solicita a la Agencia Internacional para el Desarrollo un crédito a CONPAN tendiente a generar la capacidad de planificación, de gestión y control de modo de que el Cuerpo Técnico y por ende el Consejo Rector sea eficiente en producir una mejoría en el estado nutricional de la población chilena.
- 8.- Se estima que el mejor sistema para servir los objetivos de CONPAN es aquel que provenga a) de un mejoramiento en la efectividad del costo de los proyectos institucionales de alimentación que se encuentran vigentes desde hace aproximadamente 20 años y que se ha estimado un costo actual para el Gobierno de Chile de alrededor \$ 100 millones al año; b) de la generación, selección e implementación de proyectos diseñados para mejorar el nivel nutricional de los grupos tradicionalmente más vulnerables, determinados en el grupo etario de 0-15 años, mujeres embarazadas y nodrizas, pertenecientes todos ellos a los grupos de más bajos ingresos, y c) de un sistema de Información para recibir información proveniente del terreno y de otras Agencias del Gobierno de Chile con el fin de supervigilar, evaluar y planificar proyectos de modo de asegurar que se logren las expectativas planificadas.
- 9.- Para los fines arriba mencionados y para canalizar los esfuerzos en la dirección correcta venimos a solicitar a Ud. un crédito de 5 millones de dólares, cuyos términos de pago sean los más blandos posibles y su desembolso sea en un plazo de cuatro años. Unido este créd.

dito al presupuesto de CONPAN, que es de aproximadamente US\$ 1 millón anual, esperamos cumplir con una meta de al menos reducir la tasa de desnutrición a la mitad en un plazo de diez años.

10.- En la esperanza de una favorable acogida por USAID por cuanto no contamos con otra fuente de financiamiento se despide atentamente de Usted.

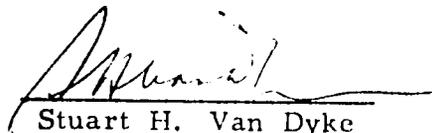
DR. FERNANDO MONCABERBERG BARRON  
Coordinador Ejecutivo del  
CONPAN

DISTRIBUCION

- 1.- AID
- 2.- archivo cr
- 3.- crédito AID

CERTIFICATION PURSUANT TO SECTION 611(e) OF  
THE FOREIGN ASSISTANCE ACT OF 1961, AS AMENDED

I, Stuart H. Van Dyke, the principal officer of the Agency for International Development in Chile, having taken into account, among other factors, the maintenance and utilization of projects in Chile previously financed or assisted by the United States, do hereby certify that in my judgment Chile has both the financial capability and the human resources capability to utilize and maintain effectively the capital assistance project proposed for financing under the Nutrition Loan.

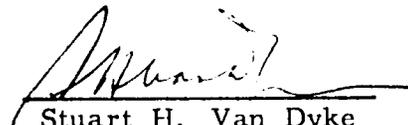
  
Stuart H. Van Dyke  
Director, USAID/Chile

April 15, 1975

Date

CERTIFICATION PURSUANT TO SECTION 611(e) OF  
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Stuart H. Van Dyke  
Director, USAID/Chile

April 15, 1975

Date

CHECKLIST OF STATUTORY CRITERIA

(Alliance for Progress)

The following abbreviations are used:

- FAA - Foreign Assistance Act of 1961, as amended
- FAA, 1973 - Foreign Assistance Act of 1973
- App. - Foreign Assistance and Related Programs  
Appropriation Act, 1974
- MMA - Merchant Marine Act of 1936

BASIC AUTHORITY

ANSWER OR DISCUSSION

- |   |                  |
|---|------------------|
| 1. <u>FAA s 103; s 104; s 105;</u><br><u>s 106; s 107.</u> Is loan<br>being made  |                  |
| a. for agriculture, rural<br>development or nutrition;  | a. For nutrition |
| b. for population planning<br>or health;  |                  |
| c. for education, public<br>administration, or human<br>resources development;  |                  |
| d. to solve economic and<br>social development problems<br>in fields such as transpor-<br>tation, power, industry,<br>urban development, and<br>export development; |                  |

e. in support of the general economy of the recipient country or for development programs conducted by private or international organizations?

