RAP PUBLICATION 2007/14

REPORT OF THE TECHNICAL MEETING OF THE ASIA PACIFIC NETWORK FOR FOOD AND NUTRITION ON SCHOOL BASED NUTRITION

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For copies, please write to:

Biplab K. Nandi
Senior Food and Nutrition Officer
FAO Regional Office for Asia and the Pacific
39 Phra Atit Road, Bangkok 10200, Thailand
Tel: (+66-2) 697 4143 or 697 4265
Fax: (+66-2) 697 4445 or 697 4405
E-mail: biplab.nandi@fao.org

Foreword

A growing number of developing countries are faced with a "double burden of malnutrition": the persistence of undernutrition, especially among children, along with emerging problems of overweight and obesity, and diet-related chronic diseases. Both conditions are often associated with problems of micronutrient deficiencies. Taken together, these problems are significant causes of disability and premature death worldwide. As with many other health-related problems, the children at greatest risk of malnutrition are those from the poorest and most disadvantaged socio-economic groups.

In Asia the "double burden of malnutrition" has become an increasing concern for many countries independent of their economic development. The co-existence of undernutrition and obesity is becoming more widespread and imposes an additional burden on already stretched social and health care services, especially in urban areas.

Improving the nutritional status of school-age children is an effective investment for the future. Schools offer many opportunities to promote healthy dietary patterns, influence lifestyle choices for children and engage parents and community members in preventing children's malnutrition. The universality of the school setting for gaining access to children makes it highly relevant to global efforts to help combat malnutrition in all its forms.

FAO recognizes the important contribution that schools can make in countries' efforts to address all forms of malnutrition. To support and reinforce these efforts, FAO develops and promotes innovative strategies and materials to assist member countries to plan and implement comprehensive school nutrition education activities and programmes. The aims are to improve the health and nutrition of school children and the entire school community, and to encourage lifelong healthy eating habits and lifestyles.

FAO also promotes activities within schools and communities that enable school children to access safe and nutritious food within the school environment, the family and the community, and provides the information, education and skills needed to empower children, teachers, and families to choose healthy diets and practice lifelong healthy eating habits. Cross-sectoral collaboration among education, agriculture, health and community services is encouraged and the importance of addressing problems of malnutrition through locally appropriate solutions is emphasized.

This report provides a summary of the presentations and discussions on policies and programmes on school based nutrition in some countries in Asia. It also takes note of the national activities related to the International Conference on Nutrition and the World Food Summit: *five years later* follow up. Outcomes of the working groups and recommendations for FAO and country action to promote school based nutrition are also included.

It is hoped that this document will serve as a useful reference for countries in the region to promote school based nutrition programmes in the context of achieving the Millennium Development Goals.

He Changchui
Assistant Director-General and Regional Representative
FAO Regional Office for Asia and the Pacific

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I. OPENING OF THE TECHNICAL MEETING

1. The Technical Meeting of the Asia Pacific Network for Food and Nutrition (ANFN) on School Based Nutrition was organized by the Food and Agriculture Organization of the United Nations (FAO) Regional Office for Asia and the Pacific (RAP) in Bangkok, Thailand from 17 to 20 July 2007. A total of 20 participants representing 11 countries attended the Meeting. The countries represented included Bangladesh, Cambodia, China, India, Indonesia, Lao People's Democratic Republic, Nepal, Philippines, Sri Lanka, Thailand and Viet Nam. Also present in the meeting were representatives from FAO Rome whom Biplab K. Nandi, Senior Food and Nutrition Officer, FAO RAP and Secretary of ANFN thanked for the support they extended in organizing the meeting. The representatives were Ellen Muehlhoff, Senior Nutrition Officer and Peter Glasauer, Nutrition Officer both from the Nutrition and Consumer Protection Division, FAO, Rome. Simon Baker of the United Nations Education and Cultural Organization (UNESCO) and Andrew Colin Bell of the World Health Organization (WHO) for the Western Pacific Region (WPRO) were likewise acknowledged for their contributions. The Special Invitee for the meeting was Kraisid Tontinsirin, former Director of the Nutrition and Consumer Protection Division, FAO, Rome. Biplab K. Nandi thanked him for his valuable contributions to ANFN. Annex 1 shows the list of participants, invitees and guests.

2. By way of introduction and orientation, particularly to those joining the Technical Meeting for the first time, Biplab K. Nandi welcomed participants, resource persons and special guests to the meeting and gave a brief background of ANFN. He introduced the subject of the meeting and underscored the importance of school based nutrition in addressing malnutrition in all its forms. He informed the Meeting of the many opportunities that schools can provide to promote healthy dietary patterns, influence lifestyle choices for children and engage parents and communities in preventing malnutrition among children. All participants and guests were then requested to introduce themselves.

3. Hiroyuki Konuma, Officer in Charge, RAP and Deputy Regional Representative of FAO, RAP delivered the opening address on behalf of He Changchui, Assistant Director-General /Regional Representative, FAO-RAP. He informed the Meeting that major changes were taking place in the food and nutrition situation of the Asia Pacific region. There existed the double burden of malnutrition, i.e while the region was still facing problems of undernutrition and food

insecurity, significant proportions of the population in the region were also suffering from diet-related chronic and lifestyle diseases.

4. He said that FAO recognized the potential of schools in overcoming food insecurity and all forms of malnutrition. In partnership with other international organizations FAO has developed and promotes innovative strategies and materials to help countries plan and implement school based nutrition education programmes and initiatives.

5. The important role of schools in promoting healthy eating habits, which have the potential of lasting a lifetime, was underlined. The impact of healthy eating could extend beyond school-age children to encompass their families and communities.

6. The Meeting was informed about current FAO nutrition education and school gardening projects and initiatives. Hiroyuki Konuma urged the Meeting to promote and support innovative programmes that help improve school children's nutrition and learning. Such programmes should include school meals for children through the creation of innovative public-private partnerships for healthy food choices. The potential of school gardens as a source of micronutrient-rich vegetables, fruits and animal foods to complement and add nutritional value to school meals was emphasized.

7. Some important documents published jointly by WHO and FAO were also shared. These included "Healthy Nutrition: An Essential Element of a Health Promoting School" and two journal articles which documented the lessons learned from a school based nutrition education pilot projects in Zhejiang Province in China.

8. Lastly, the Meeting was asked to consider the following key action points during the three-day deliberations, namely: 1) compulsory nutrition education in the school curriculum, 2) inclusion of comprehensive nutrition topics highlighting the relationship between diet and health, 3) coordination of nutrition education at all national fora, 4) provision of more resources for nutrition education, 5) strengthening school meal programmes, and 6) introducing school garden programmes. To conclude, the participants were wished a successful and productive Meeting which was declared open. The full text of the opening address is given in Appendix 2.

9. The participants elected Shashi Prabha Gupta, Technical Adviser of the Food and Nutrition Board (FNB), Department of Women and Child Development (DWCD) of India and Pattanee Wichinagoon, Associate Professor and Deputy Director for Academic Affairs of the Institute of Nutrition, Mahidol University (INMU), Thailand, Chair and Vice-chair, respectively. Maria Antonia G. Tuazon, Director of the Institute of Human Nutrition and Food (IHNF) and the Regional Training Programme on Food and Nutrition Planning (RTP-FNP) of the College of Human Ecology (CHE) at UP Los Banos, Philippines was elected Rapporteur of the Meeting, while Hardinsyah, Dean of the Faculty of Human Ecology of Bogor Agricultural University, Indonesia was elected assistant Rapporteur.

10. Biplab K. Nandi provided an overview of the Meeting. He shared the rationale, objectives, agenda, timetable, expected outputs and organization of the Technical Meeting. Specifically, the objectives were as follows: 1) to highlight the problem of the double burden of malnutrition in the countries in the Region and the consequences for children's learning and development, and 2) to identify the lessons and best practices from on-going school based nutrition programmes to promote life-long healthy eating and lifestyles. The revised Meeting agenda (inclusion of an Agenda item on the International Conference on Nutrition/World Food Summit) was adopted and is given in Appendix 3.

