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Technical Report

Edited and Produced by

Vitamin A Field Support Project (VITAL)
International Science and Technology Institute, Inc.
1601 North Kent Street, Suite 1016
Arlington, Virginia 22209
Phone: (703)841-0652
FAX: (703)841-1597

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INTRODUCTION

The Vitamin A Field Support Project (VITAL) was established by the Office of Nutrition (S&T/N), Bureau for Science and Technology, U.S. Agency for International Development (A.I.D.) in September 1989. The purpose of the project is to provide technical support to A.I.D. field missions, bureaus, and offices and to host country institutions to address two overriding objectives of the Agency's vitamin A strategy

- to locate and document the prevalence of vitamin A deficiency among young children of the developing world and
- to develop and implement sustainable, cost-effective programs to overcome vitamin A deficiency.

The VITAL Project is managed by the International Science and Technology Institute, Inc. (ISTI). The University of Arizona (UA), the Community Systems Foundation (CSF) and the Program for Appropriate Technologies in Health (PATH) serve as project subcontractors.

During its second year, VITAL greatly expanded its operations in terms of both volume and diversity of country-specific technical assistance and intervention support activities. Latin America continued to be the most active region as VITAL initiated or planned project activities in nine countries. VITAL significantly enhanced its Africa program capability by adding Dr. Mohamed Mansour and Ms. Charlotte Johnson-Welch to its long-term consultant staff dedicated to the Africa Region Program. As a result, the pace of program development has increased and many country-specific activities are already underway. VITAL devoted somewhat less effort to Asia because most Asian countries have already initiated vitamin A intervention programs and other A.I.D.-sponsored organizations have been providing assistance throughout the region for many years. Nevertheless, as several requests and opportunities arose during the past year, VITAL performed or planned project activities in Indonesia, India, Nepal, and the South Pacific.

The year saw several project management and staffing changes. Ms. Mary Linehan was promoted to Assistant Director for Technical Assistance, while the vacant position of Deputy Director was eliminated. Dr. Tina Sanghvi became a permanent part-time staff member charged with development of training activities and preparation of training materials. Dr. Mohamed Mansour joined the project as a long-term consultant in the role of VITAL's Africa Region Technical Advisor, with support from Ms. Charlotte Johnson-Welch. Ms. Michele Dreyfuss was hired as Technical Assistance Specialist for the Latin America region, backstopping Dr. José Mora and Dr. David Nelson. Ms. Subhi Mehdi, VITAL Technical Information Specialist, resigned from her position June 1, 1991, but continued to provide services to VITAL as a consultant. Katarina Paddock assumed responsibility for production of the *VITAL News* newsletter and other publications.

An annual review meeting conducted in December 1990 at ISTI headquarters brought together VITAL staff, the R&D/N Office Director and Project Officer, representatives from A.I.D. bureaus, and ISTI headquarters staff. Participants discussed achievements and obstacles encountered during VITAL's first year as well as plans for second-year project activities. The third Technical Advisory Group meeting was held on March 13-14, 1991, to review project activities. The second-year workplan for the project was approved in January 1991.

REGIONAL ACTIVITIES

Asia Region Program

Focusing its activities in the South Pacific, the Asia region program conducted several surveys and provided a wide range of technical assistance services. Activities in the region were funded through FY 1990 buy-ins totalling \$790,000 from the Asia and Near East Bureau and the India Mission. VITAL received a FY 1991 buy-in of \$300,000 for continued work in the South Pacific.

■ *Kiribati*

In collaboration with UNICEF, VITAL is providing technical assistance to the Ministry of Health (MOH) of Kiribati and the Foundation for the Peoples of the South Pacific for the Kiribati Vitamin A Prevention and Control Program. Specifically, VITAL assisted in program planning during February 1991 and provided training to nurses in the treatment, control, and prevention of vitamin A deficiency.

In collaboration with UNICEF, VITAL funded the attendance of Dr. Kienene of the MOH at the IVACG conference in Ecuador to present the findings of the 1989 Vitamin A Deficiency Survey in Kiribati.