## COUNTRY PERFORMANCE

### Progress Towards Country Goals

2. FAA s 201 (b) (5), (7) & 8;  
s 208

A. Describe extent to which country is:

(1) Making appropriate efforts to increase food production and improve means for food storage and distribution.

An agricultural recovery program is of high priority for the GOC. Policies of realistic prices at farm level, mobilization of agricultural credit through achieving a positive real interest rate, and distribution of land titles will act as incentive to increase food production. The GOC policies of returning state-owned agro-industries to private hands and of encouraging cooperatives will improve food storage and distribution.

(2) Creating a favorable climate for foreign and domestic private enterprise and investment.

A 1974 GOC decree-law (#600) provides a favorable climate for foreign private investment, liberalizing regulations governing repatriation and profit remittances for foreign capital. Resolution of claims arising from past expropriation of U.S. firms has improved

the climate further. Domestic investment is being encouraged by freeing of most product prices, liberalized import policies for parts and machinery, and a return of intervened firms to the private sector.

(3) Increasing the public's role in development process.

Efforts to mobilize rural population through Agrarian Reform and a continuing emphasis on cooperatives, both rural and urban, are designed to achieve this objective.

(4) (a) Allocating available budgetary resources to development.

Though it is difficult to break the GOC national budget into components, it is believed that sizeable portions are being allocated to development areas. 15.9% of the 1975 local currency budget is allocated for education, 5.9% for health, 11.4% for public works (including water, sewage, and transportation infrastructure), 2.0% for transportation, 5.9% for housing, and 2.4% for agriculture. 22.6% goes to the Ministry of Finance for use mostly in public sector salaries, including employees of the above mentioned ministries.

(b) Diverting such resources for unnecessary military expenditure (see also Item N° 19) and intervention in affairs of other free nations. (See also Item N° 10.)

Neither is known to be occurring. See Items N° 10 and 19.

(5) Making economic, social, and political reforms such as tax collection improvements and changes in land tenure arrangements, and making progress toward respect for the rule of law, freedom of expression and of the press, and recognizing the importance of individual freedom, initiative, and private enterprise.

Land reform has proceeded rapidly. The breaking-up of large estates was largely completed by the previous government and the present one is proceeding rapidly with the distribution of titles to individual land owners. Tax revenues have increased significantly and reforms are in progress. The current GOC is encouraging free competition and private investment. Expropriated enterprises are being returned to private ownership, and all major cases involving nationalization of U.S. private concerns have been settled satisfactorily.

There continues suspension of certain rights of expression in what is considered the current emergency period: Political parties are suspended or prohibited, trade union activities are restricted, and self-censorship continues to exist. Restrictions on individual freedom and civil rights exist, but in some areas progress has been made, such as the release of detainees. (See speech of Ambassador Bennett to United Nations on October 22, 1974.)

(6) Willing to contribute funds to the project or program.

The Chilean contribution to the project will be approximately 45%.

(7) Otherwise responding to the vital economic, political, and social concerns of its people, and demonstrating a clear determination to take effective self-help measures.

The GOC appears to be otherwise responding to the economic, political, and social concerns of its people and has strengthened self-help measures as indicated above.

B. Are above factors taken into account in the furnishing of the subject assistance?

Yes.

#### Treatment of U.S. Citizens and Firms

3. FAA s 620 (c). If assistance is to government, is the government liable as debtor or unconditional guarantor on any debt to a U.S. citizen for goods or services furnished or ordered where (a) such citizen has exhausted available legal remedies and (b) debt is not denied or contested by such government?

The GOC is active in negotiating claims and has reached agreement on all major claims to satisfaction of USG. Others not yet resolved are in active process of negotiation.

