

FINAL REPORT

Nutritional Surveillance Project
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I. INTRODUCTION

The Nutritional Surveillance Project (NSP) is a collaboration between Helen Keller International (HKI) and the Institute of Public Health Nutrition (IPHN) of the Government of Bangladesh. The NSP routinely collects data every two months on indicators of food security and nutrition that are used by the Government, USAID, international agencies and local NGOs to develop policies and programs in health and agriculture that can improve the food security, nutrition and health of vulnerable groups in Bangladesh.

The NSP was established in 1990 to assist with disaster preparedness and was modified in 1998 to provide data that are representative of each of the six divisions of Bangladesh and of the country as a whole. The NSP data collected over the last 12 years have provided an unrivalled means of detecting trends in nutrition and food security in Bangladesh. For example a recent NSP bulletin has shown that the prevalence of stunting, an indicator of chronic undernutrition, has fallen by about 16% in the last decade, an encouraging trend. The NSP data have also been used by the Government of Bangladesh to improve or develop nutrition and health programs such as the national vitamin A capsule distribution program and the Bangladesh Integrated Nutrition Program.

The Nutritional Surveillance Project in Bangladesh currently collects data every two months in 24 sub-districts (*thana*), four in each of the six divisions. The surveys coincide with the six seasons of Bangladesh which strongly influence agricultural production and the seasonality of food production and consumption. The broad range of data collected by the NSP on nutritional, socio-economic and demographic characteristics of households provides a means of analyzing the factors associated with nutrition and food insecurity.

The Nutritional Surveillance Project has been supported since its inception by USAID/Bangladesh and provides data which are used both by the office of Population, Health and Nutrition (PHN) to monitor nutrition and health indicators such as vitamin A capsule coverage, and by the office of Economic Growth, Food and the Environment (EGFE) to monitor indicators of food security such as wasting, food purchased or grown by households, and loans taken to buy food. In 1999, a cooperative agreement was signed between USAID and HKI for a third 5-year phase of the NSP from the PHN office. In 2001, PHN funding was capped. At the same time, the EGFE office requested that the NSP collect data in areas where CARE and World Vision are implementing programs supported by resources from P.L. 480 Title II to improve the food security of vulnerable groups, which is USAID Strategic Objective 8. Thus, from December 2001 – September 2002, HKI continued to collect data in the original NSP sub-districts and also collected data in CARE and World Vision project areas. The project completion date was extended to November 25, 2002. This report is the final report on the NSP; a separate final report of SO8 activities is attached.

II. PROJECT OBJECTIVES AND GOALS

A. Purpose/goal

Continued operation and transfer of the skills required to operate a surveillance system which produces, analyzes and promotes the use of data on child health and nutrition, household socioeconomic conditions, agriculture production, and food consumption for planning, external review, and evaluation of programs and disaster preparedness and response (affects/impact, relief and rehabilitation efforts).

B. Specific objectives

- Provide quality, up-to-date information on child and maternal nutrition and health including vitamin A status and vitamin A capsule coverage, as well as influencing factors such as household welfare, labor patterns, household expenditure and food consumption, agriculture production. Such information can be used to:
 - Monitor seasonal trends and patterns;
 - Track overall cohort and time effects of household economics and child health;
 - Identify households, mothers and children who are most vulnerable to the effects of chronic food shortage and disasters;
 - Evaluate the effectiveness and efficiency of nutrition, health, food relief, and economic development programs;
 - Plan future programs and policies
- Serve as an independent monitor of the national and area-based activities of the Government of Bangladesh Integrated Nutrition Program (BINP) and the National Nutrition Program.
- Provide an ongoing surveillance system that can be used to assess the impact of disasters, to identify high-risk households and children before, during and post disaster, and to monitor the coverage and impact of relief and rehabilitation efforts;
- Predict situations that might lead to increases or improvements in nutrition – for instance the impact of rice price on nutrition, the seasonal income failure of landless laborers and incorporate such findings into programs and policies;
- Provide the framework to conduct special studies on topics that are important for national and sub-national planning and to conduct external monitoring and evaluation of national and sub-national programs;
- Continue to explore greater and more expanded use of surveillance system information with GOB and NGOs and also internationally for policy dialogue and decision-making;
- Develop and institutionalize the capacity to design and implement the kind of standardized surveillance techniques HKI implements under the NSP within GOB and other organizations.

