

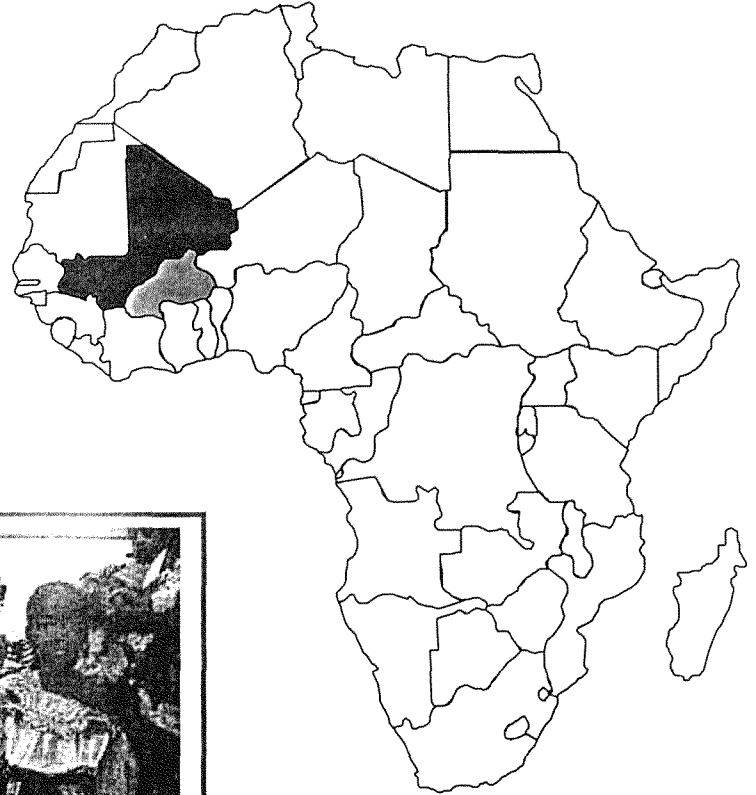


Helen Keller International

the international division of Helen Keller Worldwide

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The Sahel Micronutrient Initiative Final Technical Report July 1998 – January 2001 *Center File: 04193/91-0313-47*



Niamey, Niger
May 29, 2001

Submitted to:

The
Micronutrient
Initiative



L'initiative
pour les
micronutriments

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Sahel Micronutrient Initiative
Strengthening vitamin A and iron programs in West Africa
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Final Technical Report for Phase I

Background and Executive Summary:

The Micronutrient Initiative and Helen Keller International (the international division of Helen Keller Worldwide) share a common goal of assisting countries in achieving the micronutrient objectives of the World Summit for Children, with a particular focus on populations in greatest need. Discussions between the Micronutrient Initiative and Helen Keller International on a partnership in West Africa to reinforce micronutrient programs stated in early 1997. Three target countries were selected, Burkina Faso, Mali and Niger. This choice was made based on the very high levels of unmet need, and Helen Keller International's history of partnership in these three countries. They have a combined population of roughly 30 million people, of whom 3.9 million are under five years old. It is estimated that their combined population will be approximately 63 million in the year 2020, of whom 10.4 million will be under five years old (World Bank 1994). They represent some of the most nutritionally at-risk and most food insecure populations in the world. Niger has one of the highest documented rates of under five mortality in the world, at 274 per thousand (DHS 1998). Mali has the tenth highest rate of child mortality and Burkina Faso is ranked as number 25 in the world for child mortality rates (UNICEF 1998). Gross under-nutrition and micronutrient deficiencies, especially vitamin A deficiency, are major contributors to these alarming rates of child death in all three countries.

The PROFILES initiative, funded by the United States Agency for International Development (USAID) and managed by the Academy for Educational Development (AED) has undertaken an estimation of the number of lives of children 6-59 months that could be saved by vitamin A interventions every year in the French-speaking countries of West Africa. It is estimated that over 40,000 thousand lives a year can be saved in Burkina Faso, Mali and Niger alone.

After submission of a concept paper to The Micronutrient Initiative, a full project proposal was requested. Following submission, technical and financial review and negotiations, a contract was signed between The Micronutrient Initiative and Helen Keller International at the end of July 1998. An extension of this first phase was granted through January 31, 2001.

Overall, the joint efforts have had far more success than originally planned. Highlights of program accomplishments include:

- Harnessing the opportunities offered by National Immunization Days (NIDs) in all three countries, as well as other countries in the region, to rapidly expand coverage of vitamin A, and in Niger, of iron/folate.

- Assisting in development of complementary strategies for mass distribution, including National Micronutrient Days (NMDs) in Niger and Regional Micronutrient Days (RMDs) in Mali that include vitamin A and iron/folate, and planning for National Micronutrient Days in Burkina Faso.
- Reinforcing capacity in micronutrients in the health system by training 9,500 health workers in micronutrients in the three countries.
- Developing new models for distribution of micronutrients through Traditional Birth Attendants (TBAs), schools, and improved use of peri-urban health services.
- Taking inventory of all existing nutrition education materials in the three countries and developing recommendations for a minimum package of nutrition Information, Education and Communication that should take place in all health facilities.
- Undertaking initial studies in all three countries using the FRAT methodology (Fortification Rapid Assessment and Tool) to identify potential food vehicles for fortification and establishment of fortification working groups.
- Leveraging major new additional funding for nutrition from diverse sources including the Danish Cooperation, the United States Agency for International Development (USAID), Sight and Life, Leiner Health Products and the United Nations Children's Fund (UNICEF), which include a focus on food-based strategies.
- Leveraging the impacts of the project by providing technical assistance to other countries, and supporting the West African Nutrition Focal Points Network, under the auspices of the West African Health Organization.
- Seizing a number of opportunities to disseminate the results of the project.

This report will review all activities undertaken in each of the three countries and on a regional level, and identify constraints. Documents produced under the project will be included as annexes. As background information on the three countries has already been provided in the initial request as well as in the first technical report, this information will not be repeated here.