4. FAA s 620 (e) (1). If assistance is to a government, has it (including government agencies or subdivisions) taken any action which has the effect of nationalizing, expropriating, or otherwise seizing ownership or control of property of U.S. citizens or entities beneficially owned by them without taking steps to discharge its obligations toward such citizens or entities?

See answer to Item N° 3. No known cases of actions having effect described.

5. FAA s 620 (o); Fishermen's Protective Act. s 5. If country has seized, or imposed any penalty or saction against, any U.S. fishing vessel on account of its fishing activities in international waters,
- No known incidents have occurred.
- a. has any deduction required by Fishermen's Protective Act been made?
- b. has complete denial of assistance been considered by A.I.D. Administrator?

Relations with U.S. Government and Other Nations

6. FAA s 620 (a). Does recipient country furnish assistance to Cuba or fail to take appropriate steps to prevent ships or aircraft under its flag from carrying cargoes to or from Cuba?
- Chile does not trade with or furnish assistance to Cuba.
7. FAA s 620 (d). If assistance is to a government, has the Secretary of State determined that it is not controlled by the international Communist movement?
- Yes.

8. FAA s 620(d). If assistance is for any productive enterprise which will compete in the United States with United States enterprise, is there an agreement by the recipient country to prevent export to the United States of more than 20% of the enterprise's annual production during the life of the loan? No such enterprises are to be assisted.
9. FAA s 620 (f). Is recipient country a Communist country? No.
10. FAA s 620 (i). Is recipient country in any way involved in (a) subversion of, or military aggression against, the United States or any country receiving U.S. assistance, or (b) the planning of such subversion or aggression? No.
11. FAA s 620 (j). Has the country permitted, or failed to take adequate measures to prevent the damage or destruction, by mob action, of U.S. property? No known recent instance.
12. FAA s 620 (l). If the country has failed to institute the investment guaranty program for the specific risks of expropriation, in convertibility or confiscation, has Country has not failed to institute the investment guaranty program. Reinstitution of the program in Chile is currently under negotiation between the Overseas Private Investment Corp. and the GOC.

the A.I.D. administration within the past year considered denying assistance to such government for this reason?

13. FAA s 620 (n). Does recipient country furnish goods to North Viet-Nam or permit ships or aircraft under its flag to carry cargoes to or from North Viet-Nam? No.
14. FAA s 620 (q). Is the government of the recipient country in default on interest or principal of any A.I.D. loan to the country? GOC repayment on five loans with terms less than 40 years are in suspension pending outcome of 1975 debt renegotiations.
15. FAA s 620 (t). Has the country severed diplomatic relations with the United States? If so, have they resumed and have new bi-lateral assistance agreements been negotiated and entered into since such resumption? No.
16. FAA s 620 (u). What is the status of the country's U.N. obligations? If the country is in arrears, were such arrearages taken into account by the A.I.D. Administrator in determining the current A.I.D. Operational Year Budget? Chile is in arrears on a portion of its CY 1974 general assessment. This arrearage will not affect the voting rights of Chile at the forthcoming 30th General Assembly.

17. FAA s 481. Has the government of recipient country failed to take adequate steps to prevent narcotics drugs and other controlled substances (as defined by the Comprehensive Drug Abuse Prevention and Control Act of 1970) produced or processed, in whole or in part, in such country, or transported through such country, from being sold illegally within the jurisdiction of such country to U.S. Government personnel or their dependents, or from entering the U.S. unlawfully?
- No. The GOC has taken such measures as are within its capacity to control narcotics traffic and is cooperating with U.S. efforts to eliminate production and trade in narcotics.

18. FAA, 1973 s 29. If (a) military base is located in recipient country, and was constructed or is being maintained or operated with funds furnished by U.S., and (b) U.S. personnel carry out military operations from such base, has the President determined that the government of recipient country has authorized regular access to U.S. correspondents to such base?
- Not applicable.