■ *South Pacific Vitamin A Deficiency Surveys*

In November 1990, VITAL consultant Dr. Guy Hawley conducted a preliminary fact-finding visit to New Zealand and Australia to collect information about vitamin A deficiency in the South Pacific. As a result of his visit, Dr. Hawley identified three countries in which vitamin A deficiency could represent a public health problem (Tuvalu, Vanuatu, and the Solomon Islands). Rapid surveys, including clinical and dietary indicators, were planned for those countries. The surveys in Tuvalu and Vanuatu were conducted in May and July respectively, while the Solomon survey is planned for November. Data on the two completed surveys are being analyzed.

■ *Indonesia*

Throughout 1991, VITAL subcontractor CSF provided technical assistance to the Indonesian Ministry of Health as it carried out the micronutrient survey of the

Eastern Islands of Indonesia. Data collection was completed in June, and responses were analyzed during August and September. Drs. Tarwotjo and Muhilal of the Ministry of Health formally presented the survey findings in Washington, D.C., in September.

■ *India*

CSF has provided technical assistance to the Integrated Child Development Services Progress Reporting System to meet the requirements of the revised monitoring system including the vitamin A supplementation program. The government of India has been highly satisfied with CSF's work and has requested that the Progress Reporting System be extended to five more states. This activity has been funded by a buy-in from the India Mission to VITAL.

■ *WHO/SEARO Nutrition-cum-Action Network*

VITAL has initiated preliminary discussions with three nutrition institutions of the Nutrition-cum-Action Network of the World Health Organization's (WHO), Southeast Asia Regional Organization (SEARO) to plan research into the effects of food preservation and preparation techniques on the nutritive value of indigenous vitamin-A rich foods promoted for consumption. The three institutions--the Institute of Nutrition at Mahidol University (Salaya, Thailand), the National Institute of Nutrition (Hyderabad, India), and the Nutrition Research and Development Center (Bogor, Indonesia)--will conduct laboratory-based investigations of locally consumed foods to determine the effects of cooking and preparation techniques on the nutrient content of the foods consumed by target populations. Findings will be compared among the institutions and will guide future vitamin A food interventions and nutrition education activities.

■ *Nepal*

VITAL is working with CARE/Nepal in a collaborative inquiry to investigate the impact of home gardening on the vitamin A-rich food consumption patterns of target populations. During the next year VITAL will conduct a baseline survey of dietary and farming patterns in January at two CARE/Nepal impact areas, one in the Terai and one in the Far Western province. VITAL will provide training to CARE staff in vitamin A nutrition and nutrition education interventions.

A collaborative inquiry project developed by VITAL and the Nepal Ministry of Health to determine the operational implications of adding vitamin A supplementation to the existing Expanded Program for Immunization (EPI) has been delayed due to government reorganization and new research findings from studies conducted in Nepal on vitamin A.

Africa Region Program

VITAL devoted considerable effort to the Africa region during the past year and initiated several project activities. Furthermore, by charging Dr. Mansour and Ms. Johnson-Welch with responsibility for the region, VITAL laid the groundwork for additional projects scheduled to begin in 1992. The work is supported in part by a \$225,000 FY 1991 buy-in from the Africa Bureau.

- *Niger*
VITAL is working with the Food and Agriculture Organization (FAO) to develop and implement a collaborative gardening and food preservation project in Niger. VITAL will provide technical assistance in the monitoring and evaluation, nutrition education, and food preservation and preparation components of the FAO/Niger gardening project. A project document has been drafted, Dr. Mansour conducted a site visit to Niger in May to meet with FAO/Niger and government staff to develop a detailed implementation plan and to investigate both in-country resources for the VITAL-assisted components of the project and data analysis capabilities. The project is expected to begin in January 1992.
- *Uganda*
VITAL is collaborating with the USAID mission, UNICEF, the Ministry of Health, and Makerere University to conduct a sub-national vitamin A prevalence assessment. Mr. Robert Pratt and VITAL consultants Mr. David Mwandu and Dr. Mansour have traveled to Uganda several times over the past year to organize and prepare for the survey, which is scheduled to begin in October 1991.
- *Zambia*
VITAL has subcontracted with the Tropical Diseases Research Center (TDRC) to provide information collection and dissemination services among English-speaking African countries as part of VITAL's information gathering and dissemination program. TDRC will focus on providing relevant information on the prevalence, identification, treatment and current research and activities for vitamin A deficiency.
- *Senegal*
VITAL began providing support for the vitamin A information center at *Organisme De Recherche Sur l'Alimentation et la Nutrition Africaines (ORANA)* to conduct information collection and dissemination activities in French-speaking African countries.
- *Cameroon*
VITAL is collaborating with Drew University to undertake a vitamin A deficiency and blindness survey in Cameroon. VITAL will provide technical assistance for the biochemical and dietary assessments of vitamin A deficiency. In August, a