11. To set the scene, Biplab K. Nandi gave an overview of the nutrition situation. He started by defining food security as "when all people, at all times, have physical and economic access to sufficient, safe and nutritious foods to meet their dietary needs and food preferences for an active and healthy life" as well as nutrition security as when there is adequate intake and utilization of macro-and micronutrients by the body. He also shared with the Meeting FAO's mandate and the fact that this (i.e. improving the nutrition of populations and standards of living, and ensure humanity's freedom from hunger) had special bearing on the theme of the Meeting.

12. He drew attention to the global malnutrition paradox. While FAO estimated that there were 854 million undernourished in the world, WHO's most recent figures showed that there were 300 million obese adults. The nutrition issues that confronted us at present included continuing and persistent global problems related to undernutrition and micronutrient deficiencies, new and emerging concerns related to diet related non-communicable diseases in addition to problems of food safety and quality.

13. In response to these global problems a number of worldwide events were organized resulting in international resolutions. The last of these international resolutions were the UN Millennium Development Summit in 2000 leading to the Millennium Development Goals (MDGs) and the FAO World Food Summit: *five years later* (2002).

II. SUMMARIES OF PAPERS PRESENTED AND ISSUES RAISED IN DISCUSSION

Agenda item 1: Global and regional trends in nutrition, health and education

HIV Preventive Education and School Health: A Sub-regional Perspective
presented by Simon Baker, UNESCO

14. The Meeting was informed that there were 300 million chronically hungry children in the world, of which 180 million went to school on an empty stomach. There were also 120 million who did not go to school at all and more than half of those were females.

15. Two important frameworks namely, Education for All (EFA) and Focusing Resources on Effective School Health (FRESH) were shared with the Meeting. The EFA goal was that all children must have access to basic education of good quality by 2015. This meant that all schools and basic education programmes must provide an environment where children were ready to learn, able to learn and enabled to learn. In other words, EFA worked for the establishment of Child Friendly Schools of the United Nations Children's Fund (UNICEF).

16. FRESH's key strategy was learning through health and health through learning. There were four core FRESH components. These were 1) health policies for school, 2) safe water and sanitation, 3) skills based health, hygiene and nutrition education, and 4) school based health and nutrition services.

17. Simon Baker also shared with the Meeting evidence from Jamaica and Viet Nam demonstrating the links between health and educational outcomes. The negative effects of

malnutrition like stunting on children's cognitive performance and school attendance were mentioned.

18. The Meeting was also informed of the prevalence of HIV in the Region and how Cambodia had successfully brought down its HIV prevalence from 3.3 % to 0.9%. Part of the success could be attributed to skills-based health education, which included education on the prevention of HIV and AIDS. Emphasis was given to the development of knowledge, attitudes and skills that would lead to reduction of high-risk behaviour of school children around HIV transmission, alcohol and drug abuse, adoption of healthy lifestyles and delay in initiation of sexual relationships.

Responding to Trends in nutrition and health through schools in the Western Pacific Region presented by Andrew Colin Bell, WHO WPRO

19. Data on the prevalence of overweight and obesity in Shenzhen, China and Australia were shared to show that this was no longer a problem of developed countries but also of developing countries or countries in economic transition. For China and Indonesia, there had been a rapid increase of overweight adults with higher prevalence among female adults followed by male adults and then children.

20. A number of health education programmes in Australia which had demonstrated success in the prevention and reduction of overweight and obesity were shared. "Be Active, Eat Well" that aimed to increase community capacity to promote healthy eating was described. Specific community actions on obesity like improved active planning, improved active transport (e.g. walking, cycling), increased intake of fruits, quality fast foods and community education were key to the success of the programme.

21. Another example of a programme in China namely, China Health Promoting Schools programme was also shared. This programme, which was a response to the increasing trend in overweight and obesity, had the following strengths that contributed to the success of the programme: recognizing health as a core responsibility, good programme leaders and research support, strong linkages with government, and adopting a population based and high risk

approach. The programme also included changing the physical environment to provide more opportunities for physical activity.

22. With regard to changing the school environment, there were different approaches which could be undertaken. There were policy, leadership, enablers and accountability components built into the programme.

23. Other examples of programmes were FreshTastes@School, which made use of the traffic light system for guiding school children on making healthy food choices and the Nutrition Friendly Schools Initiative (NFSI).

Agenda item 2: Country presentations on the nutrition situation of school age children and school based health and nutrition programmes (including nutrition education)

24. This agenda item was presented by Peter Glasauer. Owing to the large number of participants and to encourage more interaction, the participants were divided into four working groups. Each group was asked to select its facilitator and Rapporteur. An outline for the plenary presentations was also provided to the participants. The Terms of Reference of the group work are given in Appendix IV while the group outputs are presented in Appendices V to VIII.

Issues Raised in Discussion

25. With Ellen Muehlhoff facilitating the discussion on the four key areas of the presentations, the Meeting raised the following issues.

26. Nutritional and health status of school age children. Country presentations and situation analyses showed that very few countries had nationally representative data on the nutrition and health status of school age children. In the majority of countries available data were from projects or regions within the country. There was considerable variation in the methodologies used for data collection, indicators, cut-off points, reference/standards as well as age groups and age ranges for which data are available. Most countries did not have qualitative or quantitative data on school children's food and dietary patterns, including snacking behaviours, nor nutrient intake and physical activity patterns.

27. Factors influencing children's food intake and nutritional practices. While there seemed to be lack of systematic data on changing dietary habits and eating behaviours, participants, based on observations, mentioned a mix of factors that determined dietary patterns, including:

- Nutrition awareness of mothers
- Food availability at home and in schools
- Income (vs. Food prices)
- Nutrition awareness of school teachers
- Peer pressure/ influences
- Media and advertising
- Breakfast skipping
- Proliferation of food industry and fast food
- Street foods sold outside schools and school's lack of control

28. Inventory of existing direct health and nutrition interventions. Participants thought that school feeding programmes currently implemented in some countries encouraged dependency mentality. School feeding required political commitment and huge economic investment. It was unlikely to be sustainable in less developed countries without the necessary resources and there was little community involvement.

29. School gardening and production programmes were constrained by lack of space and inputs in some countries, especially in urban areas. School gardens served as a demonstration ground and provided opportunities for children to learn how to grow vegetables, fruits and raise small animals, including poultry. Fresh micronutrient-rich produce can add nutritional value to school meals.

30. Health and nutrition education programmes were implemented in some countries, usually as part of a more comprehensive school health and nutrition programme. Nutrition education was usually not a subject on its own. Given that curricula were overcrowded, nutrition education might be at risk of having to compete with other subjects. Participants felt that nutrition education should focus on building and applying nutrition skills. Knowledge and skills gained should be extended to the family and the community.

31. Concerns voiced by participants were that school children were generally not seen as a priority group and there might be a need to reposition this age group as an important one within the context of the lifecycle perspective.

Agenda item 3: Nutrition education in schools – FAO approaches and materials

Nutrition Education in Schools: What is FAO doing and why? Presented by Ellen Muehlhoff, FAO, HQ

32. The first part of the presentation reviewed the nutritional problems of young people in the region and good ways to tackle them effectively. Education about food and nutrition was essential in an overall strategy aimed at improving children's health and nutrition and schools could make an important contribution. The last part of the presentation reviewed FAO's methods, materials and activities in nutrition education in schools.