Military Expenditures

19. FAA s 620 (s). What percentage of country budget is for military expenditures? How
- 21.0% of Chile's 1975 local currency budget is allocated for the armed forces and national police force

much spent for the purchase of sophisticated weapons systems? (Consideration of these points is to be coordinated with the Bureau for Program and Policy Coordination, Regional Coordinators and Military Assistance Staff (PPC/RC).)

combined. 31.2% of Chile's 1975 foreign exchange current budget is likewise allocated, an amount of \$ 95.4 million. An additional \$ 10.6 million of Chile's foreign exchange resources is budgeted in 1975 for military and national police capital expenditures. None is for the purchase of sophisticated weapons systems.

### Conditions of the Loan

#### General Soundness

20. FAA s 201 (d). Information and conclusion on reasonableness and legality (under laws of country and the United States) of lending and relending terms of the loan.
- The loan terms are considered reasonable and legal under both United States and Chilean law.
21. FAA s 201 (b) (2); s 201 (e). Information and conclusion on activity's economic and technical soundness. If loan is not made pursuant to a multilateral plan, and the amount of the loan exceeds \$ 100,000, has country submitted to A.I.D. an application for such funds together with assurances to indicate that funds will be used in an economically and technically sound manner?
- For the reasons given in the loan paper, the project is considered economically and technically sound. An application with appropriate assurances has been received.
22. FAA s 201 (b) (2). Information and conclusion on capacity of the country to repay the loan, including reasonableness of repayment prospects.
- There are reasonable prospects that Chile will be able to repay the loan fully and promptly.

23. FAA s 201 (b) (1). Information and conclusion on availability of financing from other free-world sources, including private sources within the United States. Other appropriate lending agencies have expressed no interest in the project and financing from private U.S. sources is not available at appropriate terms.
24. FAA s 611 (a) (1). Prior to signing of loan will there be (a) engineering, financial, and other plan necessary to carry out the assistance and (b) a reasonably firm estimate of the cost to the United States of the assistance? A team of A.I.D. and contract nutritionists and economists has already carried out financial and other analyses on which the assistance will be based. A reasonably firm estimate of proposed costs has been made and is reflected in Section IV-C of the Capital Assistance Paper.
25. FAA s 611 (a) (2). If further legislative action is required within recipient country, what is basis for reasonable expectation that such action will be completed in time to permit orderly accomplishment of purpose of loan? The loan can be accomplished with no further legislation.
26. FAA s 611 (c). If loan is for Capital Assistance, and all U.S. assistance to project now exceeds \$ 1 million, has Mission Director certified the country's capability effectively to maintain and utilize the project? Yes. See Annex IV, Exhibit A.

Loan's Relationship to Achievement  
of Country and Regional Goals.

27. FAA s 207; s 113. Extent to which assistance reflects appropriate emphasis on: (a) encouraging development of democratic, economic, political, and social institutions; (b) self-help in meeting the country's food needs; (c) improving availability of trained manpower in the country; (d) programs designed to meet the country's health needs; (e) other important areas of economic, political, and social development, including industry; free labor unions, cooperatives, and Voluntary Agencies; transportation and communication; planning and public administration; urban development and modernization of existing laws; or (f) integrating women into the recipient country's economy.
- The loan is designed to assist in reducing Chile's malnutrition problem through the implementation of a planning and policy process at the government level, through the more efficient use of food resources, and through pilot nutrition activities. As such the activity is supportive of GOC health programs, other social programs, the activities of Voluntary Agencies, and nutrition education. Private industry will play a major role in the development and production of food products for feeding programs. A conscious effort will be made to determine and solve any nutritional inequities by sex; as such, integration of women into Chile's national economy will be aided.
28. FAA s 209. Is project susceptible of execution as part of regional project? If so, why is project not so executed?
- Not susceptible.
29. FAA s 201 (b) (4). Information and conclusion on activity's relationship to, and consistency
- The project will be consistent with other GOC development activities; it will contribute directly to