planning meeting was held while a field planning visit is planned for VITAL and Drew University in December 1991.

■ *Sahel Food Technology Initiative*

As part of its food preservation initiative, VITAL has planned a series of visits to countries in the Sahel to identify local resources and ongoing food preservation activities. Dr. Mansour visited Burkina Faso in September and will visit Mali, Chad, and Senegal during October and November.

Latin America and Caribbean Region (LAC) Program

The LAC region has been the most active in terms of the number of countries and projects served by VITAL. The work has been supported in part by buy-ins from the LAC Bureau for \$400,000 in FY 1990 and \$575,000 in FY 1991.

■ *LAC Regional Meeting*

VITAL sponsored a meeting in Guayaquil, Ecuador, on June 17, 1991 to coincide with the IVACG meeting. Representatives of various organizations in the LAC region were brought together as follow-up to the LAC Regional Workshop held in June 1990.

■ *Bolivia*

VITAL is providing technical and financial assistance to the Ministry of Health to assess the prevalence of vitamin A deficiency in Bolivia through an evaluation of serum retinol and dietary intake. The USAID mission funded the majority of the local operating costs of the survey. Dr. Hernando Flores, VITAL consultant from Pernambuco University, Recife, Brazil, and Dr. David Nelson assisted with planning and implementation of the survey. Dr. Barbara Underwood, NIH/NEI and Mr. Pratt visited Bolivia in June to review progress. Survey data collection began in late May and includes anthropometric measures in addition to serum retinol levels and dietary intake.

A.I.D./Bolivia requested that VITAL manage the funds distributed to Non-governmental Organizations during 1991 for vitamin A project activities in Bolivia. VITAL will implement this program through a subcontract with *Programa de Coordinación en Supervivencia Infantil* (PROCOSI). The projects will focus on gardening and food consumption interventions for improved vitamin A status.

■ *Haiti*

The Mango Solar Drying Project, in collaboration with Save the Children/Haiti, has progressed as planned. The Creole solar drying manual and English translation have been completed. Training of the Maissade women's groups in the construction and use of the solar dryer to preserve vitamin A-rich fruits and

vegetables took place in June and September. The women's groups are very enthusiastic about the project and have begun experimenting with additional foods (pineapple, papaya, pumpkin) and recipe development.

■ *Dominican Republic*

VITAL provided technical assistance to Centro Nacional de Investigaciones en Salud Materno Infantil (CENISMI), to carry out a vitamin A deficiency prevalence survey in the western regions of the Dominican Republic, including training of field personnel, review of data collection forms, and final agreement on data collection, processing, and analysis. Data collection, including serum samples and dietary intake using the IVACG Simplified Dietary Assessment Methodology, began in mid-May and was completed and analyzed by September. VITAL funded the laboratory analysis of the blood serum samples, which was performed by the Institute of Nutrition for Central America and Panama (INCAP). CENISMI has requested that VITAL provide planning and technical assistance for follow-on activities, including food preservation and nutrition education by nongovernmental organizations working in the western regions.

■ *Honduras*

At the request of the Ministry of Health, VITAL consultant Dr. Jesus Bulux of the Center for Studies of Sensory Impairment, Aging and Metabolism (CeSSIAM) Guatemala made a reconnaissance visit in March 1991 to the two highest-risk regions of Honduras. Based on a preliminary clinical assessment, Dr. Bulux reported some clinical signs of xerophthalmia, although the overall findings were equivocal and suggest the need for a prevalence assessment in the near future.