33. Nutrition education was about lifelong healthy eating and aimed to develop capable, informed, skilled and experienced "nutrition-literate" citizens who had food and nutrition skills, could make the right choices and adapt to a changing world. People who were nutritionally literate, would, for example, know how to select foods of high nutritional value; be able to produce food, prepare it and conserve it; knew how to prepare foods safely and hygienically; understand how to feed babies and young children; cope with shopping; be ready to try something new and discuss their experience with their families and others in the community.

34. Schools are an important setting for nutrition education because they reach most children and parents. Schools have central importance in the community and are places where children eat and can learn about eating and eating behaviour, and where they can see and practise good nutritional behaviour such as growing food, buying healthy snacks and drinking clean water. Teachers claim respect and can have a huge influence on children's attitudes and behaviour. Schools can also act as a multiplier for nutrition education, because they can reach parents, families and the community both directly and through the children.

35. Success in nutrition education means changes not only in knowledge and understanding but also in behaviour, attitudes, skills, and the real-life capacity to improve one's own and others' nutritional well-being now and in the future. FAO's food-based approach sees nutrition education mainly in terms of foods and meal-making, individual dietary needs, and the whole process of acquiring, preparing and consuming food in its environmental and social context.

36. To be effective, a good classroom-based nutrition education programme is essential. However, classroom learning alone does not always produce practical results in the world outside. The classroom needs support from a healthy, hygienic school environment, with scope for exercise, good eating and for producing and preparing food. FAO's Nutrition Education Group has coined the concept of the tri-partite curriculum, whereby learning takes place in (1) the classroom, (2) in the school grounds, and (3) in the family and the community. With active contributions from these elements, there is hope for long-term lifestyle learning.

37. To conclude, a brief overview was provided of FAO's methods and materials, and ongoing initiatives and technical assistance projects aimed at assisting Member Countries in the development and implementation of nutrition education programmes in schools.

FAO's Planning Guide for Nutrition Education in Primary Schools presented by Peter Glasauer, FAO HQ

38. The presentation focused on FAO's publication "Nutrition Education in Primary Schools – A Planning Guide for Curriculum Development". This is a manual for governments and school systems wishing to establish effective nutrition education programmes and curricula in schools. The comprehensive package comprises three main materials: (i) a book that explains the key ideas and processes in nutrition, health and education (pedagogy); (ii) a set of worksheets that takes participants through the entire curriculum planning exercise; and (iii) the *Classroom Curriculum Chart*, a poster providing learning objectives for nutrition education in primary schools in developing countries. Additional working materials of the resource package offer helpful inputs and tools for the planning process.

39. The learning promoted in the PG differs from traditional nutrition education in several ways, by giving emphasis to the "tripartite curriculum" where classroom learning is only one

element of nutrition education. Dialogue with families and community and making the school environment conducive to healthy nutrition are considered equally important elements of a "tripartite curriculum" for nutrition education. Curricula prepared with the help of the PG will not only improve knowledge but also aim at changes in behaviours, attitudes and life skills, establishing and reinforcing good dietary and lifestyle practices. The PG stresses the importance of understanding local conditions (such as environmental, agricultural, economic and social conditions) so that food and nutrition problems and, most importantly, their solutions can be put into a real-life context. The PG, hence, promotes learning about foods, dietary intakes, nutrition and health within the context of families and communities.

40. The FAO PG is inspired by the idea of *health promotion,* which sees health as being actively created by people and communities themselves (and not a condition obtained from health care services), and which emphasises the importance of health-conducive environments and public policies. Applied in nutrition, health promotion principles result in school based nutrition education where individual lifestyles and knowledge (a weakness of traditional nutrition education) are complemented by the development of attitudes and skills through active learning, which is reinforced by a health-conducive school environment.

41. In addition to its primary purpose of facilitating the development or revision of nutrition education action programmes (including classroom curricula), the FAO Planning Guide is a rich source on improved teaching/learning styles and can, hence, be directly used in teacher training. The document can also help in formulating education and nutrition-related policies and mission statements, guide the development of better nutrition education teaching and learning materials and assist in preparing effective lesson plans.

42. Given that the PG shares basic concepts and strategies with many other current health/nutrition initiatives and frameworks (e.g. WHO Health-promoting schools; FRESH; the UNICEF Child Friendly Schools; Joint UNICEF/WFP Essential Package; Nutrition Friendly Schools Initiative) it lends itself as an ideal tool for operationalizing nutrition education in all of them.

FAO's approach and work in school gardening presented by Biplab K. Nandi, FAO, RAP

43. The Meeting was informed of the lessons learned from the implementation of two projects in Asia supported by FAO, namely, the Integrated Horticulture and Nutrition Development Project in Bangladesh and the FAO Technical Cooperation Programme/TeleFood Project on home gardening for nutrition improvement in Lao PDR. These projects demonstrated that school gardens are good for learning and contributes to the education of rural and urban children. In particular, the children learned how to grow fruits and vegetables, raise small animals, make good food choices, conserve water, care for the environment and acquire basic marketing and income generating skills.

44. Biplab K. Nandi also shared how these projects contributed to the improvement of the school environment. Another important outcome of these projects was, while the school children were identified as the primary development beneficiaries, the benefits of the school gardens also spilled over to the communities through their parents.

45. Key factors of success and sustainability for school garden projects include: institutionalization of school gardening through integration into the curriculum, involvement of various key stakeholders (i.e. teachers, parents, children and community) in planning and implementation, ensuring availability of necessary inputs and resources like water, teaching-learning materials and budget, training of teachers and community volunteers, availability of reliable source of technical advice on garden development and management and lastly, adequate programme monitoring and evaluation.

Nutrition Friendly Schools Initiative (NFSI) presented by Ellen Muehlhoff, FAO HQ

46. The Meeting was informed that the Nutrition Friendly Schools Initiative was developed in partnership among the Education Development Centre (EDC), FAO, UN Sub-Committee on Nutrition (SCN), UNESCO, UNICEF, World Bank, WFP and WHO with support from the academic sector. WHO is leading and coordinating this Initiative. The NFSI was developed in follow-up to the WHO Expert Consultation on Childhood Obesity in Kobe, 2005, which recommended that the double burden of malnutrition should be addressed through school based programmes.

47. The objectives of NFSI are to: (1) provide a framework for designing integrated school based interventions that is aimed at addressing all forms of malnutrition; (2) serve as a mechanism for linking ongoing school based health and nutrition interventions and (3) provide practical guidance on how to strengthen nutrition in school based programmes. The core components of NFSI consist of: (1) a written nutrition-friendly school nutrition policy, (2) awareness and capacity building of the school community, (3) nutrition health and physical education, (4) a supportive school environment, and (5) school nutrition and health services.

48. The NFSI proposes a step-by-step procedure and establishes a set of essential criteria that schools need to fulfil in order to be accredited as 'nutrition friendly'. Given that NFSI follows a strategy that is similar to other school based health programmes, NFSI can easily complement ongoing school health and nutrition programmes that wish to strengthen their nutrition orientation. The NFSI has been field-tested in Asia, Latin America, the Caribbean and Europe and results are currently being analysed for further fine-tuning and eventual implementation. An official launch of the Initiative is planned for the end of 2007.

Agenda item 4: Nutrition education in schools: lessons learned and best practices from country projects and initiatives

Thailand: PSU-Songkhla project: A school based obesity prevention initiative, Presented by Ladda Mo-suwan

49. The *PSU-Songkhla* project has been implemented in five experimental as well as five control kindergartens in Songkhla province since 2004. Interventions included the integration of healthy diet and physical activity into the Kindergarten 1 & Kindergarten 2 curricula through five learning activities, i.e. rhythm and movement, creative play, life skills, outdoor activities, educational game. Nutrition topics included healthy foods, i.e. milk, egg, meat, vegetables, fruit and water, as well as obesogenic foods, i.e. high fat food, fast food, crispy snacks, confectionery and sugary beverages. Each topic was integrated into different activities every day for the whole week and offered again in the second semester. A computerized programme to improve the quality of lunch and snacks and which emphasized the offering of vegetables every day and fruits at least 3 days per week was also used. An extra 15 minutes of aerobic exercise daily was

likewise organized and a healthy school environment created through provision of clean drinking water. Selling of soft drinks and energy-dense snacks as well as advertisements of soft drink and snacks in the school ground were banned.