Acronyms, Abbreviations and Special Terms:

BASICS II	Basic Support for Institutionalizing Child Survival II - a USAID-funded project
CD-rom	Read only memory compact disc
CRAN	<i>Centre Régional de Recherches en Alimentation et Nutrition</i> - Regional Center for Food and Nutrition Research
ECOWAS	Economic Community of West African States
FRAT	Fortification Rapid Assessment Tool
HemoCue™	A portable device for measuring hemoglobin levels
HKI	Helen Keller International, the international division of Helen Keller Worldwide
HKW	Helen Keller Worldwide
IDEA Project	Iron Deficiency Elimination Action Project
IEC	Information, Education, Communication
INACG	International Nutritional Anemia Consultative Group
IVACG	International Vitamin A Consultative Group
LINKAGES	A USAID-funded project for promotion of breast feeding and complementary feeding
MI	The Micronutrient Initiative
MOST	The USAID Micronutrient Project
NGO	Non Governmental Organization
NIDs	National Immunization Days
NMDs	National Micronutrient Days
OCCGE	<i>Organisation de Coordination et de Coopération pour la Lutte Contre les Grandes Endémies</i> - Organization for Coordination and Cooperation for Combatting Major Endemic Diseases
RMDs	Regional Micronutrient Days
SANA	Support to Applied Nutrition in Africa - a USAID-funded project
SARA	Support to Analysis and Research in Africa - a USAID-funded project
UNAPSA	Union of African Paediatric Societies and Associations
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
VACs	Vitamin A Capsules
WAHC	West African Health Community
WAHO	West African Health Organization
WHO	World Health Organization

Key Accomplishments:

Regional

While the focus of this project is on the three target countries, part of the mandate is also to use the experiences of these three countries to leverage micronutrient interventions throughout the region. The key vehicle for regional activities has been the partnership with the *Centre Régional de Recherches en Alimentation et Nutrition* (CRAN, Regional Center for Research in Food and Nutrition) based in Lomé, Togo. During the course of this project, the Economic Community of West African States (ECOWAS), which covers the 15 countries¹ of West Africa and a combined population of over 230 million, has proceeded with fusion of the prior regional health structures, the OCCGE (*Organisation de Coopération et de Coopération pour la Lutte Contre les Grandes Endémies*- Organization for Coordination and Cooperation for Combating Major Endemic Diseases, covering Francophone countries) and the West African Health Community (covering Anglophone countries), into the West African Health Organization (WAHO). We have accompanied this evolution, and transferred our strong partnerships with CRAN and OCCGE to the newly-born WAHO.

Other mechanisms, both formal and informal, have been used to leverage micronutrient interventions, including closer working relationships with the Regional Nutrition Advisor for UNICEF in Abidjan and the World Health Organization (WHO) Vitamin A and Immunizations initiative.

Regional Startup Meeting: As soon as offices were established in Burkina Faso and Mali, a regional start-up workshop was held in Bamako, January 25-27, 1999. The objectives of the workshop were to:

- Exchange experiences across countries in vitamin A and iron/folate supplementation, including experiences of integrating vitamin A into NIDs
- Amend the project proposal document
- For each country, establish a consensus on the objectives, strategies and activities for the project.

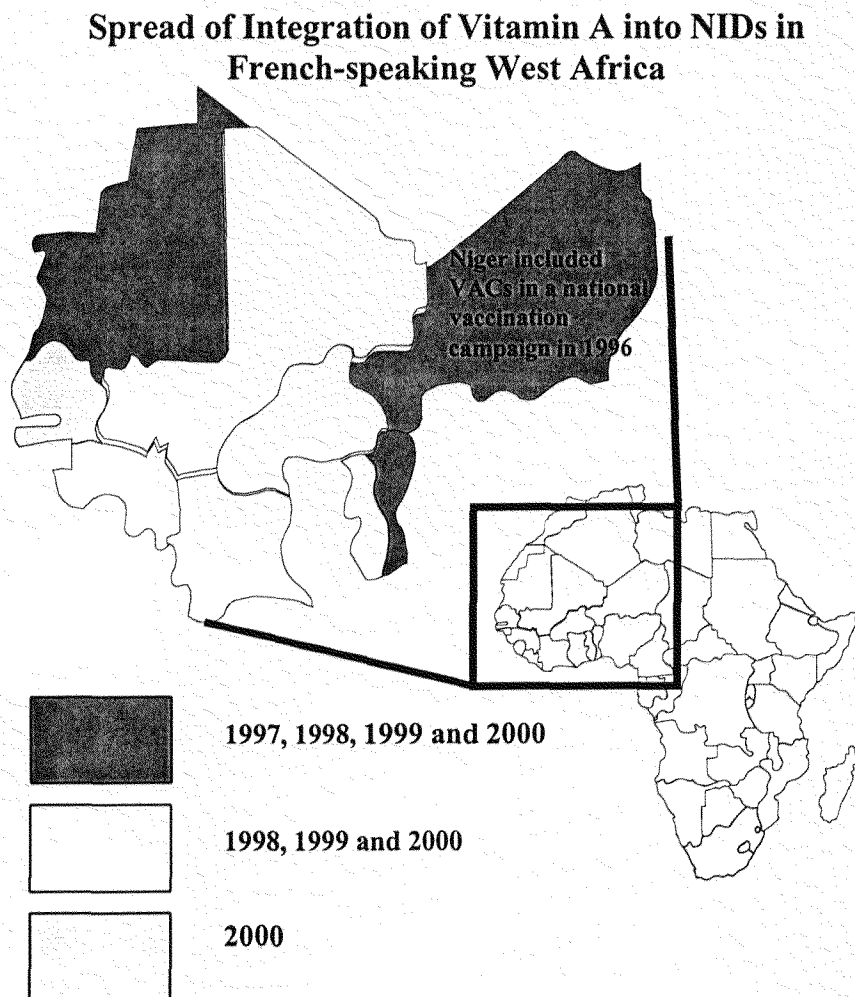
This workshop was organized in close collaboration with CRAN in order to leverage the regional structure's ability to place national interventions into a regional context, and to disseminate national experiences to other countries.