■ *El Salvador*

At the request of the USAID mission, VITAL consultant Dr. John McKigney and Dr. Tina Sanghvi visited El Salvador in May 1991 to prepare a national vitamin A strategy for USAID-supported programs.

■ *Guatemala*

VITAL consultant Dr. McKigney visited Guatemala in June to plan an assessment of vitamin A supplement distribution and fortification in that country. The assessment is part of an intercountry comparison of vitamin A distribution programs carried out by VITAL under the auspices of A.I.D., Pan American Health Organization (PAHO), and UNICEF. INCAP is the in-country collaborator for this effort, which is planned for November.

■ *Peru*

Dr. Nelson assisted members of a government-sponsored Vitamin A Planning Group to develop a presentation for the Montreal Micronutrient Malnutrition Conference in October 1991. VITAL will provide technical assistance to a Peruvian organization's gardening project through the University of Arizona.

INFORMATION GATHERING AND DISSEMINATION

During the past year, VITAL's information-gathering and dissemination activities expanded greatly, requiring some reorganization of the project's information function. Various staff changes led to a review of the contractual requirements for VITAL's information gathering and dissemination services and recommended strategies for improving project activities and for assigning priorities.

Networking

VITAL staff attended and participated in several international conferences during 1991 and, as a result, developed and strengthened ties with A.I.D. missions and bureaus, collaborating institutions, nongovernmental organizations, and other donor organizations. The conferences and meetings included the XIV IVACG Meeting, the Asian Nutrition Congress (Kuala Lumpur, Malaysia), Latin American Nutrition Society Meeting, the Infant Feeding and Child Survival Forum (Lomé, Togo), and the LAC Health, Population and Nutrition Officers' Meeting.

VITAL has developed collaborative relationships with several other donor organizations involved in program development and implementation, including UNICEF in Kiribati and Uganda, FAO in Niger, and WHO in Asia and for the development of a training module for adding vitamin A supplementation in measles case management.

Publications

- *Newsletter*
Two issues of *VITAL News* were published and distributed to USAID missions, A.I.D./Washington, NGOs, other donors, and interested parties during 1991. Newsletter distribution expanded from 300 to 500.
- *Nutrition Communications Assessment*
The report of the Nutrition Communications Assessment entitled "Getting out the Message: A Review of Communications Strategies for Promoting Vitamin A Interventions" was completed during 1991. Conducted for VITAL by PATH consultant, Ms. Judi Aibel, the report assesses the universe of communications efforts for vitamin A nutrition, draws together lessons learned, highlights successful vitamin A interventions, and provides A.I.D. and VITAL with guidance for future communications activities. The Academy for Educational Development (AED) and IVACG are publishing complementary communications documents.
- *Home and Community Gardens Assessment*
VITAL consultant Carolyn Peduzzi, conducted an assessment of field experiences

in home gardening and reported her results in "The Tip of the Iceberg: Home & Community Gardens Assessment Program Implementation Experience." In addition, the University of Arizona conducted a review of the literature on gardening and produced two publications in January 1991: "Vitamin A Nutrition and Gardens Bibliography" and "Gardens and Vitamin A: A Review of Recent Literature." In March, VITAL held a debriefing to discuss the findings and recommendations of the assessments.

■ *A.I.D. Vitamin A Strategy*

VITAL assisted in the development of the A.I.D. Vitamin A Strategy. The purpose of the strategy is to provide program support and guidance for A.I.D.'s efforts to assist countries in eliminating vitamin A deficiency as a contributing cause of morbidity and mortality among target populations.

■ *Assessment of Simplified Dietary Assessment Guidelines*

VITAL consultant Dr. Mary Ruth Horner, in collaboration with IVACG, has conducted a comprehensive review and analysis of field experience with the IVACG Guidelines for the Development of a Simplified Dietary Assessment. The assessment report has been submitted to IVACG for its review and use.