50. Lessons learned

- Commitment of the school administrators and active involvement of parents and community are among key factors for success and sustainability of the programme.
- Local government has an important role in funding the activities and ensuring sustainability of these activities.
- Fruit is expensive, so it is hard to provide fruit 3 days per week, especially in the city.
- It is difficult to talk to the vendors outside the school ground regarding the selling of healthy foods, snacks and beverages.
- Some schools depended on revenues from sale of snacks and soft drinks, so they were not willing to ban the sale of these products.
- Health/nutrition should be considered as an input for improving learning ability and performance of students.
- Information for schools, students and parents should include healthy food as well as unhealthy food.

School based Programme for Promoting Food Security and Healthy Eating Behaviours: Lessons Learned from Agriculture for School Lunch Project of Her Royal Highness Princess Maha Chakri Sirindhorn, Presented by Col. Dr. Nantaporn Viravathana

51. Her Royal Highness Princess Maha Chakri Sirindhorn initiated the Agriculture for School Lunch Project in 1980, which was designed to fight hunger and to equip young children in remote areas with knowledge and skills that are useful for earning their living in the future.

52. Children were assigned to perform all of the work including growing plants, raising animals, selling their products, preparing their own meals and keeping accounts through school gardening, school lunch and school cooperative shop. These activities were either part of the school curriculum or extracurricular. Parents and other community members were also encouraged to participate in all activities of the schools. These processes are so-called "learning by doing" which is an important methodology for promoting behaviour change.

53. The success of the project can be shown by the increasing amount of school agricultural products. There was also a decline in the percentage of children who were underweight or stunted. While children attended schools they received a nutritious lunch that increased their ability to learn. More importantly, the project demonstrated that it could provide children with knowledge and skills on appropriate agricultural technology, nutrition, food preparation and preservation, and business skills among children and parents in remote villages.

54. The most important factor contributing to the success of the project was the quality of the human resources involved, particularly the school principal. The establishment of an effective school cooperative system that manages agricultural produce for income generation and school feeding programmes contributed to sustainability. Sharing knowledge among teachers who use good practices can provide useful information for application in other schools. Regular follow-up meetings will give these teachers an opportunity to share and create new knowledge in agricultural management. In addition, teacher training in agriculture and nutrition is still important. This is to ensure that knowledge can be transferred effectively to children as well as to the community. Moreover, food security at the household and community levels should be enhanced by extending school agriculture into the community through the children and activities at school. Schools will become learning and information centres for local people. Therefore, teachers and schools can be instrumental in effecting change to improve the quality of life of underprivileged people.

PHILIPPINES: The Philippines school nutrition programme, Presented by Magdalene Portia Cariaga

55. The School Nutrition Programme (SNP) was created in the Philippine educational system consistent with the efforts to strengthen health and nutrition education as a strategy to address the malnutrition affecting the school populace. The SNP is carried out by the different programmes and projects implemented. Each programme or project is composed of different components such as school feeding, food assistance, nutritional assessment, food production, development of Information, Education and Communication (IEC) materials, health and environmental sanitation and nutrition education. Each component, in turn, is defined by different policies and standards that serve as guide for the field implementers.

56. The programmes and projects under SNP are as follows: School Milk Programme (SMP), Breakfast Feeding Programme (BFP), Applied Nutrition Programme (ANP), Food for School Programme (FSP), Food Production in Schools and the Teacher-Child-Parent Approach (TCP) Programme. The SMP provides liquid or powdered milk to Grade I pupils in selected schools nationwide for 120 days in the school year. The BFP, on the other hand, provides fortified noodles and biscuits to Grade I pupils in the 5th and 6th class municipalities nationwide also for 120 days. In both programmes, commodities are procured centrally by the Department of Education Central Office and sent to different schools and both are financed by the national government.

57. The ANP is a self-help feeding effort that is managed and sustained by the school together with the parents and the community. Thirty-five percent (35%) of canteen funds and some of the produce of the food production programme are used to support the feeding activity.

58. The FSP is a food subsidy package for young learners and their families by providing 1 kilogram of rice daily for 120 days per school year. It is part of the Accelerated Hunger Mitigation Programme of the government in response to the increasing incidence of hunger with very large funding supported by the national government. The Food Production Programme seeks to produce food for the self-help feeding programme in schools.

59. The TCP approach is an innovative method of disseminating basic health and nutrition concepts involving spontaneous interaction between and among teachers, pupils and parents. The systematic relay of proper health and nutrition concepts is made possible with the use of especially designed teaching-learning packages which include teaching guides and workbooks containing activities for the pupils in schools and for the parents in the home.

BANGLADESH: Nutrition education in schools: lessons learned and best practices from Bangladesh, Presented by Sanjib Kumar Saha

60. In 2003 the School Nutrition Education Programme was introduced into the project "Integrated Horticulture and Nutrition Development (IHAND) in Bangladesh on the third year of the five-year project period.

61. The project envisaged the need for encouraging schools to make use of synergies with horticulture production and nutrition education programmes. The School Nutrition Education Programme provided an opportunity to help teach adolescent students the importance of eating vegetables and fruits by bringing nutrition education into the classroom.

62. The programme was successful in creating nutrition awareness among the high school students and promoting consumption of a variety of micronutrient rich horticultural foods in the daily diet. The Meeting highlighted that Sustainability of the School Nutrition Education Programme requires institutionalization of the programme at the community level where the schools, parents, community, local service providers and organizations come and work together. A School Management Committee may play an important role in bringing the stakeholders together and arrange the required meetings, trainings, workshops, social events with the help of the extension agents.

63. It was recognized that there was a need to consolidate experiences and best practices in order to provide policy formulation and strategic outline at the highest level of the government and ministries concerned so that the school Nutrition Education Programme was scaled-up as a national level programme encompassing both nutrition education and school gardening activities.

64. It was highlighted that inter-ministerial and inter-sectoral coordination especially among the Ministry of Agriculture (MOA), Ministry of Education (MOE) and Ministry of Health and Family Welfare (MOHFW) was critical for the policy guidance, management decision and evaluation of the programme. The coordination might also play a vital role in sharing lessons and upgrading the programme and activities on a regular basis.

CAMBODIA: School health, nutrition and HIV & AIDS, Presented by Chhvyroth So

65. In Cambodia, the School Feeding Programme has been implemented to provide all children access to primary education and reduce gender disparity in education and skill training. Support to this programme was provided by WFP in the form of rice (110 grams), canned fish (20 grams), vitamin A fortified oil (8 grams), iodized salt (3 grams) and beans (20 grams) per student per day. Collaborating ministries included Ministry of Education, Youth and Sports (MoEYS) and Ministry of Health (MOH), which are responsible for policy planning, monitoring and supervision. The community provides facilities and fresh vegetables, fuel and water and community volunteers cook the meals. NGOs and international organizations help in capacity building and provision of safe water and sanitation.

66. The iron deficiency anemia (IDA) prevention and control programme in school involves the weekly supplementation of iron and folic acid tablets for secondary school girls in six provinces in 2006. To improve knowledge about IDA and demand for weekly iron/folate supplementation among secondary school girls, IEC and other materials were developed. Training of staff involved in the programme like health centre staff, school director, district education staff and school teachers were also conducted.

67. At primary and secondary schools, health/nutrition education has been incorporated into various subjects such as biology and social science. A textbook and teacher guide for primary schools were developed with support from WHO and implemented by MOH and MOEYS.