ECOWAS Nutrition Focal Point Meeting The nine French-speaking countries of West Africa (Benin, Burkina Faso, Côte d'Ivoire, Guinea, Mali, Mauritania, Niger, Senegal and Togo) have had a regional health structure called the OCCGE. Since 1995, the CRAN, a specialized center of the OCCGE, has worked with partner agencies to organize annual meetings of nutrition focal points of the nine member countries. The nutrition focal points, who are usually the heads of the nutrition divisions of their respective ministries of health, have constituted the beginnings of a nutrition network in West Africa. Helen Keller International was officially appointed

¹ ECOWAS includes Benin, Burkina Faso, Cap Verde, Côte d'Ivoire, The Gambia, Ghana, Guinea, Guinea Bissau, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone and Togo

to the international organizing committee. Under the terms of the 1993 revision of the ECOWAS treaty the regional health structures were merged into the West African Health Organization in December 2000. In anticipation of the creation of WAHO, the OCCGE and its partners this year extended the annual nutrition focal point meeting to the other ECOWAS members as well as to the West African Health Community, and extended participation to a number of other partners. This first ECOWAS-wide nutrition meeting was held in Niamey, Niger, September 20-24, 1999 and was opened by the Prime Minister of Niger. Workshop activities focused on a technical update and sharing of field experiences in nutrition education, an analysis of progress towards achieving the nutrition goals of the World Summit for Children, identification of key strategies for moving toward reaching these goals, and identification of strategies for improving nutrition networking in the region. Recommendations included strong support for food fortification.

Advocacy for Integration of Vitamin A in NIDs: A good deal of effort was expended in documenting and disseminating the experience in Niger, with a special focus on using regional channels, particularly the CRAN. In addition, Helen Keller International was invited by the World Health Organization (WHO) to a workshop for Niger, Burkina Faso and Mali to act as a resource for the integration of vitamin A into



vaccination campaigns. The map above illustrates the spread of integration of vitamin A into NIDs, a spread that has been facilitated by Helen Keller International's advocacy and technical assistance. The experience has also been used in Morocco to encourage authorities to add VACs to NIDs in 1998 and 1999 for children less than two years old, and helped push the decision for VACs to be added to NIDs in Mozambique in 1999 – the first mass distribution of vitamin A in this country's history. Cameroon and Madagascar also used the Niger experience.

Information and Liaison Bulletin: The CRAN and Helen Keller International have produced their first two joint information bulletins. The inaugural bulletin reports on the International Vitamin A Consultative Group meeting held in Durban in March 1999. The second bulletin focuses on the meeting of the International Nutritional Anemia Consultative Group (INACG), reports on National Micronutrient Days in Niger, and gives an update on the Sahel Micronutrient Initiative Project. The bulletins were produced in English and French.

Training Seminar in the Use of HemoCue™: CRAN and Helen Keller International organized a training-of-trainers seminar in the use of the HemoCue™ to assess anemia. The seminar was held at the HKI Africa Regional Office in Niamey. Sixteen participants from nine French-speaking countries in West Africa, from CRAN and from Helen Keller International attended the seminar. In addition to mastering use of the HemoCue™, the training included components on planning an anemia survey in-country and on planning iron interventions based on the data gathered. The Mozambique Country Representative and the Asia Nutrition Manager from headquarters served as trainers. This training was opportunely organized, since anemia data is generally incomplete in Africa, and most of the participants plan to conduct anemia surveys in their countries. Participants also learned communication techniques making it easier for them to efficiently conduct training in the use of HemoCue™ in their countries. This activity was funded from co-funding secured by Helen Keller International.

Development of CRAN's Information Technology Capacity and Development of Regional Micronutrient Visual Aid: Helen Keller International leveraged additional resources to develop the CRAN's information technology capacity, this has included providing computer equipment and training in information technologies, including desktop publishing. The first fruit of this effort has been the development of a regional prototype of a micronutrient visual aid designed in two formats: a large wall chart or desk mat, and a laminated, menu-size brochure. This is based on work already done in Niger and was published in September 2000.

Presentation on Micronutrients at the 8th Congress of the Union of African Paediatric Societies and Associations (UNAPSA): The Regional Nutrition Advisor was invited to make a presentation on micronutrients at the UNAPSA, held in Cotonou, Benin from December 6-10. Over 250 pediatricians from all over Africa attended. The presentation covered an update on the role of micronutrients in child health, and summarized the key actions that pediatricians should take to improve nutrition services in their practice and nationally. This was a critical opportunity to advocate for micronutrients, as pediatricians are instrumental in deciding nutrition

policy and practice for children. In addition to the presentation, copies of the most up-to-date information on supplementation with vitamin A and iron were provided to all participants.

Promising Practices and Lessons Learned in Vitamin A Programs in Africa: The Regional Nutrition Advisor took the lead in developing a document to be jointly issued by CRAN, HKI, and several USAID-funded projects, in French, on Promising Practices and Lessons Learned in Vitamin A Programs in Africa. The document was released in September 2000. It focuses on experiences in vitamin A programming that have worked in Africa, including sugar fortification in Zambia, integration of vitamin A into NIDs in Mali and Niger and National Micronutrient Days in Niger. It has also been included as a .PDF file in the French version of the Vitamin A and Immunizations CD-rom (see below).

Participation at the International Vitamin A Consultative Group (IVACG) and International Nutritional Anemia Consultative Group (INACG) Meetings At the INACG and IVACG meetings in Durban in 1999, there was an eight-member delegation from HKI in Africa. At the meetings in February 2001 in Hanoi, 28 counterparts and staff members of HKI in Africa attended (the Micronutrient Initiative authorized use of phase I project funds to cover travel costs of six participants). Seven posters were presented based on our work and our partners' work in Africa:

- Networking to Strengthen Vitamin A Programs in West Africa.
- Beyond NIDs: Niger's experience in organizing National Micronutrient Days.
- Identifying appropriate vitamin A-rich sweet potatoes for Niger.
- Integrating vitamin A into National Immunization Days in Mozambique.
- Change in key vitamin A indicators in a Child Survival program in Niger
- Integrating Delivery of Micronutrient Services in Morocco.
- Developing a Community Approach to Combat Micronutrient Deficiencies in Morocco.

Technical Assistance to Benin and Liberia Under other funding, we have provided technical assistance to Benin to carry out a national vitamin A deficiency survey, and to Liberia to develop a national micronutrient plan, adapt a training manual on micronutrients for health workers, and carry out the initial training of trainers.