- with, other development activities, and its contribution to realizable long-range objectives.
30. FAA s 201 (b) (9). Information and conclusion on whether or not the activity to be financed will contribute to the achievement of self-sustaining growth.      development of the poorest third of the society, consistent with A.I.D. activities and goals.      Assistance to reducing malnutrition will contribute significantly to long-term self-sustaining growth through having a healthier, more productive population and through more efficient use of the country's resources.
31. FAA s 209. Information and conclusion whether assistance will encourage regional development programs.      Except as the assistance may be an encouragement to other nutrition activities in Latin America, the assistance is not expected to have a significant developmental impact on any regional development program.
32. FAA s 111. Discuss the extent to which the loan will strengthen the participation of urban and rural poor in their country's development, and will assist in the development of cooperatives which will enable and encourage greater numbers of poor people to help themselves toward a better life.      The assistance will contribute directly to greater participation of both urban and rural poor to the country's development, through better health, productivity, and well-being, brought about by improved nutrition. The assistance will have no direct effect on cooperative development.
33. FAA s 201 (f). If this is a project loan, describe how such project will promote the country's economic development, taking into account the country's human and material resources requirements and relationship      The project will promote the country's economic development through creation of a more productive populace, reduction in disease, and more efficient use of food resources now used in feeding programs.

between ultimate objectives of the project and overall economic development.

34. FAA s 281 (a). Describe extent to which the loan will contribute to the objective of assuring maximum participation in the task of economic development on the part of the people of the country, through the encouragement of democratic, private and local governmental institutions.
- Maximum participation of the people will be encouraged through improved services and coverage of GOC and private agency health centers, maternal clinics, day-care centers, and educational institutions.
35. FAA s 281 (b). Describe extent to which program recognizes the particular needs, desires and capacities of the people of the country; utilizes the country's intellectual resources to encourage institutional development; and supports civic education and training in skills required for effective participation in governmental and political processes essential to self-government.
- The program recognizes the need for improved nutrition, health, well-being, and productivity among the poorest segment of the population; it further encourages an intersectorial approach to nutrition through the involvement of all appropriate governmental and private institutions and the personnel of those institutions.
36. FAA s 201 (b) (3). In what ways does the activity give reasonable promise of contributing to the development of economic resources or to the increase of productive capacities?
- The program is designed to increase the productive capacity of the people through better nutrition. It also encourages the more efficient utilization of Chile's food resources.

37. FAA s 601 (a). Information and conclusions whether loan will encourage efforts of the country to: (a) increase the flow of international trade; (b) foster private initiative and competition; (c) encourage development and use of cooperatives, credit unions and savings and loan associations; (d) discourage monopolistic practices; (e) improve technical efficiency of industry, agriculture and commerce; and (f) strengthen free labor unions.
- The loan will encourage private initiative through presenting opportunities to participate in the implementation of nutrition pilot projects. The project will encourage policy to be formulated which will improve technical efficiency of industry as relating to food processing. Impact on other listed items is not anticipated.
38. FAA s 619. If assistance is for newly independent country, is it furnished through multi-lateral organizations or plans to the maximum extent appropriate?
- Chile is not newly independent.

Loan's Effect on U.S. and A.I.D. Program.

39. FAA s 201 (b) (6). Information and conclusion on possible effects of loan on U.S. economy, with special reference to areas of substantial labor surplus, and extent to which U.S. commodities and assistance are furnished in a manner consistent with improving the U.S. balance of payment position.
- The major anticipated effect of the loan on the U.S. economy will be increased exports from the U.S. to Chile of the services of technical advisors and goods and services for various pilot projects. The loan is consistent with improving the U.S. balance of payments.