68. An NGO, Partner for Development (PFD), adopted the 'Child to Child methodology', in which children taught in the classroom were expected to communicate the health messages to their families and communities. All children, mainly grade 5 students, were seen as potential peer educators who can pass on the health/nutrition and related messages to their family and community effectively. Key to the successful school based health education was multi-stakeholder involvement. NGOs encouraged the involvement of nuns and senior women living in temples in reproductive health education. Multiple local actors' involvement was essential for coverage, sustainability and efficiency of both school feeding and health/nutrition education.

69. 'Starting small' was another success factor. In this case, it meant that the project starts with a small number of schools, giving full support. Then the achievement of those schools can be shown to other schools as an example to follow. This will bring better results than working with a large number of schools from the beginning.

INDIA: Nutrition education in schools: lessons learned and best practices: Indian experience, Presented by Shashi Prabha Gupta

70. The Meeting was informed that India is implementing a Mid-day Meal Scheme (MDM) for about 120 million primary school children with the basic objective of improving school participation and nutritional well-being of school children. Nutrition education of school children is of crucial importance if one wants to bring about sustainable improvement in nutrition and health of children. School children, if made nutrition-literate, can serve as a vast resource for addressing the problem of malnutrition.

71. Feeding Minds, Fighting Hunger modules of FAO when adapted to local needs and adopted for use in schools in Kolkata (West Bengal) had a snowballing effect in changing community behaviours and practices in nutrition.

72. Evaluation of the nutrition content of the school curriculum in Andhra Pradesh undertaken by the National Institute of Nutrition (NIN), Hyderabad, revealed that there was no continuity in chapters on nutrition. The nutrition curriculum, at present, is a part of general science and physical education for classes 3 to 10. A systematic review and updating of existing curricula is a priority.

73. Teachers' training, technical support for the MDM programme in the form of development of suitable recipes for mid-day meals, nutrition education programmes undertaken by the Community Food and Nutrition Extension Units of the Food and Nutrition Board of the Ministry of Women and Child Development need to be scaled up. Food and nutrition departments of Home Science Colleges, nutrition NGOs and other institutions need to be involved through networking. Core teams could be created in each state to cater to the needs of schools in this respect.

74. The National Council of Educational Research and Training (NCERT) could be entrusted with the task of introducing nutrition education into the school curricula of all school children from grades 1 to 12. Nutrition education of children from 2 to 6 years old also needs to be undertaken through all child development centres and crèches.

75. A school nutrition policy needs to be adopted by all schools and schools are encouraged to become "nutrition-friendly".

Issues Raised in Discussion

76. The following good practices, lessons learned and issues were discussed following the presentations for Agenda items and 3 and 4.

Advocacy

- High level advocacy with education, agriculture and health sectors can be very effective in raising awareness on the importance of nutrition.
- The example of Thailand (Her Royal Highness Princess Maha Chakri Sirindhorn) shows that having a champion for nutrition education is effective for promoting nutrition education.
- Intersectoral and interministeral coordination among ministries of education, agriculture and health is critical for policy guidance, management decisions and programme evaluation.
- There is a need for advocacy with teachers to convince them that the nutrition of school children is extremely important for their health and learning and needs to be attended through various interventions (e.g. school meals, school gardens, nutrition education, health services, etc.).
- There is a need for good data on the nutritional status of school age children as well as information on food consumption and eating behaviours, to convince policy and decision makers, as well as for monitoring and evaluation of interventions.

Policy

- Inclusion of nutrition in sectoral (e.g. agriculture, education and health) as well as in local government policies is essential for generating support for school based nutrition programmes and the integration of nutrition education in the school curriculum.

School environment

- There is wide scope for using the school environment (e.g. school meals, school gardens, health, water and sanitation facilities) as a source of learning about good health, food and nutrition practices.
- Some countries have guidelines for types of foods to be served/sold in school canteens/kiosks and they are able to regulate the assortment of food sold in schools.
- Street foods and vendors selling outside schools frequently influence children's food choices, and this is difficult for schools to control.
- The need for schools to generate funds from the sale of foods was recognised and in many cases may have a negative impact on the assortment of food sold in schools and thereby children's food choices.
- Participants recognised that there were huge opportunities for schools to engage in the sale of healthier choices and to collaborate with local government authorities in the regulation of street vendors (food quality, food safety, variety etc.).

Nutrition Education: Curriculum and Content

- School curricula are frequently overloaded. However, all efforts are necessary to make nutrition education a stand-alone subject. In cases where this may not be immediately possible, nutrition education should be integrated into related subjects (e.g. science, biology, home economics, agriculture, health and physical education).
- Early introduction of age-appropriate nutrition education, from the kindergarten onwards, was recommended.
- Extra curricular learning opportunities should be explored.
- Nutrition education should be mindful of gender issues (i.e. depict girls and boys in food production, processing and preparation in school books).
- Nutrition education should promote healthy foods but should also enable students to identify less healthy food choices (i.e. foods high in fat, sugar, and salt).

- There is a lack of systematic inclusion of appropriate and needs-based nutrition messages.
- Not only is knowledge important in nutrition education, there should be more focus on practical application of real-life nutrition education.

Teacher training/teaching and learning materials

- The lack of positions for qualified personnel trained in nutrition in the school system and lack of trained teachers in nutrition, food and agriculture (horticulture) are major constraints to effective teaching/learning of food and nutrition in schools.
- There is currently no training in nutrition in teacher's training institutions.
- Lack of good quality teaching and learning materials is another obstacle to effective school nutrition education.

Sustainability

- In order for school nutrition education to be sustainable, there is a need for institutionalization at the local level where the school, parents, community, local service providers and organizations come and work together.
- Participants considered the need for policies and legislation at the national level to establish nutrition education as a regular school subject and to ensure sustainability.

Agenda item 5: Review of ongoing country school health and nutrition programmes

77. Based on the presentations and discussions during the previous two days, the participants (maintaining the earlier groupings) were assigned to four different topics. Group I focused on the curriculum content, Group II reviewed the implementation of school curriculum and identified ways on integrating nutrition education, Group III explored possibilities for implementing tripartite approach and lastly, Group IV was tasked to review teaching methodologies and materials. The guide questions for each specific working group are presented in Appendix IX while details of outputs are given in Appendices X to XIII.

Issues Raised During Discussion

Nutrition Education

78. The need for practical hands-on nutrition education was emphasized for meeting real life challenges. Different teaching/learning methods, including learning-by-doing, project style learning, stories/role plays, among others, were suggested across age groups of children.

79. In addition to the list of essential topics highlighted in the Group presentations, participants recommended as important nutrition-related topics for inclusion, depending on local circumstances and needs: food and nutrition labelling, promotion of healthy snacks, infant and young child feeding for older age groups, food security, non-food factors, HIV/AIDS and other communicable diseases.

80. The lack of trained teachers in nutrition was flagged as a major constraint for effective nutrition education. There is an urgent need to explore mechanisms for in-service training of teachers in basic nutrition and engaging other professionals (e.g. agricultural extension staff), community volunteers and youth leaders in nutrition education and school gardening. However, terms of reference and expectations for such involvement should be clearly delineated at the outset.

81. Nutrition education of the non-school going population also need to be addressed (e.g. in functional literacy; adult education; vocational training, etc.).

School environment

82. To enable children and the school community to practise healthy nutrition on a daily basis, it was recognised that there was an urgent need for schools to upgrade their infrastructure (i.e. water, sanitation, inputs for school gardening, health facilities, kitchens, etc.).

83. Schools frequently face resource constraints and need to generate funds for improving facilities and subsidising school lunch programmes and educational materials. While it was recognised that the private sector can be partners in school based nutrition, participants

acknowledged the need to be circumspect in accepting donations. Such donations should not involve any form of product advertising and marketing.

84. The trend for decentralization provides opportunities to tap local government resources and support for school based nutrition programmes (e.g. regulation for street food vendors, provision of clean water and sanitation).

