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## Improving children's health and education by working together on school health and nutrition (SHN) programming in Nepal

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**Abstract.** Although the school-age children's mortality rate is low, they face diseases that keep them from succeeding in school; therefore, the objective of a School Health and Nutrition (SHN) program is to improve the health and nutrition status of school children which leads to improved school performance. The program activities include iron supplementation and deworming; health and nutrition education; capacity building of partners, teachers, and students; and provision of safe drinking water and toilets. In 2009 Save the Children (SC) is implementing the SHN program in four districts of Nepal reaching 1,127 primary schools and 354,170 students in the districts, representing almost 90% of enrolled children in these districts. Implementation is in partnership with local Non-Government Organizations (NGOs) and in close coordination with the Department of Education (DOE) and Child Health Division (CHD), Department of Health Services (DHS).

In the past, many successful school based health, hygiene and nutrition programs were implemented in Nepal from time to time, but these initiatives were temporary projects. The National SHN Strategy 2006 successfully brought the two key ministries together along with other stakeholders to create a sustainable program. The National SHN Strategy 2006 emphasized implementing comprehensive SHN package by building the capacity of teachers, health workers, School Management Committees (SMC) including students at all levels. Currently, the SHN program is progressing towards successful nation-wide expansion through the government system.

**Keywords.** Education, children, nutrition, hygiene, Nepal, SHN

### 1 Background

Nepal is a South Asian country that lies between China and India with 23 million people almost equally divided between men and women<sup>1</sup>. Administratively the country is divided into 75 districts, 58 municipalities, and the smallest unit consisting of 3,915 Village Development Committee (VDCs). The political situation of Nepal has undergone a number of significant changes with nearly 500 children perished during the long political conflict in recent years<sup>2</sup>. Signing of the Comprehensive Peace Agreement (CPA) by the Government of Nepal (GoN) and the Communist Party of Nepal (Maoist) (CPN-M) on 21 November 2006 formally ended the decade long armed conflict. A historic election for a Constituent

Assembly was held in April 2008 in which the CPN-M became the largest party and subsequently led a government, which remained in power for almost nine months. After the Maoist party resigned in May 2009, the Communist Party of Nepal – United Marxist and Leninist (CPN-UML) formed a coalition government with support from 22 parties representing the Constituent Assembly.

Of the total population of the country, 41 percent are under 16 years old. Of the total school age children in Nepal, 87 percent are enrolled in schools, of which 48 percent of the children are girls<sup>3</sup>. According to the Flash I Report 2008-09, an annual summary report from the Department of Education, Ministry of Education, there are 29,835 primary schools, 10,373 lower secondary schools, 6,369 secondary schools and 1,191 higher secondary schools (private and public) approved by the government. There are 450,000 children each year growing up without primary education. The Net

<sup>1</sup>Central Bureau of Statistics, 2003

<sup>2</sup>"Situation of Children in Nepal 2008," CWIN Fact sheet, 2008. www.cwin.org.np.

<sup>3</sup>School Level Educational Statistics of Nepal, Consolidated Report, Ministry of Education and Sports, Department of Education, June 2007

Enrollment Rate (NER) of primary level (G1-5) is 91.9%, lower secondary (G6-8) is 57.3% and secondary (G9-10) is just 36.4%. Around 70% of the children do not complete their primary education within five years time. In the 4 SC programming districts, the NER of primary level (Siraha 87.7%, Bardiya 90.3%, Kailali 89.0% and Kanchanpur 90.4%), lower secondary (Siraha 36.1%, Bardiya 72.1%, Kailali 58.0% and Kanchanpur 60.4%) and secondary (Siraha 29.7%, Bardiya 39.4%, Kailali 34.3% and Kanchanpur 36.1%) are lower than the national rates.

In addition to progress in the education sector as evident from enrollment rates, remarkable progress has been achieved on key health indicators (e.g. use of modern contraceptive increased from 35% to 44%; four or more Ante-Natal Care visits increased from 14% to 29%, infant mortality declined from 64 deaths per 1000 live births to 48 and Maternal Mortality Ratio also declined from 539 to 281 deaths/100,000 live births from 2001 to 2006) and are on track of attaining Millennium Development Goals (MDGs). However, some indicators have changed little: a 33 % neonatal mortality rate, 19 % of delivery are by skilled birth attendants, and 49% of children under-five years of age are stunted, 13% are wasted and 39 % are under weight. Early marriage and early child bearing has been a common practice in Nepal even though law prohibits early marriage. Nepal with its high proportion of youth is focusing on the issues of adolescent health and development<sup>4</sup>. According to the Nepal Demographic and Health Survey (NDHS), almost one-quarter of Nepalese women have given birth before reaching 18 years of age<sup>5</sup>. Also, the government of Nepal has been promoting a public-private-NGO partnership to provide most essential health needs of the population and improve the quality of health care.