■ *VITAL Report Series*

VITAL has developed a report series of trip reports, evaluations, subject reports, and other documents produced by the project. A list of these reports is attached as Annex I.

■ *Regional Information Dissemination Plan*

VITAL is collaborating with ORANA in Senegal and TDRC in Zambia to provide regional information centers in French- and English-speaking Africa, respectively. Regional information centers in Latin America and Asia have been proposed and are under discussion. The purpose of these regional centers is to take advantage of the contacts and local knowledge of regional centers to improve the quality and appropriateness of vitamin information available to organizations and governments within the region.

■ *Country Fact Sheets*

Brief vitamin A fact sheets for selected countries in the Africa and LAC regions were drafted and have been distributed to USAID missions and in-country staff for review, updating, and comments. The fact sheets provide a broad overview of each country's vitamin A status and activities and policies.

LIBRARY

The VITAL library now holds over 1000 documents and continues to grow. The collection underwent minor reorganization in response to staff requirements and user needs. During 1991, VITAL responded to over 50 formal document requests and has distributed its bibliography to several organizations.

TRAINING

- *Modified Relative Dose Response (MRDR) Assessment Methodology*
During July 1991, VITAL supported the attendance of four international participants at the MRDR training workshop conducted by Iowa State University, a VITAL collaborating institution. VITAL supported development of the test kits and preparation of the training manual as part of its training activities.
- *Nutrition Training for I-Kiribati Nutritionist*
As part of its technical assistance program for the Kiribati Vitamin A Prevention and Control Project, VITAL sent Ms. Tinai Arobete, the Kiribati MOH Nutritionist, to Mahidol University in September 1991 for a three-month community nutrition training program.
- *Vitamin A Orientation Module*
VITAL has prepared a training module for general orientation to the diagnosis, assessment methodologies, causes, and treatment of vitamin A deficiency. Prepared for the XIV IVACG Meeting in Ecuador, the module has been translated into both French and Spanish for field testing before it is revised for final print production and formatted for slide presentation.
- *Vital Nutrients*
In preparation for the Montreal Micronutrient Malnutrition Conference in October 1991, VITAL prepared a training document entitled "Vital Nutrients" that describes the importance of micronutrients for development as well as the contributions of A.I.D. in addressing micronutrient deficiencies.
- *Measles Module*
In conjunction with WHO, VITAL has prepared a draft training module on the use of vitamin A supplements for the treatment of measles. A group of technical experts will review the documents before production.
- *XIV IVACG Meeting*
Four VITAL staff members, three consultants and four subcontractor staff members attended the XIV IVACG meeting in Ecuador during June 17-21, 1991. Consultants Dr. Mansour and Ms. Aubel made presentations at the meeting and

consultant Dr. Horner who was assessing IVACG's simplified assessment guideline for VITAL, interviewed several participants who were using or had applied guidelines. The VITAL staff met with representatives from numerous countries to consider needs and opportunities for working together to combat vitamin A deficiency in their several nations.

VITAL sponsored the attendance of 18 Ecuadoreans and 12 representatives of Latin American and Caribbean countries at the meeting.

■ *SLAN Meeting*

VITAL provided training support to the Latin American Nutrition Society's (SLAN) Annual Congress in San Juan, Puerto Rico in September 1990. VITAL organized a symposium on vitamin A deficiency for the congress and conducted a follow-up meeting for LAC region vitamin A activities. VITAL supported the participation of 22 LAC regional participants.

■ *South Pacific Commission Regional Nutrition Workshop*

The South Pacific Commission requested a vitamin A technical resource person to participate in its first regional nutrition workshop. VITAL consultant Dr. Hawley attended the workshop during April 22-26, 1991, and presented information on the impact of vitamin A deficiency on infant/child mortality rates and visual acuity. He used orientation materials prepared by VITAL and presented data from various vitamin A deficiency prevalence surveys conducted on Pacific islands. He also discussed the results of VITAL's November 1990 fact-finding mission to Australia.