III. ACHIEVEMENTS

The NSP is one of the longest running surveillance projects in a developing country and is being used as a model for surveillance in other countries, most recently in Indonesia. It is unique in that it links family socioeconomic status, agriculture, food security and child health/nutrition information in a single system. Since 1990, the NSP has operated with the participation of government (Institute of Public Health Nutrition, IPHN) and local non-governmental organizations (NGOs) to collect the data and to use information for local program and policy decision-making. Local organizations can also provide linkages to and important information about the needs of households and villages/communities.

Main achievements from 1999-2002 include:

- Quality, up-to-date information on child and maternal nutrition and health. This information is being used by a wide variety of audiences including the Government of Bangladesh, donors, and local and international organizations.

- Baseline data for the Bangladesh Integrated Nutrition Program. (On-going monitoring data for the BINP was not possible to collect due to funding problems of the NSP during 2001-2002.)
- Provision of key information that has led to improvements in programs and policies, and information towards international goals/targets, for example, the NSP:
 - provided data to monitor Bangladesh's progress towards reaching the World Summit Goals for Children.
 - was the framework for the national vitamin A and anemia survey that provided update information on the extent of micronutrient malnutrition among women and children and valuable insight into the impact of the vitamin A capsule program and food-based interventions.
 - special study on the vitamin A capsule distribution program was used to improve the vitamin A program.
 - data have been used for various government documents including the Poverty Reduction Strategy Paper.
 - data have been used to publish reports, bulletins and peer-review articles on important issues such as gender disparity, maternal malnutrition, effectiveness of health and nutrition programs food insecurity, homestead food production, nutrition and health problems in urban areas and childhood anemia, and to assess progress towards international targets for health, nutrition and poverty.
- Donors and other international organizations working in development in Bangladesh use the data generated from the NSP to describe and select working areas or regions, to prepare country development plans, to identify and describe groups/areas at high risk of food insecurity and malnutrition, and to monitor the impacts of development resources.
- Because of the flexibility of the NSP, it was possible to easily adapt data collection to meet USAID's need for data on the SO8 indicator. This was done by expanding the surveillance system into CARE and World Vision program areas, designing additional data collection tools, and recruiting and training new NGO staff to collect and enter the data.
- The NSP has provided training to NGO partners and IPHN in data collection and data entry. Capacity building for IPHN and HKI staff in the area of data management, analysis and reporting has also been a key component of program activities.

IV. CONCLUSIONS

The NSP has proven to be an important tool for the Government of Bangladesh, donor agencies, UN agencies, NGOs and other agencies and institutions. The information that is generated is important for program planning/development, for determining allocation of resources, for monitoring and evaluating programs, for monitoring the progress of Bangladesh towards international health and development goals and for the design of nutrition policies. The NSP also provides useful information for advocacy in the areas of nutrition, health, gender, agriculture and other important areas at national and international fora. The different publications, and presentations generated through NSP data, during the period of this cooperative agreement, is summarized in the Appendix.

In summary, the NSP has been used extensively for evaluation, planning, early warning and monitoring over the past 12 years. While USAID funding for NSP was discontinued, there continues to be substantial interest from the GOB, NGOs and international organizations to continue the NSP's mandate to provide timely and comprehensive information on child and

maternal health and nutrition, vitamin A, household economics, agriculture production, and disasters/crises. And, in December 2002, the Embassy of the Kingdom of the Netherlands/Dhaka, signed an agreement with HKI for a two-year extension of the NSP – an excellent indication of the importance/value that agencies place on the NSP data.