40. FAA s 202 (a). Total amount of money under loan which is going directly to private enterprise, is going to intermediate credit institutions or other borrowers for use of private enterprise, is being used to finance imports from private sources, or is otherwise being used to finance procurements from private sources. Approximately \$ 2.0 million will be for imports of goods and services to be used in nutrition activities. Much of the remaining \$ 3.0 million of funds will finance activities involving the development and implementation of nutrition sub-projects. Both private and public organizations will be free to bid on participation in such activities.
41. FAA s 601 (b). Information and conclusion on how the loan will encourage U.S. private trade and investment abroad and how it will encourage private U.S. participation in foreign assistance programs (including use of private trade channels and the services of U.S. private enterprise). Procurement of U.S. and other Code 941 goods and equipment, other inputs, and technical assistance services is expected.
42. FAA s 601 (d). If a capital project, are engineering and professional services of U.S. firms and their affiliates used to the maximum extent consistent with the national interest? Professional services of U.S. firms and institutions are expected to be used in technical assistance segment of loan.
43. FAA s 602. Information and conclusion whether U.S. small business will participate equitably in the furnishing of goods and services financed by the loan. All procurement of goods and services will be carried out under applicable guidelines, including SBN requirements.

44. FAA s 620 (h). Will the loan promote or assist the foreign aid projects or activities of the Communist-Bloc countries? No.
45. FAA s 621. If Technical Assistance is financed by the loan, information and conclusion whether such assistance will be furnished to the fullest extent practicable as goods and professional and other services from private enterprise on a contract basis. If the facilities of other Federal agencies will be utilized, information and conclusion on whether they are particularly suitable, are not competitive with private enterprise, and can be made available without undue interference with domestic programs. Yes; see items N° 41 and 43. Facilities of other federal agencies are not expected to be used.

Loan's Compliance with Specific Requirements.

46. FAA s 110 (a); s 208 (e). In what manner has or will the recipient country provide assurances that it will provide at least 25% of the costs of the program, project, or activity with respect to which the Loan is to be made? The Loan Application contained the GOC's commitment to provide the local currency equivalent of approximately \$ 4.0 million to the Project. The Loan Agreement will also state such commitment.
47. FAA s 112. Will loan be used to finance police training or related program in recipient country? No.

48. FAA s 114. Will loan be used to pay for performance of abortions or to motivate or coerce persons to practice abortions? No.
49. FAA s 201 (b). Is the country among the 20 countries in which development loan funds may be used to make loans in this fiscal year? Not applicable.
50. FAA s 201 (d). Is interest rate of loan at least 2% per annum during grace period and at least 3% per annum thereafter? Yes.
51. FAA s 201 (f). If this is a project loan, what provisions have been made for appropriate participation by the recipient country's private enterprise? The loan encourages private enterprise through the open bidding procedures on the development and implementation of sub-activities. Private enterprise is also being encouraged to produce and process the food products being used in GOC feeding programs.
52. FAA s 604 (a). Will all commodity procurement financed under the loan be from the United States except as otherwise determined by the President? Yes.
53. FAA s 604 (b). What provision is made to prevent financing commodity procurement in bulk at prices higher than adjusted U.S. market price? Not applicable.

54. FAA s 604 (d). If the cooperating country discriminates against U.S. marine insurance companies, will loan agreement require that marine insurance be placed in the United States on commodities financed by the loan? Loan agreement will so specify.
55. FAA s 604 (e). If offshore procurement of agricultural commodity or product is to be financed, is there provision against such procurement when the domestic price of such commodity is less than parity? No financing of such procurement is contemplated.
56. FAA s 604 (f). If loan finances a commodity import program, will arrangements be made for supplier certification to A.I.D. and A.I.D. approval of commodity as eligible and suitable? The loan will not finance a commodity import program.
57. FAA s 608 (a). Information on measures to be taken to utilize U.S. Government excess personal property in lieu of the procurement of new items. As provided by the Loan Agreement, U.S. Government excess personal property will be procured in lieu of new items whenever appropriate.