ANNEX I: VITAL Publications List

1. Mora, Jose O. *Dominican Republic Trip Report (August 27-30, 1990)*. September 1990. p.7 *
2. Mora, Jose O. *El Salvador Trip Report (September 4-8, 1990)*. September 1990. 16 pp. *
3. Mora, Jose O. (VITAL/ISTI). *Panama Trip Report (August 19-22, 1990)*. September 1990. 11 pp. *
4. Mora, Jose O. *Regional Workshop: Strategies to Improve Vitamin A Status in Latin America, Guatemala (June 5 - 7, 1990)*. August 1990. 18 pp.
5. Mora, Jose O. *Terms of Reference for an Assessment of Vitamin A Distribution Programs in Four Countries of the LAC Region (Draft - February 13, 1991)*. February 1991. p.5 *
6. Olson, James Allen. *Training, Use, Application, and Interpretation of the Relative Dose Response (RDR) and Modified Relative Dose Response (MRDR) Tests for Evaluating the Vitamin A Status of 'At-Risk' Populations and for Assessing the Effectiveness of Vitamin A Intervention Programs (A Collaborative Inquiry/draft)*. June 1990. 18 pp. *
7. Schlossman, Nina. *Report on FAO - Niger Vitamin A Project Design Mission*. February 1990; (packet). 31 pp. *
8. Soleri, D., et al. *Gardens and Vitamin A: A Review of Recent Literature*. June 11, 1990. 30 pp.
9. Soleri, Daniela et al. *Vitamin A Nutrition and Gardens Bibliography*. June 1990. 96 pp.
10. Stansfield, Sally, et al. *Final Evaluation Report for the NOVA Project EYE CARE/Haiti*. April 1990. 43 pp. *
11. Stansfield, S. and Zinn. *IEF/Malawi Vitamin A Project Management Information System*. February 1991 23 pp. *

* = Internal Use Only

12. Vitamin A Field Support Project (VITAL). *First Annual Report (October 1, 1989-September 30, 1990): Volume 1 Technical Component*. November 1990; 27 pp.
13. Peduzzi, Carolyn. *Home and Community Gardens Assessment Program Implementation Experience: The Tip of the Iceberg*. June 1990. 60 pp.
14. Vitamin A Field Support Project (VITAL). *Taller Regional Sobre Estrategias Para Mejorar el Estado de Vitamina A en America Latina y el Caribe (Guatemala, Junio 5 - 7, 1990)*. Agosto 1990. 97 pp.
15. Vitamin A Field Support Project (VITAL). *VITAL NEWS*. Spring, 1990; Vol. 1. No. 1. p.9
16. Vitamin A Field Support Project (VITAL). *VITAL NEWS*. November 1990; Vol. 1 No. 2. p.10;
17. Aubel, Judi. *Getting out the Message: A Review of Communications Strategies for Promoting Vitamin A Interventions*. September 1991. 140 pp.
18. Hawley, V. Guy. *Vitamin A Deficiency in the South Pacific: A Fact Finding Mission*. January 1991. 15 pp.
19. Johnson-Welch, Charlotte. *Summary and Comparison of Evaluations of Vitamin A Projects in Malawi*. February 1991. 28 pp.
20. Mansour, Mohamed *Trip Report - Burkina Faso September 15-23, 1991*. October 1991. 35 pp.
21. Mansour, Mohamed *Trip Report - Senegal July 15-18, 1991*. August 1991. 18 pp.
22. Mansour, Mohamed *Trip Report - Niger May 6-17, 1991*. September 1991. 40 pp.
23. McKigney, John and Sanghvi, Tina. *Strategy for Vitamin A Intervention in Child Survival Programs in El Salvador*. July 1991. 43 pp.
24. Mwandu, David *Trip Report: Uganda May 13 - June 12, 1991*. June 1991. 10 pp.

25. Horner, Rudi. *The IVACG Guidelines for the Development of A Simplified Dietary Assessment to Identify Groups At Risk for Inadequate Intake of Vitamin A: A Review of Field Experience*. October 1991. 34 pp. *
26. Vitamin A Field Support Project. *VITAL NUTRIENTS*. October 1991. 37 pp.