APPENDIX: NSP publications and presentations, 1999 – 2002

Publications

1. HKI/IPHN (2003). *Postpartum Supplementation with Vitamin A has Extremely Low Coverage in Rural Bangladesh*. Bulletin No. 12, January 2003. Dhaka: Helen Keller International.
2. HKI/Asia Pacific (2003). *Integration of Animal Husbandry into Home Gardening Programs to Increase Vitamin A Intake from Foods: Bangladesh, Cambodia and Nepal*. Dhaka: Helen Keller International.
3. H. Torlesse, L. Kiess & M.W. Bloem (2003). *Association of household rice expenditure with child nutritional status indicates a role for macroeconomic food policy in combating malnutrition*. In press, *The Journal of Nutrition*.
4. HKI/IPHN (2002). *Nutrition, Health and Poverty in Bangladesh in 2001 – Facilitating Action Through Data Sharing*. Annual Report 2001. November 2002. Dhaka: Helen Keller International.
5. HKI/IPHN (2002). *Eggs are rarely eaten in rural Bangladesh: why and how to improve their availability*. Bulletin No. 11, April 2002, pp 4. Dhaka: Helen Keller International.
6. HKI/IPHN (2002). *Anemia is a severe public health problem in pre-school children and pregnant women in rural Bangladesh*. Bulletin No. 10, March 2002, pp 4. Dhaka: Helen Keller International.
7. HKI/IPHN (2002). *Urban poverty in Bangladesh: the perspective of the Nutritional Surveillance Project*. Bulletin No. 9, January 2002, pp 4. Dhaka: Helen Keller International.
8. HKI/IPHN (2001). *When the decision-maker is a woman: does it make a difference for the nutritional status of mothers and children?*. Bulletin No. 8, November 2001, pp 4. Dhaka: Helen Keller International.
9. HKI/IPHN (2001). *Undernutrition in mothers in rural Bangladesh: findings from the NSP indicate 'critical' food insecurity*. Bulletin No. 7, September 2001, pp 4. Dhaka: Helen Keller International.
10. HKI/IPHN (2001). *Complementary feeding in rural Bangladesh: family food for breast-fed infants*. Bulletin No. 6, July 2001, pp 4. Dhaka: Helen Keller International.
11. HKI/IPHN (2001). *Nutritional Surveillance Project: Evaluating national nutrition programs in Bangladesh: the role of the Nutritional Surveillance Project*. Bulletin No. 5, June 2001, pp 4. Dhaka: Helen Keller International.
12. HKI/IPHN (2001). *Nutritional Surveillance Project: Rickets in Bangladeshi children: a small focus or a widespread problem?* Bulletin No. 4, June 2001, pp 4. Dhaka: Helen Keller International.
13. HKI/IPHN (2001). *Nutritional Surveillance Project: Progress in Bangladesh Towards the Goals of the 1990 World Summit for Children*. Bulletin No. 3, April 2001. Dhaka: Helen Keller International.
14. HKI/IPHN (2001). *Nutritional Surveillance Project: National Immunization Days in the Chittagong Hill Tracts: Are special strategies needed to eradicate polio in this region of Bangladesh?* Bulletin No. 2, March 2001. Dhaka: Helen Keller International.
15. HKI/IPHN (2001). *The Nutritional Surveillance Project in Bangladesh in 1999 – Towards the Goals of the 1990 World Summit for Children*. Dhaka: Helen Keller International.
16. HKI/IPHN (2000). *Nutritional Surveillance Project: High anemia prevalence among Bangladeshi children in urban slums: An ethical economic rationale for multi-micronutrient supplementation?* Bulletin No. 1, September 2000. Dhaka: Helen Keller International.
17. HKI/IPHN (1999). *Nutritional Surveillance Project/National Vitamin A Survey 1997-98: Iron Deficiency Anemia Throughout the Lifecycle in Rural Bangladesh*. Dhaka: Helen Keller International.
18. HKI/IPHN (1999). *Nutritional Surveillance Project/National Vitamin A Survey 1997-98: Vitamin A Status Throughout the Lifecycle in Rural Bangladesh*. Dhaka: Helen Keller International.