Agenda item 6: The way forward: future action

85. The last technical session of the meeting was devoted to identification of follow-up activities, dissemination strategies, potential funding sources and formulation of country specific action plans. Guidelines for this session are presented in Appendix XIV.

86. Based on the group and country action plans, the Meeting recognized that school nutrition education is very important. There was enthusiasm and interest to undertake high impact activities to push for the integration of nutrition education in schools.

87. A suggestion to have an inventory of teaching/training materials as well as various training programmes for nutrition educators was forwarded. Ellen Muehlhoff, FAO HQ has volunteered to do this for the ANFN.

88. With the forthcoming International Congress on Nutrition to be held in Bangkok in 2009, it was also suggested that FAO RAP and HQs explore the possibility of organizing a satellite meeting on school based nutrition education at that time. This could also serve as a venue for reporting on progress on country follow-up and action plans made by the participants of the Meeting.

Agenda item 7: Review of international conference on nutrition/World Food Summit follow-up activities in the context of MDG

89. Owing to lack of time at the end of the Meeting, the presentations on ICN/WFS follow-up could not be presented in plenary. It was unanimously agreed that summaries of the country presentations be included in the report of the Meeting.

BANGLADESH

90. Malnutrition is a serious health problem in Bangladesh. Although the country has made significant progress in cereal production, non-cereal production, availability and intake are still far below the requirement. As a result, energy as well as micronutrient deficiencies continued to persist. Most affected were children and women.

91. Nutrition surveys conducted in Bangladesh so far included preschoolers and adults but school children aged 9-16 years were often left out. Therefore, information regarding diet, varieties of diets, snacks, fruit and vegetable intake, as well as intake of fatty foods, soft drinks and fast food is not available. Also, information related to hygiene, sanitation and lifestyles are not available.

92. Nutrition has been integrated in primary and secondary school education in Bangladesh but not effectively. In view of this, in April 2007, the government decided to examine the course curriculum of primary and secondary schools and 13 agriculture training institutes. The aim was to assist schools in integrating nutrition in a manner which will help attain the MDGs. The Bangladesh Applied Nutrition and Human Resource Development Board (BANHRDB) was given responsibility during the Board Meeting held on 3 April 2007 which was attended by high level officials (Joint Secretary level and above) from ten Ministries and NGOs.

93. The National Food Policy was approved in 2006 integrating nutrition appropriately. Other policies such as National Agriculture Policy, Food and Nutrition Policy are now in the process of being updated. Further initiatives have been undertaken to develop Food Based Dietary Guidelines for different age groups. This year, the initiative has also been undertaken to develop food composition tables for the country. The Food Policy Capacity Strengthening Project has been undertaken by the Ministry of Food and Disaster Management recently under which many of the nutrition related problems would be addressed.

CAMBODIA

94. Following the participation in the International Conference on Nutrition in Rome (ICN), the Cambodian government set the National Plan of Actions on Nutrition (NPAN), Cambodia's Nutrition Investment Plan (CNIP), and the Sub-Decree on the establishment of the National Council for Nutrition. The updated CNIP 2003-2007 was based on CNIP prepared in 1998 and the NPAN of 1995-96. The revision by the National Council for Nutrition was supported by UNICEF. CNIP proposes US$41.1 million investment, which was structured to contribute to Cambodia's Strategic Economic Development Plan (SEDP) II and Poverty Reduction Strategy Paper (PRSP). It reflects the government's ethical position expressed in its Constitution and the Conventions which were signed and endorsed by the government, such as Convention on the Rights of the Child (CRC), Convention on Elimination of All Forms of Discrimination against Women (CEDAW), 1990 World Summit for Children (WSC), the 1992 International Conference on Nutrition (ICN) and the 1996 World Food Summit (WFS). There have been improvements in the health and nutrition situation as shown in the Cambodia Demographic and Health Survey (CDHS, 2005) e.g. the infant mortality rate has declined and the nutrition status of children under 5 years old and vitamin A and iron distribution improved. However, the nutritional status of the Cambodian people was still one of the lowest in the region. It is obvious that a lot of work still needs to be done, including collection of reliable data.

95. The Royal Government of Cambodia continued its commitment to child survival. The Ministry of Health and partner agencies continued to increase their collaboration and support for improving child survival. The establishment of the child survival steering and management committees, and development of the Cambodian child survival strategy were manifestations of this commitment. Specifically, the strategy aims to achieve universal coverage of a limited package of essential evidence based cost effective interventions that impact on child mortality.

96. On the agricultural development side, after the WFS, the Cambodian government implemented the Special Programme for Food Security (SPFS) with support of FAO in 1998. During its pilot phase (1998-2003), a project on empowerment of women in irrigation and water resources management (WIN) was also implemented in parallel with other project activities. SPFS was nationalized in 2004 and the National Programme for Food Security and Poverty

Reduction was set up as an umbrella programme for food security under the supervision of the Ministry of Agriculture, Forestry and Fisheries.

97. Other developments included the National Food Security Forum in 2003 and the installation of the government/donor Technical Working Group (TWG-FSN) on Food Security and Nutrition, co-chaired by the Council of Agricultural and Rural Development (CARD) and the Ministry of Planning and co-facilitated by FAO and WFP. In 2005, FSN strategy paper was developed by TWG as an input into the process of National Strategic Development Plan (NSDP) 2006-2010.

CHINA

98. The National Nutrition and Health survey (NNHS) conducted in 2002 showed higher prevalence of obesity in urban areas (4.4%) compared to rural areas (1.4%). Similarly, the prevalence of overweight was higher in urban than in the rural areas. Meanwhile, the underweight and stunting prevalence using NCHS standards showed opposite trends. Rural boys and girls tended to be more underweight and stunted.

99. For micronutrient deficiencies, the prevalence of anemia in urban children from 5 to 11 years was 8.7%, 12 to 18 years was 12.1%; and the prevalence among rural children from 5 to 11 years was 13.7% and 17.5% for children aged 12 to 18 years. The prevalence of sub-clinical vitamin A deficiency in 2002 among children aged 3 to 12 years old was 9.3%, which was more prevalent in rural areas. The prevalence of marginal vitamin A deficiency (measured as serum retinol between 20 and 29µg/dl) was 45.1% and was more prevalent in rural areas. Endemic goiter among children 8–10 years of age was 6% in 2002.

100. The food and nutrition development strategy for China (2001-2010) was issued by the State Department on 6th November 2001. The objective was to promote the improvement of the food and nutrition situation. A programme to "Boost the improvement of public nutrition" was integrated in the 11th "Five-Year" Plan with the objective of improving the quality and health of both rural and urban dwellers.

101. China's State Council Legislative Affairs Office and the Ministry of Health worked for the passage of nutrition legislation. It was completed and submitted to the Ministry of Health in December 2006 and integrated in the work schedule of the MOH. This development helped strengthen national nutrition awareness, promote national and local nutrition policies and actions, ensure the smooth development of nutrition work, prevent and control malnutrition and relevant diseases in school children.

102. The trade standard of "the sanitation criterion of the enterprise producing school lunch programme" was promulgated by the Ministry of Health on 21st Jan, 1998. This programme promoted the health and growth of children through the development of good dietary habits. One of the causal factors of malnutrition among school children was an unbalanced diet, particularly low intake of milk and its products. To address this problem, the nutrition programmes were expanded to include school milk drinking and consumption of soybean products.