Regional workshop on nutrition Information, Education and Communication (IEC): Based on the inventories done in each country, we worked with CRAN and OCCGE/WAHO to organize a regional workshop on nutrition IEC. Participants included representatives of nutrition and health education units of each country as well as UNICEF, the World Health Organization and Save the Children. The objectives of the workshop were to: (1) Review the current status of nutrition in the three countries, (2) Define for each country a minimum package of nutrition IEC activities that should be carried out in all health facilities and identify implementation needs, (3) Make recommendations for a nutrition IEC minimum package to be used at the regional level. Each country presented its inventory of IEC materials, and then assessed the current status of application of core nutrition activities. A minimum package of nutrition IEC activities for each country was defined, and each country

laid out its needs for implementing these in the coming two years. A series of strong points and weak points were detailed as well as 12 recommendations. This workshop will provide the basis for our work in nutrition IEC in the next two years.

Publication of regional health worker visual aid on micronutrients: From non-MI resources, we have worked with the CRAN to produce a regional version of the micronutrient visual aid for health workers to remind them of the key micronutrient interventions that they should integrate into their daily work.

The fifth meeting of Nutrition Focal Points of the Economic Community of West African States (ECOWAS) was held in Bamako September 25-29, 2000. The meeting included over 100 participants and was opened by the Minister of Health from Mali. A delegation from the conference held an audience with the Prime Minister of Mali to discuss the importance of nutrition in the development of the region, and the future of the focal points network. The OCCGE, which has organized the meetings to date, will be dissolved at the end of this year to make way for the new West African Health Organization, under the auspices of ECOWAS. As Mali currently holds the position of president of the OCCGE and president of the ECOWAS, the meeting was very timely and the Prime Minister ensured the delegation of Mali's commitment to improving nutrition in Mali and the region. The meeting included a one-day technical update on breast feeding, a review of country programs, stands set up by countries and partners, identification of technical themes for the next meeting, recommendations for strengthening the network regionally and in-country, and development of recommendations to be implemented in the coming year. The evaluation showed a strong level of satisfaction among the participants. This effort is supported by a number of partners including several USAID-funded projects (MOST, BASICS II, SARA, SANA and LINKAGES), UNICEF, the World Health Organization, and Helen Keller International with funding from MI. The next meeting will be held in Accra, Ghana, September 24-28, 2001.

Nutrition Stand at ECOWAS Heads of State Summit: The WAHO organized a health fair for the Heads of State of the latest Summit of the ECOWAS, in Bamako in December 2000. WAHO invited us to set up a nutrition stand to provide an overview of the nutrition situation in the region and opportunities to improve micronutrient status, including supplementation, dietary diversification and food fortification. This advocacy at the highest political level in West Africa will have a positive impact on future programs, particularly on such regional efforts as food fortification.

Vitamin A and Immunizations CD-rom: We worked with our headquarters to develop the Vitamin A and Immunizations CD-rom which has been a joint effort with the MI and WHO. Our regional office took the lead on producing the French version of this CD-rom.

Within Our Reach: The Regional Director was invited to a conference entitled "Within Our Reach" organized by World Vision Canada to highlight Canada's contributions to micronutrient programs and the challenges to take micronutrient programs to scale. He presented a paper entitled "Experiences in Integrating Vitamin A Distribution into Primary Health Care in Africa".

The IDEA Project (Iron Deficiency Elimination Action) in collaboration with Emory University, the US Centers for Disease Control and Prevention and the Micronutrient Initiative, is organizing a three-day conference entitled "Forging Effective Strategies to Combat Iron Deficiency" in May 2001. A number of abstracts were submitted based on our work and our partners' work in Africa, and the following have been accepted for poster presentation:

- Distributing iron through a campaign approach: The experience in Mali.
- Increasing demand for iron/folate in peri-urban Mali.
- Community-based distribution of iron/folate in Niger.
- Improving iron supplementation in a child survival program in Niger.
- Flour fortification with iron in Morocco: A preventive strategy toward iron deficiency control.
- The impact of weekly school-based iron supplementation on school children in Mali.

Niger

Project Start-up Workshop: Following the regional project start-up workshop held in Bamako, January 25-27, 1999, the national team organized a country level start-up workshop, May 9-10, 1999. The meeting gathered the eight Departmental Health Directors, all national nutrition focal points, representatives of Ministry of Public Health, members of Vitamin A Technical Committee and NGO partners. The objectives of the meeting were:

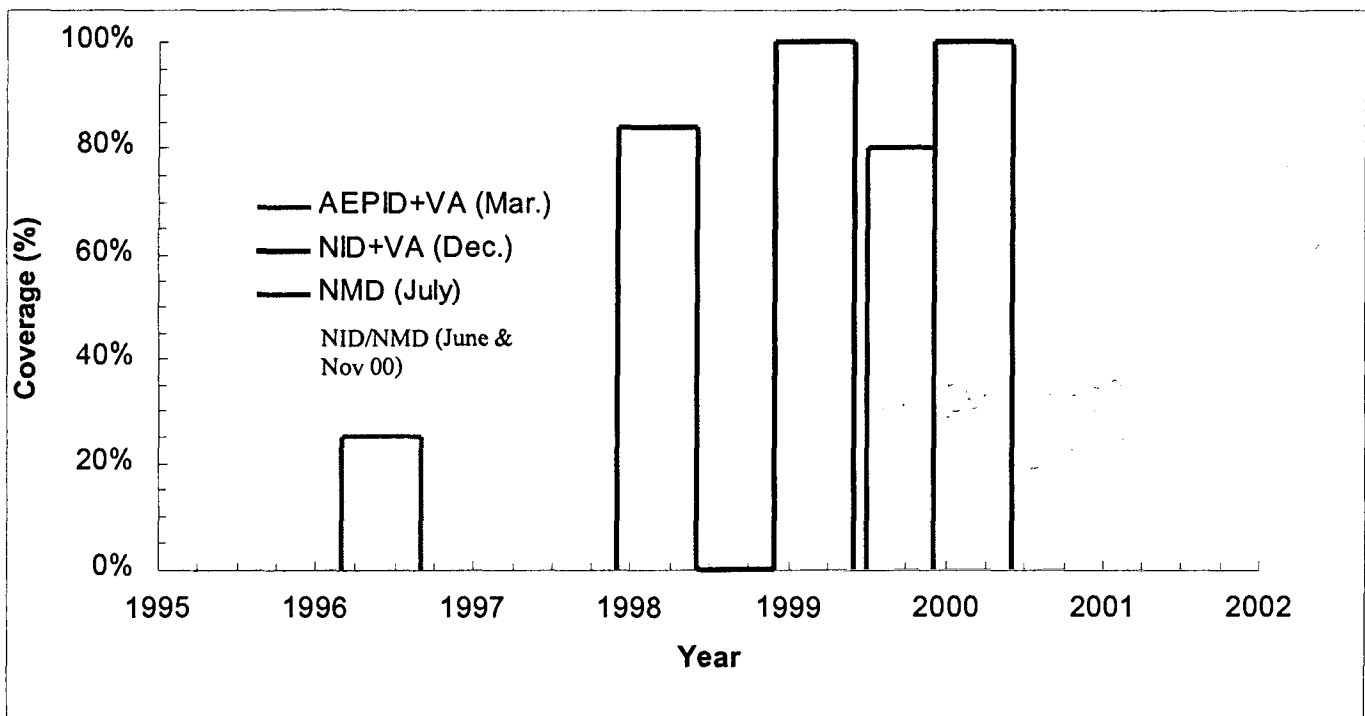
- Inform and sensitize our partners on the project objectives and strategies.
- Amend the country project document
- Refine the objectives and the activities of the project
- Define a framework for integrating micronutrient distribution into routine health services
- Define strategies for community-based iron/folate distribution in two pilot districts.

Integration of Vitamin A into NIDs: Niger became a leader of integrating vitamin A into mass campaigns, starting in 1996 during 'acceleration days' for the routine vaccination program. Vitamin A has been routinely integrated into NIDs in 1997, 1998 and 1999, with coverage rates for children 6-59 months estimated at between 95% to 100%. Helen Keller International is a long-standing member of the National NIDs organizational committee. Inputs have included technical assistance, advocacy, training, logistical support, and provision of over 4 million doses of vitamin A capsules. During the most recent round of NIDs, a one-page summary of prior NID results was prepared, with a reminder of key vitamin A information. This document was printed in 10,000 copies and distributed to all health workers and volunteers.

National Micronutrient Days: Throughout Africa, and particularly in West Africa, the opportunity offered by NIDs to expand access to vitamin A supplements has been an overwhelming success. However, the challenge remains of how to ensure a second annual dose, and how to ensure adequate distribution when NIDs come to an end. Of the countries in Asia where vitamin A coverage has been maintained above

80%, all have done so through some sort of campaign approach. This analysis of other countries' experiences and the huge success of the NIDs led to a focus on organizing National Micronutrient Days (NMDs) in Niger. These NMDs, the first-ever in Africa, were carried out on June 30, and July 1 and 2. The launch was presided by the President of the country at the national level and by the respective *Préfets* in the regions. Coverage estimates for the NMDs are 80% of children 6-59 months having received a vitamin A capsule, 63% of pregnant women having received iron/folate tablets and 52% of women in post-partum having received a vitamin A capsule. This initiative was the fruit of many months of partnership, starting well before the prior National Immunization Days. Organized by the Ministry of Public Health, it was supported by Helen Keller International and UNICEF. HKI's support included organizing initiation of the concept, providing technical assistance and advocacy, implementing a micro-planning workshop where all 42 health districts of the country were represented, and training 100 trainers and 5,000 health workers and volunteers in the correct use of micronutrient supplements.

In 2000, Niger organized two sets of NIDs (May/June and November/December), and this opportunity was used to organize joint NIDs/National Micronutrient Days in the second round of each set of NIDs. In June, the Head of State, Mamadou Tandja, presided over the launching of the second round of National Immunization Days for eradication of poliomyelitis, which was combined with National Micronutrient Days. Preliminary results show vitamin A coverage of approximately 100% for children and over 50% for women post partum. Iron/folate coverage for pregnant women is estimated at over 50%. In November, Mamadou Tandja and Alpha Oumarou Konaré, the current President of ECOWAS, presided over the launch of NIDs/NMDs in Niger as part of a regional synchronized launch.



Training Health Workers in Micronutrients The NIDs and NMDs have been used to scale-up training of health workers in the appropriate use of micronutrients throughout the country. One hundred trainers and 5,000 health workers and volunteers have been trained. In addition, journalists from all eight regions have been trained in developing appropriate media messages for micronutrients.

*APC
distribution?
etc.*

Community-Based Distribution of Iron/Folate: Agreements have been signed with one NGO (World Vision) and one project (the German-funded Alafia project) to develop pilot community-based distribution of iron/folate tablets. A baseline survey on levels of anemia has been carried out in both project areas, community distributors and health personnel have been trained, and distribution has started and is being routinely supervised. The endline evaluation, performed by an outside consultant, showed very high rates of coverage and very high levels of satisfaction with the program from all participants, with 87.4% of expected pregnancies in the intervention villages benefiting from iron/folate distribution.

there are much more to say

Resource Mobilization for Child Survival and Gardening: The Niamey office has successfully mobilized funding from the Danish Cooperation to replicate the nutrition-focused child survival activities into Diffa Department, in the far east of the country, and to continue gardening approaches for combating micronutrient malnutrition, with an emphasis on vitamin A-rich sweet potatoes.

Integration of Fortification-related Questions into Surveys: The endline survey for our nutrition-focused child survival project included questions on potential vehicles for food fortification, and on the use of village hammermills to provide information on both large-scale and small-scale food fortification opportunities. These questions were also incorporated into a baseline survey in Diffa Department. Results show a high prevalence of use of sugar and bouillon cubes ("Maggi" being the most popular), with much lower levels of consumption of wheat flour. Hammermill use varies greatly from one zone to another, with some zones having over 80% of households that use hammermills, and others around 20%. This has allowed us to identify potential target zones for a pilot small-scale fortification study.