Poor economic conditions, inadequate infrastructure and services, inaccessibility to health facilities, decline in environment quality, and social conflicts have all adversely contributed to worsen the mortality and morbidity rates, especially among women and children. Acute preventable childhood diseases, complications of childbirth, nutritional disorders, and fecal-oral contamination and endemic diseases such as malaria, tuberculosis, leprosy, sexually transmitted diseases, rabies and vector-borne diseases continue to prevail at a high rate in many countries. Determinants of such conditions are associated with pervasive poverty, low literacy rates, poor mass education, rough terrain and difficult communications, low levels of hygiene and sanitary facilities, and limited availability of safe drinking water<sup>6</sup>.

While the death rate among school-age children is low compared to children under five, the burden of disease experienced by this age group is large, and very little attention has been paid to the health aspects for these school-aged children. The Ministry of Health and Population (MoHP) of

Nepal has created a policy of free distribution of de-worming tablets and Vitamin "A" capsules for children up to 5 years of age. However, there is no plan to provide health services to the school-going population of ages 6-18. The high morbidity among this population is due to parasitic infections, malnutrition, micronutrient deficiencies and other diseases.

A baseline survey report carried out by SC in 2005 in the three program district (Siraha, Kanchanpur and Kailali) of Nepal revealed that Kailali had the highest prevalence of anemia at 47.7% followed by Siraha (29.5%) and Kanchanpur (28.6%). In Kailali, the prevalence of anemia is of severe public health significance whereas in Kanchanpur and Siraha, it is of moderate public health significance. A higher prevalence was found among the students of the age group of more than 10 years (37.9%), compared to 32.8% of those students who were of the age group below 10 years. The prevalence of hookworms by district was as follows: Kailali – 67%, Kanchanpur – 53% and Siraha – 33%. Most (92.3%) of the students who were suffering from hookworm were found to be in the light intensity category. The other aspect of poor sanitation and risk of infection was that 81% of the surveyed children defecated in open fields and 11% did so in the river. The poor health and sanitary conditions in schools have adversely affected the physical and mental development amongst the children, and numerous health problems are related to poor personal hygiene, water and sanitation and nutrition practices.

With improved knowledge and attitudes towards health and nutrition behavior of children, increased access to health services and increased availability of safe water and sanitation at school, it is assumed that this group's health and nutrition status will improve, resulting in higher primary school completion rates because of improvement in educational performance, school attendance and retention. Thus for physical, mental and social development of the school going aged population, the SHN program is one of the most important programs for overall child development. Children need to be healthy to learn and learn to be healthy from early on.

While SC was implementing the SHN program at the district and community level with local Non-Government Organizations (NGO), the GoN was investing tremendous effort in improving maternal and children's health by reducing maternal and infant mortality. At the same time, school health services were identified as one of the cost effective interventions of delivering health care services in Nepal<sup>7</sup>.