19. HKI/IPHN (1999). *Nutritional Surveillance Project: 1998 NSP Annual Report - National and Divisional Trends Among Children and Households in Rural Bangladesh*. Dhaka: Helen Keller International.
20. HKI/IPHN (1999). *Nutritional Surveillance Project: Vitamin A Deficiency Among Preschool Children in Rural Bangladesh*. Dhaka: Helen Keller International.
21. *Nutritional Surveillance Project: Report of Round 59 – Urban, December 1999 Data Collection*. Dhaka: Helen Keller International.
22. *Nutritional Surveillance Project: Report of Round 59 – Rural, December 1999 Data Collection*. Dhaka: Helen Keller International.
23. *Nutritional Surveillance Project: Report of Round 58 – Urban, October 1999 Data Collection*. Dhaka: Helen Keller International.
24. HKI/IPHN (1999). *Nutritional Surveillance Project: Report of Round 58 – Rural, October 1999 Data Collection*. Dhaka: Helen Keller International.

Presentations at international conferences

1. Integration of animal husbandry into home gardening programs to increase vitamin A intake. A Talukder, H Torlesse, S de Pee, A Taher, T Chowdhury, H Kroeun, D Panagides, L Kiess, MW Bloem. International Vitamin A Consultative Group Conference, Marrakech, Morocco, February 2003.
2. Night blindness among women is a good indicator of vitamin A deficiency in a population experiencing crisis. H Torlesse, H Moestue, L Kiess, A Thorne-Lyman, S de Pee MW Bloem. International Vitamin A Consultative Group Conference, Marrakech, Morocco, February 2003.
3. 24-VASQ method for estimating vitamin A intake: Evaluation of its performance. S de Pee, S Halati, L Kiess, D Panagides, A Talukder, MW Bloem. 5th International Conference Dietary Assessment Methods (ICDAM), Chiang Rai, Thailand, January 2003.
4. Evidence for impact of homestead food production on micronutrient deficiencies and health. S de Pee, MW Bloem, A Talukder, R Moench-Pfanner. ACC/SCN Meeting, Berlin, March 2002.
5. Integrating strategies for combating vitamin A deficiency: Successes in Asia. S de Pee, MW Bloem, L Kiess, D Panagides, A Talukder. IUNS meeting, Vienna, August 2001.
6. Nutrition surveillance to monitor nutrition and food security: Indicators, interpretation and action. MW Bloem, L Kiess, S de Pee, R Moench-Pfanner. Inter-Agency Working Group on Food Insecurity and Vulnerability Information and Mapping Systems 4th International Meeting Bali, Indonesia, February 7-11, 2000.

Formal presentations in Bangladesh

1. Dietary diversity in Bangladesh: Evidence from the Nutritional Surveillance Project. Presented at the Workshop on 'Alleviating Malnutrition through Agriculture II: Biofortification and Diversification as Long-term Sustainable Solutions', organized by IFPRI at the BRAC conference Center, January 2003.
2. Monitoring the SO8 of USAID in CARE and World Vision program areas. Presented by at USAID, January 2003.
3. Nutrition, Health and Poverty in Bangladesh in 2001: Facilitating Action Through Data Sharing. Presented at the NSP 2001 Dissemination Seminar, December 2002.
4. Gender Dimension in BBS Questionnaires: Health and Nutrition. Presented at the Workshop on Gender-based data analysis, methods and process, DFID and BSS, 2002.
5. Capturing Gender-sensitive Data in Bangladesh. Workshop on Gender-based data analysis, methods and process, DFID and BSS, September 2002.
6. Monitoring the SO8 of USAID in CARE and World Vision program areas. Presented to USAID, CARE and World Vision, July 2002.