Nutrition Surveillance System: Since 1997, HKI has worked with the Ministry of Health in four departments to implement a nutrition surveillance system. The system is based on community workers, working under the supervision of local health centers selected for that purpose. The system provides routine information on nutritional status, clinical signs of vitamin A deficiency, food production and intake, and vitamin A and iron folate coverage. Support to the system has continued under this project, with six data collection rounds completed.

Inventory of Nutrition IEC Materials: A study protocol was jointly designed by Helen Keller International and the Division of Health Education of the Ministry of Health to inventory and undertake a qualitative assessment of all nutrition IEC materials in the country. The initial inventory took advantage of the network of district health educators in all districts of the country, and brought them together for a three day workshop to inventory all materials and finalize the assessment. All field work has been completed and the report has been finalized. The evaluation in general

was positive about the quality of many of the materials, and recommended wide-spread diffusion of the most appropriate ones, accompanied by the training of health workers in their use.

Fortification Rapid Assessment and Tool (FRAT): A FRAT Study has been carried out, using technical assistance from Burkina Faso. Results are somewhat similar to those from Burkina Faso and Mali, with Bouillon cubes ("Maggi" more than others) and sugar showing promise as fortification vehicles. The main difference is that Niger doesn't produce either of these products, and will need to benefit from a regional approach to fortification.

Survey on Mothers' Perceptions of Vitamin A Distributed during NIDs: In order to assess what information is being communicated to mothers during mass campaigns, we undertook this assessment in conjunction with another survey funded by another partner. It is being used to improve vitamin A communication and training for mass campaigns.

Quality of Nutrition Services Provided by Health Workers: We undertook a study to evaluate the quality of nutrition services provided by health workers in Diffa Department under the auspices of a Danish-funded project in order to assess the training needs in nutrition for health workers.

Burkina Faso

Establishing Full Country Office: We established a full country office in Burkina Faso starting in January 1999. The office is based within the *Association Burkinabè pour la Promotion des Aveugles et Malvoyants* (ABPAM), a local NGO with which we have collaborated for over 10 years. Between the submission of the proposal and its acceptance by the Micronutrient Initiative, we also leveraged resources in the areas of onchocerciasis and trachoma control, and leveraged resources to meet our matching requirements for the Burkina operations.

Project Start-up Workshop: In March 1999, a National Start-up Workshop was organized to inform the Regional Directors of the content and aim of the project. The project document was presented and discussed and the feedback and comments from all 11 Regional Directors were recorded. The project document was then finalized, and submitted to the government for adoption in April 1999.

Integration of Vitamin A into NIDs: Helen Keller International was named as a member of the National NIDs organizing committee, and worked closely to ensure successful integration of vitamin A capsules into the NIDs in 1998 and 1999. Coverage in both years for children 6-59 months is estimated at approximately 99%. This has been done again in November 2000 and again results are estimated at over 90%. } 100% / 1-
no NID

Training of Health Workers: The Niger micronutrient training manual was adapted to the Burkinabè context, and the nutrition trainer from Niger assisted in the first training of trainers. The NIDs were used to increase the reach of the project. A total of

60 trainers, 900 health workers and 3,000 community health workers were trained in micronutrients.

Fortification Rapid Assessment and Tool (FRAT): The Ouagadougou office subcontracted with PATH Canada to undertake a FRAT study and a market assessment. It resulted in several promising food vehicles for vitamin A, notably sugar (there is one local producer) and “Jumbo” bouillon cubes which are extensively used in sauces and made locally. The study has raised a great deal of interest in Burkina Faso in food fortification.

Micronutrient Program in Schools: The pilot school-based micronutrient program is being carried out in collaboration with Catholic Relief Services (CRS), and the Ministry of Education. The school nutrition project includes the creation of a school kit that would combine education with provision of services. Nutrition, health, and hygiene education will be included in the education component, as well as deworming, iron/folate tablet distribution, and iodized salt distribution. A memorandum of understanding has been signed with CRS and a baseline survey on anemia levels has been carried out. In addition, all teachers have been trained on nutrition and have come up with teaching plans to integrate nutrition education into their lessons.

Technical Assistance to Partners: A number of requests have come from partners for assistance in the area of nutrition, including from Save the Children and UNICEF. HKI has organized trainings on the use of Hemocue™ for the Ministry of Health staff, as well as for Save the Children staff.

Inventory of Nutrition IEC Materials: A study protocol was jointly prepared by HKI and the National Nutrition Center to undertake an assessment of all nutrition IEC materials produced and used in Burkina Faso. The survey team contacted all the partners working in nutrition and went into the field to determine what existed at the peripheral level as well. The report of the study is an inventory of all the existing materials with details on the users, projects, funding, target groups, etc.

Review of the 10-year Action Plan for the Ministry of Education: HKI has been instrumental in reviewing the “Health-Nutrition-AIDS” component of the 10-year action plan of the Ministry. HKI participated in a two-week consultancy organized by the World Bank and the Dutch Embassy to provide technical assistance to the Ministry of Education in finalizing their 10-year Plan of Action. HKI headed up the working group on the health component and provided a work plan with objectives, activities and a budget. One of the main recommendations is to include nutrition in pre-service training. The Ministry has accepted all the recommendations and HKI is participating in meetings to operationalize the work plan.

Anemia Survey in Dédougou and Tougan: In preparation for the community-based distribution of iron/folate a survey was carried out on women of reproductive age in these two health districts. Overall, 40.3% were anemic, with non pregnant women having a 38.9% rate of anemia and pregnant women have a rate of 53.2%.

Mali

Establishing Full Country Office: We established a full country office in Mali in December 1998. The office was initially based in the *Conseil de Coordination des Activités des ONGs* (CCA-ONG, an NGO coordination body), and with continued growth has recently had to move to new office space. Between the submission of the proposal and its acceptance by the Micronutrient Initiative, we also leveraged resources in the areas of onchocerciasis and trachoma control, and leveraged resources to meet our matching requirements for the Mali operations.