## 2 General Information/Geographical

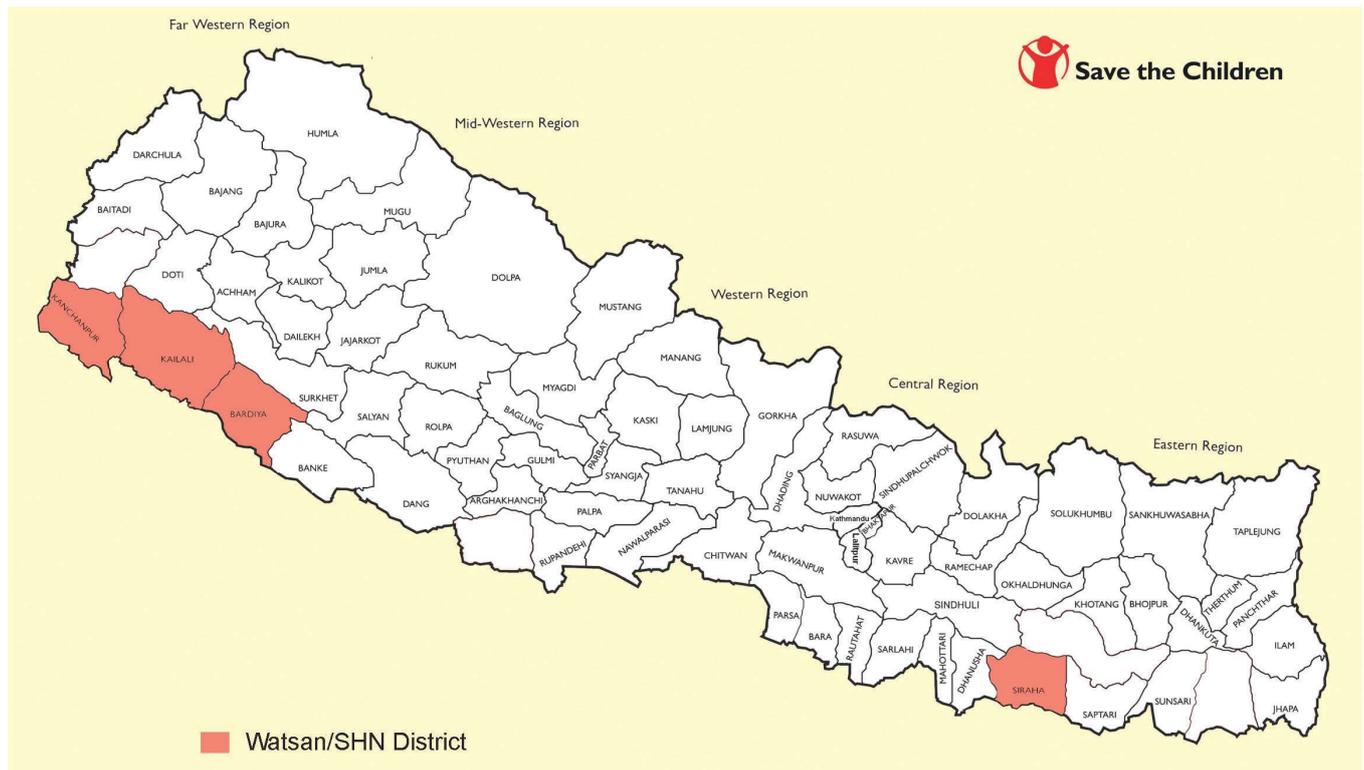
SC has been implementing the SHN program in three districts of Nepal since 1999, aiming to improve the health and nutrition status of school children, so that children can better perform at school. The three districts are Siraha in the Eastern region and Kailali and Kanchanpur in the Far-Western region of Nepal. SC believes in true partnerships with local government and NGOs for sustainability of social

<sup>4</sup>National Adolescent Health and Development Strategy, Family Health Division Department of Health Services, Ministry of Health 2000

<sup>5</sup>Nepal Demographic and Health Survey 2006, Population Division Ministry of Health and Population, Government of Nepal

<sup>6</sup>www.moh.gov.np, 30 December 2006

<sup>7</sup>Second Long Term Health Plan 1997-2017, HMGN Ministry of Health (1999) Katmandu



**Figure 1.** Nepal Map with SHN Program implemented by Save the Children

development and program expansion, through extending support and collaborative working relationships<sup>8</sup>. Keeping this as an organizational philosophy, the SHN program started at the schools of the three districts partnering with local NGOs.

The SHN program is results-oriented: its design is based on SC's Common Approach for Sponsorship Programming module which is in line with the international framework for SHN and the GoN's National SHN strategy. The program strategies include partnership and collaboration with government organizations, NGOs and other agencies; capacity building of partners, school management committee and students; program learning and innovation; integration within program and sectors; and social inclusion and advocacy. Programs are implemented in partnership with local NGOs and in collaboration and coordination with the District Public Health Office (DPHO) and District Education Office (DEO).

Based on the years of program learning experiences of the three districts, in 2006, a National School Health and Nutrition Strategy was developed jointly by the Ministry of Education (MoE) and MoHP, with technical support of SC. The strategy emphasized the implementation of a comprehensive and standardized package of SHN interventions by providing de-worming and iron tablets, building the capacity of teachers, health workers, and SMC, including students at all levels<sup>9</sup>.

From August 2007, with support of Save the Children Italy and Media Friends, SC scaled up its program to reach district-wide coverage in the Kailali, Kanchanpur, and Siraha districts and added one new district, Bardiya. In 2009, the

SHN program is reaching 84% (1,127 out of 1,342) of primary schools and 89% (354,170 out of 397,898) of total students in the four districts<sup>10</sup>.