INDIA

103. There has been a significant reduction in severe malnutrition over the years but the prevalence of underweight in children under three years of age has marginally reduced. On the programme side, India has undertaken a number of initiatives to reduce malnutrition, mortality in children and mothers and improve household food security. The National Rural Health Mission launched in April 2005 and the National Rural Employment Guarantee Programme were two of the initiatives taken.The existing programmes, like Integrated Child Development Services Scheme, Public Distribution System for Food, and Mid-day-meal Scheme for school children have been strengthened and expanded. A number of nutrition advocacy workshops have been organized by the Food and Nutrition Board (FNB) of the Ministry of Women and Child Development at the national, regional and state levels. The second edition of National Guidelines on Infant and Young Child Feeding was released by the Food and Nutrition Board in May 2006. Micronutrient Malnutrition Control received the attention of the Cabinet Secretariat and a comprehensive approach was advocated for the 11th Five Year Plan. Nutrition education of the people through mass awareness campaigns, ad campaigns, radio and TV programmes was intensified by the FNB.

104. Millennium Development Goals are being monitored by the Ministry of Planning and Statistics. An Annual Health Survey and a biannual Child Health Survey are also being considered. The Office of the Prime Minister is also monitoring the reduction in malnutrition levels among children.

INDONESIA

105. The Government of Indonesia adopted the ICN/WFS and MDGs concepts and goals and integrated them into the national development policy of Indonesia, especially in health and agricultural policies and programmes. Some efforts were made to reduce problems of food security, undernutrition, and poverty in Indonesia. These included improving food production and food diversification; improving food supply and intake, and food safety; strengthening food fortification (wheat flour fortification with iron, zinc and folic acid; and iodized salt), formulating food and nutrition standards and guidelines, strengthening food and nutrition surveillance, revitalizing Posyandu (integrated health post), feeding programmes, community empowerment through family nutrition awareness programme; micronutrient supplementation, immunization, strengthening nutrition referral system and therapeutic nutrition, and health school programme.

106. Despite these efforts, Indonesia with a population of about 225 million people, still faces food insecurity, poverty and undernutrition. The availability of food in terms of energy increased from 2,966 to 3,151 kcal/cap/d, but the protein intake slightly decreased from 76.7 to 75.3 gram/cap/d during 2000-2006. Household food intake improved during the same period shown by an increase in the desirable dietary pattern score (DDS) of household food intake from 66 in 1999 to 78 in 2005. In terms of undernutrition, the prevalence of underweight among children under-five increased during that same period from 26.9% to 28.0 %. However, the prevalence of iron deficiency anemia (IDA) decreased from 45.5% in 1995 to 25.0% in 2006 among children under-five, as well as subclinical vitamin A deficiency (from 50% in 2000 to 12 % in 2006).

107. The incidence of poverty decreased very slowly, from 18.2 % in 1999 to 17.8% in 2005. This partly explained the slow reduction in the prevalence of underweight. Other identified contributory factors included limited budget, lack of local government commitment,

lack of infrastructure, and high dependency of target groups on charity programmes (cash transfer, rice for poor, complementary foods for poor children under-two) that weaken social capital of the family and community. There is still a demand for quality programmes and effective efforts in both social and economic sectors through community empowerment approaches to rapidly reduce undernutrition in Indonesia.

LAO PDR

108. Nutritional status of the population in Lao PDR is still poor when compared with neighbouring countries. For children under five, 37.9% are underweight, 41.2% are stunting and 7.7% are wasting. Micronutrient deficiency is also prevalent, vitamin A deficiency in children under five is 45% and anemia is 46%.

109. The Meeting was informed that various activities were implemented to improve nutritional status of the children in Lao PDR. Examples of these activities include: 1) nationwide deworming programme, 2)Vitamin A supplementation for children under five and post partum women within 6 weeks of delivery, 3) nationwide daily iron supplementation of pregnant women, 3) improved iodized salt quality at the production level, 4) promotion of exclusive breastfeeding from birth up to six months, 5) operational trial of weekly iron supplementation for child bearing age women in a pilot province, 6) national training of trainers for infant and young child feeding counselling, 7) training on management of severe malnutrition for doctors and nurses, 8) piloting of the home garden project in three provinces with FAO funding, and 9) school feeding project in three provinces in the North with support from the WFP.

110. Infant feeding regulations and guidelines were also revised. Several meetings and workshops were conducted to draft the National Nutrition Policy/Strategy and to formulate the National Plan of Action for Nutrition with relevant ministries and international agencies, and to set the goal to the year 2020. There is also a national school health policy and strategy with five components, namely personal health and life skill, healthy environment, health and nutrition services, prevention and control of common diseases and school - community partnership.

NEPAL

111. Nepal recognizes adequate nutrition as a fundamental right of every human being. The main nutritional problems observed in Nepal were PEM, IDD IDA and VAD. High prevalence of malnutrition in the Nepalese population especially among children and women led to high risk of death due to lack of resistance against common infectious diseases. This type of malnutrition has not only affected people's health but also the quality of life and the development of the socio-economic situation of the country.

112. In the Millennium Development Goals (MDGs), underweight was adopted as a key indicator of poverty and hunger. Improved nutrition can help reach the MDGs by achieving primary education for all, reducing child mortality, improving maternal health, reducing the burden of HIV/AIDS and other infectious diseases as well as reducing poverty and hunger.

113. In order to reduce the burden of nutritional problems in Nepal, the Government focused its policy on the following targets: 1) reduce the prevalence of PEM and IDA, 2) eliminate IDD and VAD by 2017, 3) reduce prevalence of LBW and intestinal worm infestations, 4) ensure household food security, 5) control of infectious diseases and life style related diseases, 6) improve health and nutritional status of school children, 7) promote good dietary habits, 8) improve nutrition of people living in exceptionally difficult situations, and 9) regular monitoring of the nutrition situation of the country.

PHILIPPINES

114. The National Nutrition Council reported that the present administration continued to support its commitments toward the achievement of the MDGs by 2015, particularly MDG 1 which is eradicating extreme poverty and hunger. The second Philippine Progress report stated that the nutrition situation in the Philippines has improved from a low to medium probability of reaching the target with a reduction in the prevalence of underweight 0-5 years old from 30.6% to 29.6% in 2003. Furthermore, based on the most recent data on the nutritional status of Filipino children 0-10 years conducted by the Food and Nutrition Research Institute of the Department of Science and Technology (FNRI-DOST) in 2005, the prevalence of underweight has also

declined to24.6%. These improvements mean that the country has a high probability of meeting the nutrition target by 2015.

115. For the 14th Congress, the priority legislative agenda in support of the MDGs will be reviewed and legislative advocacy will be strengthened. The NNC will also work for the integration and mainstreaming of this agenda in the Formula One for Health of the DOH where the NNC is now based since its transfer in November 2005 from the Department of Agriculture. NNC was also tasked to oversee the Accelerated Hunger Mitigation Programme (ACHMP).

116. The ACHMP was anchored on an integrated and holistic approach to address hunger. All major factors that contribute to hunger were considered. FIVIMS data which included five out of the 12 indicators using the 2000 Family Income and Expenditure Survey according to subsistence incidence, poverty incidence and FIVIMS were used to identify 54 target provinces of the ACHMP and their priority ranking.

SRI LANKA

117. Sri Lanka, an island with an average economic growth of 5 – 6% GDP and a per capita income of US$ 1030 has handsome figures for human development. It is noteworthy that a life expectancy of 72 years, adult literacy of 92.5%, under five mortality of 15/1000, maternal mortality of 92/100,000, Primary Net Enrolment of 95% and primary retention of 97.6% (EFA Development Index 0.956), and zero gender disparity in primary, secondary and tertiary education, all contributed towards Sri Lanka's rank of 93 in the Human Development Index. This places Sri Lanka in the medium human development category with the HDI of 0.751 for 2005.

118. The average household size recorded a decline from 4.61 (1996/97) to 4.31 in 2003/04 (CFS, 2003/2004). The age dependency ratio has declined with a shift from the child and youth population to the middle aged and elderly population over time.The National nutrition policy is being reviewed with the overall goal of ensuring household availability of appropriate food in adequate quantities to all people throughout the year and to ensure optimum nutrition of all individuals.