Project Start-up Workshop: The national start-up workshop was held in Bamako on April 19th and 20th with 70 participants, including national representatives of health departments and social action, international organizations, and associations for development. The objectives of this workshop were:

- To present the Sahel Micronutrient Initiative project
- To present current policies and programs in micronutrients in Mali
- To develop a Mali-specific action plan for the project
- To provide information on the IVACG and INACG meetings

Integration of Vitamin A into NIDs: Helen Keller International was named as a member of the National NIDs organizing committee, and worked closely to ensure successful integration of vitamin A into the NIDs in 1998 and 1999. Coverage in both years for children 6-59 months is estimated at approximately 99%. In Mali, it has been decided to use vitamin A dispenser bottles instead of capsules for the NIDs. HKI undertook a summary evaluation of the difficulties associated with the dispenser bottles and is advocating for a return to use of capsules. Integration of vitamin A into NIDs has taken place again in 2000 and is planned for 2001.

Regional Micronutrient Days: The first Micronutrient Days in Mali took place on June 3rd and 4th in the districts of Kati, Koulikoro and Kolokani. In Koulikoro City the opening was hosted by the Minister of Health, who expressed her great satisfaction, her hope for the continuation of Micronutrient Days, and her wish that the other districts of the Region would be covered as soon as possible. The UNICEF Country Representative, local authorities, and a number of Directors and Cabinet Members of the Ministries of Health, Social Affairs, and Territorial Administration attended, and there was extensive media coverage. The preliminary results indicate a very good coverage for vitamin A. During the first day of distribution, we noticed that pregnant women were reluctant to go to the Health Centers to receive their iron tablets, but thanks to extensive use of the network of community radios, participation of pregnant women picked up in days 2 and 3. Regional Micronutrient Days were repeated in November of 2000 in four other districts and are planned in other regions for 2001.

→ Ten weeks following the first RMDs, an evaluation was carried out. It is estimated that 56% of women pregnant at the time of RMDs received iron/folate tablets. Among women who received them, 69% reported having consumed at least half of the tablets. For women who consumed less than half of the tablets, reasons stated were: giving birth before the end of the tablet supply (39%); side effects of the tablets (27%) and

forgetting (20%). There was strong support for the campaign approach, with health workers and women interviewed requesting a recurrence of the experience.

Training of Health Workers: HKI has worked closely with the Division of Family and Community Health on the development of a series of training modules in nutrition. One of the modules deals specifically with the logistics related to ensuring supplies of micronutrient supplements. Based on these nutrition modules, a subset dealing only with micronutrients has been used for the training of trainers and health workers. To date, 80 trainers and 483 health workers have been trained.

FRAT and Food Fortification Committee: A working group was established to plan the FRAT study, including representation from the Ministry of Public Health, the Ministry of Industry and the Institute of Public Health Research. The FRAT was undertaken and gave a number promising possibilities for fortification in Mali, namely bouillon cubes (“Jumbo” and “Maggi”) and sugar. The working group was so enthusiastic that its status has been formalized, and it has been tasked with developing a food fortification strategy for Mali.

Community-Based Distribution of Micronutrients: An agreement has been negotiated with the Canadian Center for International Cooperation (CECI) to carry out community-based distribution of iron/folate and vitamin A in their project areas in peri-urban zones of Bamako. A baseline survey on anemia has been carried out as well as ongoing monitoring. To date significant increases in coverage and compliance of iron folate and coverage of post partum vitamin A have been noted. An evaluation of the exercise has been undertaken, and provides valuable information for future work.

Technical Assistance to Partners: A number of partners requested technical assistance from HKI in micronutrient programs. We have provided training to two partner NGOs in the use of the HemoCue™ and the HKI Food Frequency Methodology (HKI/FFM) for assessing community risk of vitamin A deficiency. We have included NGOs in micronutrient trainings and assisted in the creation of a nutrition network. In November 2000, we trained 17 NGOs that are members of the network during a two-day workshop, and subsequently 11 other NGOs have applied to become members of the network.

Assistance to School Micronutrient Programs of Save the Children: We signed a memorandum of understanding with Save the Children to assist them in designing the micronutrient components of a school health program. The project covers 131 community schools and 30 formal schools. During the first year, 14 nurses, 320 teachers and 262 members of community school boards were trained in micronutrients, and vitamin A was distributed to 31,227 children and iron/folate to 4,000 children. In the second year, a refreshers training was held for the same number of participants. An evaluation of the iron/folate supplementation showed positive impacts on hemoglobin levels. (An abstract has been submitted to the IDEA conference).

Analysis of Iron/Folate Needs and Current Distribution System The Regional Nutrition Advisor prepared a briefing on the current availability of iron/folate supplements in Mali compared with estimated needs. This was also the basis for the training module on logistics of micronutrient supplements.

Technical Assistance to the Mali Demographic and Health Survey: The Government is undertaking the third Demographic and Health Survey (DHS) with funding from USAID and UNICEF. As members of the technical committee for nutrition, we have lobbied for inclusion of the HemoCue™ for measuring levels of anemia and for questions related to iron/folate and vitamin A coverage. The survey is currently at the field work stage.

Midterm Review of the Mali National Health Plan We have been instrumental to the midterm review of the nutrition component of the Mali National Health Plan (PRODESS), which has been presented to the Minister of Health. Part of the nutrition plan calls for restructuring of the Ministry of Health, including the creation of a nutrition division.

Inventory of Nutrition IEC Materials: This study was carried out in two parts. The first survey of organizations working in nutrition in Mali identified existing materials, and the second study identified obstacles to dissemination and use. Both studies were presented at the regional workshop.

Leveraging of Additional Resources for Nutrition-Focused Child Survival: We developed a grant for more intensive support of nutrition programs in health centers and communities in three districts of Koulikoro.

Activities Not Completed:

For different reasons, several activities were not completed or not undertaken:

- Due to initial resistance from the part of the government, the test of community-based distribution of iron/folate did not take place in Burkina Faso. The baseline study has been carried out, and there is now enthusiasm for the activity (based in part on the success in Niger and Mali), and this activity has been included in the second phase of the project.
- Due to the delays in starting activities in Burkina Faso, the final evaluation of the school nutrition project with Catholic Relief Services has not been finalized. This will be finalized by June 2001.
- Food industry assessments for fortification could not be carried out during this time frame, and they have already been scheduled during the first six months of the second phase of the project.