58. FAA s 611 (b); App. s 101. If loan finances water or water related land resource construction project or program, is there a benefit-cost computation made, insofar as practicable, in accordance with the procedures set forth in the Memorandum of the President, dated May 15, 1962? No such activity is anticipated.
59. FAA s 611 (c). If contracts for construction are to be financed what provision will be made that they be let on a competitive basis to maximum extent practicable? No such financing is contemplated.
60. FAA s 612 (b); s 636 (h). Describe steps taken to assure that, to the maximum extent possible, the country is contributing local currencies to meet the cost of contractual and other services and foreign currencies owned by the United States are utilized to meet the cost of contractual and other services. The GOC and other Chilean entities will contribute to the project local currency to the maximum extent possible. No excess U.S. owned currencies are available in Chile.
61. App. s 113. Will any of loan funds be used to acquire currency of recipient country from non-U.S. Treasury sources when excess currency of that country is on deposit in U.S. Treasury? No. Chile is neither an excess nor a near-excess currency country.

62. FAA s 612 (d). Does the United States own excess foreign currency and, if so, what arrangements have been made for its release? No.
63. FAA s 620 (g). What provision is there against use of subject assistance to compensate owners for expropriated or nationalized property? Such use of funds will not be eligible under terms of the Loan Agreement.
64. FAA s 620 (k). If construction of productive enterprise, will aggregate value of assistance to be furnished by the United States exceed \$ 100 million? Not applicable.
65. FAA s 636 (i). Will any loan funds be used to finance purchase, long-term lease, or exchange of motor vehicle manufactured outside the United States or any guaranty of such transaction? Any motor vehicle leased or purchased with loan funds will have been manufactured in the United States.
66. App. s 103. Will any loan funds be used to pay pensions, etc. for military personnel? No.
67. App. s 105. If loan is for capital project, is there provision for A.I.D. approval of all contractors and contract terms? Not applicable.

68. App. s 107. Will any loan funds be used to pay UN assessments? No.
69. App. s 108. Compliance with regulations on employment of U.S. and local personnel. (A.I.D. Regulation 7.) Loan agreement and implementation letters will provide for application of Regulation 7 as may be appropriate.
70. App. s 110. Will any of loan funds be used to carry out provision of FAA ss (209) (d)? No.
71. App. s 114. Describe how the Committee on Appropriations of the Senate and House have been or will be notified concerning the activity, program, project, country, and other operation to be financed by the Loan. Project was presented to Congress in the FY 75 Congressional Presentation.
72. App. s 601. Will any loan funds be used for publicity or propaganda purposes within the United States not authorized by Congress? No.
73. MMA s 901. b; FAA s 640 C.  
(a) Compliance with requirement that at least 50 per centum of the gross tonnage of commodities (computed separately for dry bulk carriers, dry cargo liners, and tankers) financed with funds made (a) The Loan Agreement will provide for compliance with the 50% U.S. flag shipping requirements.

available under this loan shall be transported on privately owned U.S.-flag commercial vessels to the extent that such vessels are available at fair and reasonable rates.

(b) Will grant be made to loan recipient to pay all or any portion of such differential as may exist between U.S. and foreign-flag vessel rates?

(b) No such situation is anticipated.

74. Section 30 and 31 of PL 93-189 (FAA of 1973). No.

Will any part of the loan be used to finance directly or indirectly military or paramilitary operations by the U.S. or by foreign forces in or over Laos, Cambodia, North Vietnam, South Vietnam, or Thailand?

75. Section 37 of PL 93-189 (FAA of 1973); App. s 111. Will No.

any part of this loan be used to aid or assist generally or in the reconstruction of North Vietnam?

76. App. s 112. Will any of the No.

funds appropriated or local currencies generated as a result of AID assistance be used for support of police or prison construction and administration in South Vietnam or for support of police training of South Vietnamese?

77. App. s 604. Will any of the funds appropriated for this project be used to furnish petroleum fuels produced in the continental United States to Southeast Asia for use by non-U.S. nationals? No.