119. Guidelines on infant feeding and young child feeding, the breastfeeding code for Sri Lanka and the Child Health Development Record (CHDR) were revised for effective implementation of the interventions.

120. The government of Sri Lanka recognized the internationally agreed MDGs and included them in the development agenda to be achieved by 2015. The recent analysis of five major MDGs has shown a remarkable achievement in spite of 20 years of civil war. Sri Lanka fared well with respect to many goals in areas such as education and health. However, there were regional variations not in line with national status. The review highlighted the need to maintain strong growth, ensure male and female students attain equally better educational levels, improve health and nutrition, expand infrastructure and pay close attention to districts currently underserved.

121. Child malnutrition in Sri Lanka remained high; 17% of infants were low birthweight and one in three children in the 3-5 years age group was underweight. Despite improvements over time 13.5% of children aged 3-59 months were stunted. The prevalence of acute malnutrition was 14% and a 1% reduction of underweight among children less than five years was observed during the period of 1975-2005. Surveys showed that the prevalence of anemia decreased from 1995 to 2000 in all groups but the very high levels in infant and preschool children, adolescents, non pregnant adult women and among pregnant women was a concern. Although very little information was available on the nutritional status of the elderly, the growing elderly population and the increasing prevalence of lifestyle related chronic diseases was an important area that needed attention. Changes in lifestyles have also resulted in an increasing proportion of obese people.

THAILAND

122. The Meeting was informed that Thailand has entered a nutrition transition since the early 1990s because of very successful health care and rapid economic development and demographic changes. Problems of undernutrition, underweight, stunting and wasting have declined, but overweight, obesity and related NCD are rapidly increasing.

123. Thailand's national alliance on prevention of obesity and NCD (INMU and nutrition association are core coordinators) works with the national planning board and various relevant ministries to include these problems into the 10th NESDP (2007-2011). Implementation strategy and action plans are being drafted.

124. Micronutrient deficiencies are marginal. Anemia prevalence remained high in all population groups (20-30%), and evidence that iron is only one factor has been elucidated, implicating the need to review the action programme. IDD remained a problem as reflected by low urinary iodine excretion. A major constraint was the quality of salt iodization and its availability at household level.

125. Urbanization and changing lifestyles also brought about food safety and quality issues, from farm to table. Street foods, processed foods and continued use of chemicals/pesticides in food production, food additives and flavouring added new challenges for risk assessment from food consumed by all population groups. Interesting models for food safety and nutrition have been developed with inputs from national planning and other agencies and NGOs. Funds are usually provided by the National Planning board taxes which levies taxes on cigarette and alcohol. There is an awareness that the problem of obesity is on the rise and there are various public awareness programmes as well as a school based programme for nutrition and physical activity

VIET NAM

126. The National Steering Committee for Nutrition Strategy is actively working as a guidance and monitoring body of food and nutrition activities in Viet Nam, following the ICN/WFS and the MDGs.

127. On 9 March, 2007, a national meeting on nutrition was held in Hanoi to review all nutrition activities conducted from 2001 to 2006 and attended by all 64 leaders of provincial governments. Fifty-two out of a total of 64 provinces have a Plan of Action for Nutrition for 2007-2010. The Government programme for control of childhood malnutrition has funding until the next period (about 5 million USD/year). The prevalence of underweight in Viet Nam was 22.6% and for stunting 28%.

128. Recently, the National Institute of Nutrition (NIN) and the Ministry of Health conducted monitoring visits to 10 provinces to look at implementation of the National Nutrition Strategy towards achievement of ICN/WFS goals in the context of MDGs. NIN also disseminated the results of a national survey on overweight and obesity in adults 24-64 years old.

129. An undergraduate programme for nutrition and food safety in the Secondary Medical School Number I was recently offered. There were around 40 entrants to this undergraduate training programme.

130. The Meeting was also informed that the nutrition surveillance system has been strengthened over the last two years. In 2005-2006, emergency nutrition surveys in some natural disaster- prone areas were conducted which were used by the government as bases for the planning and implementation of interventions. FIVIMS network and National Food Security Project continue to provide reports on an annual basis. Several actions toward improving the food security situation in the disadvantaged regions have also been undertaken.

III. CONCLUSIONS AND RECOMMENDATIONS

Conclusions

131. The Meeting recognized that good nutrition is fundamental for children's current and future health, as well as their development and learning. The benefits of developing healthy dietary and lifestyle patterns from an early age onwards can positively impact people's nutrition and health throughout their adult lives, and enhance the productivity of individuals and nations. Nutrition education is an important element in an overall strategy aimed at improving food security and preventing all forms of malnutrition. Schools (from pre-school to secondary) are ideal settings for promoting lifelong healthy eating habits and lifestyles.

132. Most countries in the region implement school health and nutrition programmes, including school feeding, deworming, vitamin and mineral supplementation, etc. Innovative, creative and effective school nutrition education programmes exist in some countries in the region. However, these are often small-scale and implemented as pilot projects, focus on children with special needs and prioritize the transfer of knowledge over the promotion of active learning

and the creation of appropriate attitudes, life skills and behaviours. Generally, nutrition education is not systematically integrated into school curricula in the region.

Recommendations for country action

133. In order to build a comprehensive and sustainable school nutrition programme that addresses all forms of malnutrition, the Meeting recommended that countries:

1. consolidate and strengthen ongoing school based nutrition programmes, aiming at improved nutritional status and learning of school children and creating an appropriate learning environment through nutrition education, school gardening and school meals, nutritional assessment, clean water and sanitation, as well as physical activity education.
2. Apply a multi-disciplinary and multi-stakeholder holistic approach to support effective school based nutrition programmes and policies at national and local levels.
3. Promote the active involvement of parents, communities and local government in the development and implementation of school nutrition programmes.
4. Advocate for the integration of nutrition education into the school curriculum for all age groups.
5. Promote the integration of nutrition training into the course curriculum of teacher's training institutes.
6. Review existing teaching/learning materials on school nutrition education and promote the adaptation of available, or the development of new materials in line with local needs and conditions.
7. Promote the establishment of school gardens as an integral part of school nutrition programmes.
8. Explore opportunities for appropriate public-private partnerships to support health and nutrition education and improvements in the school environment.
9. Explore funding opportunities among bilateral and multi-lateral donors and NGOs.
10. Encourage countries to work towards making all schools nutrition-friendly with adequate political commitment and funding.

11. Ensure that nutrition education in schools always applies the tri-partite curriculum approach (i.e. link nutrition education in the classroom with learning in the school environment, home and community).
12. Nutrition education should always employ a wide range of hands-on teaching/learning methods.

Recommendations for FAO action

134. Initiate the establishment of a coordinating mechanism for standardising data collection on school-age children (i.e. food consumption, dietary and eating patterns, anthropometry and physical activity) at the regional level.

135. Organise a follow-up satellite meeting on School- based Nutrition at the forthcoming International Congress on Nutrition (Bangkok, 4-9 October 2009).

136. Disseminate the nutrition education materials developed by FAO.

137. Explore opportunities for translating FAO materials into additional languages.

138. Explore opportunities for providing technical assistance in the development and implementation of school nutrition projects in interested countries and identify funding support through FAO's Technical Cooperation Programme or bilateral trust funds.

139. Promote sharing of information and materials on school based nutrition among ANFN members.

140. Facilitate provision of assistance to countries in the establishment of M & E system for monitoring progress on school based nutrition.

Agenda item 8: Adoption of report and closing

141. The draft report of the Meeting was reviewed by the participants and adopted.

142. In conclusion, Biplab K. Nandi thanked the participants and guests for their active participation and valuable inputs to the Meeting. He expressed optimism that the outputs of the Meeting, specifically the action plans at country level, would bring forward school nutrition education for sustainable food and nutrition security.