Principle Constraints:

While the three target countries offer a challenging operating environment, and our technical assistance approach to ensure outcomes carries some risk, there have been relatively few constraints during the period of the project that we were unable to surmount. Principal constraints include:

Delays in setting up full country offices in Burkina Faso and Mali It took longer than anticipated to identify and recruit adequate Country Representatives for these two offices, delaying the start of project implementation. With both offices fully operational, we don't anticipate these delays in the next phase.

Logistics. Given the distances that need to be traveled and the age of the vehicle pool in Niger, logistics have been an ongoing constraint. This has been coupled with a deterioration of air transportation in the region over the last two years. We have worked on leveraging other resources to improve the vehicle pool in the three country offices and have included two new vehicles (Niger, Nigeria) in the second phase request. Poor air transportation in the region remains an obstacle, particularly traveling in and out of Niamey. It is likely that the Regional Director for Africa will move to a city with better air transportation.

Delays in Governmental approvals. As a technical assistance agency, we work in close collaboration with government counterparts. In Burkina Faso, as discussed above, the Ministry of Health was initially reluctant to undertake community-based distribution of iron/folate. We are witnessing a much-increased commitment to micronutrient programming in Burkina Faso, as indicated by the recent decision to organize National Micronutrient Days. In Mali, there has been a plan to restructure the Ministry of Health to create a Nutrition Division for several years. There has been some confusion during this transition period, resulting in delays in getting the micronutrient training module approved by the government. This delay was overcome, and the Ministry has now officially created the Nutrition Division, but the Director has not yet been named.

Combined Roles of Niger Country Representative and Regional Director When HKI started our new regional thrust in Africa, the positions of Country Representative for Niger and Regional Director for Africa were combined because of resources constraints. Since 1997, programs have grown over eight-fold in Africa, which required splitting out these two roles and provided the necessary resources to do so. As of September 2000, a Country Representative for Niger has been recruited. This allows for greater regional supervision and coordination. It is likely that the Regional Director for Africa will move out of Niamey to a city in the region that has better access to air transportation.

Lack of Resources for Regional Activities As the project was originally designed, it did not anticipate the level of regional activities that has been undertaken. Fortunately, additional resources have been leveraged as opportunities arose. For the second phase, the regional activities have been made more explicit, and have been included in the budget.

Micronutrient Supplements. The Canadian Government, through the Micronutrient Initiative, has supplied UNICEF with large quantities of vitamin A capsules and iron/folate tablets. It was anticipated that these supplements would be used to fulfill the needs of this project. However, there was often confusion within UNICEF offices about these supplements, and there were sometimes difficulties in mobilizing adequate supplements in time, particularly for mass campaigns. HKI mobilized additional vitamin A capsules in Niger, from other resources, and the Micronutrient Initiative mobilized iron/folate tablets for immediate needs in Burkina Faso and Mali. During the second phase it will be important to clarify roles in provision of micronutrient supplements.

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Annexes:

1. Rapport de l'atelier régional de lancement
2. Rapport de l'atelier national de lancement du projet (Mali)
3. Rapport de l'atelier national de lancement du projet (Burkina)
4. Bulletins de liaison nos 01, 02 et 03
5. Abrégés IVACG
6. Abrégés IDEAS
7. Etude FRAT au Niger
8. Etude FRAT au Mali
9. Etude FRAT au Burkina
10. Enquête d'évaluation du marché FRAT au Burkina
11. Bulletin Linkages sur le lait maternel
12. Etude sur le matériel IEC nutrition au Niger
13. Etude sur le matériel IEC nutrition au Mali
14. Etude sur le matériel IEC nutrition au Burkina
15. Les pratiques prometteuses et les leçons apprises dans la lutte contre la carence en vitamine A dans les pays de l'Afrique subsaharienne
16. Evaluation de la supplémentation en fer sur le statut nutritionnel des élèves (Mali)
17. Enquête sur la qualité des prestations de la prise en charge nutritionnelle dans le département de Diffa (Niger)
18. Enquête sur la perception des mères des JNV Polio / vitamine A
19. Enquête finale sur la distribution à base communautaire du fer/folate (Niger)
20. La lutte contre les carences en micronutriments - Manuel de formation des formateurs (Mali)
21. La lutte contre les carences en micronutriments - Manuel de formation des agents de santé (Mali)
22. La nutrition périnatale et La lutte contre les carences en micronutriments - Manuel de formation à l'intention des médecins des CSCOM (Mali)
23. Projet amélioration de l'alimentation de rue dans 5 écoles du district de Bamako – rapport général (Mali)
24. Rapport de formation en nutrition des médecins – Projet de lutte contre la malnutrition infantile (Mali)
25. Evaluation du projet de lutte contre la malnutrition infantile (Mali)
26. Rapport final – Projet de lutte contre la malnutrition infantile (Mali)
27. Synthèse rapport de l'atelier des ONG partenaires de HKI
28. Rapport technique des Journées Régionales Micronutriments (Mali)
29. Evaluation de la compliance en fer et de l'organisations des JRM (Mali)
30. Rapport comparatif - Journées Régionales Micronutriments 2000 (Mali)
31. Module de formation des agents de santé et volontaires sur les micronutriments dans le cadre des Journées Nationales Micronutriments 1999 (Niger)
32. Formation des formateurs sur la distribution des micronutriments et le recyclage sur la surveillance active de la paralysie flasque aiguë 1999 (Niger)
33. Journées Nationales Micronutriments - Guide technique (Niger)
34. Launch of the National Micronutrient Days – Niger 1999

35. Launch of joint National Immunization Days / National Micronutrient Days in Niger
36. Le Niger – Leader de la lutte contre la carence en vitamine A en Afrique
37. Fusion and Nutrition in Africa: The birth of the West African Health Organization with nutrition at the center
38. Aide mémoire visuel sur les micronutriments
39. Nutrition Counseling Cards - Niger
40. Rapport final – Journées Nationales Micronutriments, première édition (Niger)
41. Rapport final – JNV/JNM édition 2000
42. Rapport de l’atelier régional de formation sur l’utilisation de l’HemoCue®
43. Rapport de l’Atelier Régional sur l’Information, l’Education et la Communication pour la Nutrition – Niamey, Décembre 2000