7. Anemia in Bangladesh: Findings of the 2001 National Anemia Survey. Presented to the Secretary, the Ministry of Health and Family Welfare and other relevant senior government officers and USAID, May 2002.
8. Dietary diversity in Bangladesh: evidence from the Nutritional Surveillance Project. Presented at the Workshop on 'Alleviating Malnutrition through Agriculture: Biofortification and Diversification as Long-term Sustainable Solutions', organized by IFPRI and BRRI, April 2002.
14. Anemia in Bangladesh: Findings of the 2001 National Anemia Survey. Seminar presented at IPHN, April 2002.
15. The sex of the household decision maker and the diet and anthropometric status of household members in rural Bangladesh. Presented at the 8th Bangladesh Nutrition Conference, March 2002.
16. The prevalence of undernutrition in mothers in rural Bangladesh indicates 'critical' food insecurity. Presented at the 8th Bangladesh Nutrition Conference, March 2002.
17. Homestead gardening practices and the consumption of non-grain foods in households in rural Bangladesh. Presented at the 8th Bangladesh Nutrition Conference, March 2002.
18. Evidence of vitamin A deficiency in children and women after the 1998 flood in rural Bangladesh. Presented at the 8th Bangladesh Nutrition Conference, March 2002.
19. The Nutritional Surveillance Project and collection of information on the SO8 indicator. USAID, March 2002.
20. Women and nutrition in Bangladesh. LCG Sub-group meeting on Gender, January 2002.
21. SO8 data collection and sampling design. USAID, January 2002.
22. Disasters and livelihoods in rural Bangladesh: findings from the Nutritional Surveillance Project, 1991-2001. Paper presented at DFID seminar on the Environment, Disasters and Poverty, October 2001.
23. NSP presentation on gender. Ministry of Home Affairs, Government of Bangladesh, August 2001.
24. Complementary feeding in Bangladesh: family food for breast-fed children. Seminar presented at IPHN, August 2001.
25. The Nutritional Surveillance Project 1990 to date. Presented for USAID, CIDA and other donors, June 2001.
26. The progress of Bangladesh towards the goals of the World Summit for Children. Seminar presented at IPHN, May 2001.
27. Programmes to combat vitamin A deficiency. Training workshop on 'Food and nutrition security in Bangladesh' organized by BRRI, February 2001.
28. Nutrition Surveillance in Bangladesh. Workshop on Food Insecurity and Vulnerability Information and Mapping System (FIVIMS), July 2000.
29. Prevalence of childhood anemia and its determinants from the Bangladesh National Micronutrient Survey 1997-1998. Workshop on 'Strengthening Development Policy by Looking Within the Household: Linking Agriculture, Nutrition and Health in Bangladesh'. Organized by IFPRI in collaboration with BNNC & INFS, April 2000.
30. Qualitative exploration of perceived causes and treatments of *rokto kom* (anemia) among Dhaka city garment workers. Presented at the 9th ASCON Meeting of ICDDR,B, February 2000.
31. A programmatic opportunity for iron supplementation. Presented at the 9th ASCON Meeting of ICDDR,B, February 2000.
32. Using routine surveillance to improve the national vitamin A week. Presented at the 9th ASCON Meeting of ICDDR,B, February 2000.
33. Impact of the 1998 floods on nutrition and health: what can we learn for future disasters? Presented at the 9th ASCON Meeting of ICDDR,B, February 2000.
34. Disease prevalence, health-seeking behavior, and scope for prevention and curative treatment of female factory workers. Presented at the 9th ASCON Meeting of ICDDR,B, February 2000.
35. Malnutrition of Women: a major problem yet to be addressed by policies and programs in Bangladesh. Presented at the 9th ASCON Meeting of ICDDR,B, February 2000.
36. Prevalence of childhood anemia and its determinants from the Bangladesh National Vitamin A Survey. Presented at the 9th ASCON Meeting of ICDDR,B, February 2000.

37. Briefing of the NIPHP to the Secretary, Ministry of Health and Family Welfare, January 2000.
38. Current nutrition among women and children in Bangladesh. Presented at the National Seminar on the State of the Art in Nutrition of Mothers and Children in Bangladesh. December 1999.
39. VAC coverage during Vitamin A Week 1999. Presented at the meeting on 'The Achievements of the Vitamin A week' at IPHN, November 1999.
40. Presentation on NSP III Future for USAID, June, 1999.
41. Presentations on vitamin A capsule distribution; impact of the 1998 floods; national vitamin A survey; and review and discussion of the current and future NSP for NGO partners, May 1999.
42. Presentation on nutrition, RMP/VGD study for Canadian High Commission, March 1999.
43. Impact of the 1998 flood on rural households. Presented at a special meeting of the Disaster Forum for Members of the Disaster Forum (NGOs), February 1999.