Based on the National SHN Strategy 2006, the DOE and CHD, Department of Health Services (DHS) jointly developed a facilitation book to implement the SHN program with support of Plan Nepal<sup>11</sup>. The purpose of the book was to ensure a common understanding of the SHN strategy among the stakeholders, to ensure effective implementation. The CHD, DHS printed the second edition of the School Health Program Operational Guideline for further expansion of SHN programming<sup>12</sup>.

Health and Education are considered two different services and are often delivered in silo-fashion. But the National SHN Strategy 2006 outlined the roles and responsibilities of each stakeholder in the integrated implementation of SHN programming at different levels. The two ministries (MoE and MoHP) not only took responsibilities for their roles, but also mobilized all the stakeholders and have taken initiative to promote the National SHN Strategy 2006. The Partner NGOs who worked directly with the communities and schools and the SMCs, school children and their parents have essential roles in making the program effective at all levels.

<sup>8</sup>Save The Children/US 15 Years in Nepal (1981-1996), Himalayan Field Office- Nepal Program

<sup>9</sup>National School Health and Nutrition Strategy, Nepal 2006

<sup>10</sup>SHN Program Operation Plan 2009 submitted to Child Health Division, MoHP

<sup>11</sup>School Health and Nutrition Program Facilitation Guideline 2005, Ministry of Education and Sports, Ministry of Health and Population and Plan Nepal

<sup>12</sup>School Health Program Operational Guideline 2006, Second edition 2002

### 3 Methodological issues: Major Activities of the SHN Program

The SHN program is designed to improve the nutrition and health status and the school performance of primary aged children (6-18 yrs). Major activities of the program under four intermediate results are:

1. Increased access to the use of health and nutrition services at schools
  - 1.1 Mass treatment for parasites – Trained focal teachers and School Health and Child Rights Clubs (CRC) manage the distribution of Albendazole to all school-aged children to treat for intestinal parasitic infection on a semi-annual basis. A SHN register is maintained by each school with students' names. In areas where the MoHP has initiated giving deworming tablets, SC works to collaborate with the MoHP.
  - 1.2 Iron supplementation – Iron tablets are given weekly for 13 weeks to all school children starting a week after distribution of de-worming tablets. With the support and guidance of the NGOs, health staff, SHN focal teachers and CRC members give iron tablets to the children. The NGOs ensure that children receive iron tablets 13 consecutive weeks and record the distribution.
  - 1.3 First Aid service – Teachers are trained in first aid and a first aid kit is provided. Maintenance of the kit and refilling of the materials are the responsibility of the school. The health staff of the NGOs health ensure the functioning of first aid services at school during supervision visits and meetings.
2. Increased availability of safe water and sanitation at school
  - 2.1 Safe drinking water – Hand pumps for drinking water in needy schools are installed. The SMC members are responsible for maintaining these drinking water facilities. In consultation with technical experts for water testing, the NGOs test the arsenic level of all newly installed hand pumps. If the result shows an arsenic level of 50 ppb or more, schools are supported with Arsenic filter jars.
  - 2.2 Functioning toilets – Separate toilets for girls and boys are key to school sanitation. The community contributes 20 percent of the total cost for building toilets or installing water sources. The SMC/CRC of each school ensures the functioning of the toilets.
  - 2.3 Waste disposal – Waste disposal pits in needy schools are constructed.
  - 2.4 Hand washing facilities – A locally adaptable and cost effective hand washing facility is established in needy schools.
3. Improved knowledge, attitude of and skills towards key behavior on SHN

- 3.1 SHN management – school teachers and health workers are trained on the management of SHN activities.
- 3.2 Health education and demonstration sessions – Teachers are trained so that they can conduct SHN health education sessions on personal hygiene, nutrition and healthy habits that complements the national curriculum.
- 3.3 Child Initiative Program – Child club members are trained on the different SHN, and after the training they perform activities such as street dramas and radio broadcasts.
4. Improved community support system and policy environment
  - 4.1 District SHN Coordination Committee – When a district level SHN coordination committee is formed under the chairmanship of DEO and secretariat with DP/HO (District Public/Health Office), the committee members receive training and orientation on the SHN program.
  - 4.2 Regular Meetings – Regular review and reflection meetings are held by focal teachers, DEO and DP/HO at the district level. NGOs hold semiannual and annual program progress meetings with SC and district team to share the program accomplishments and further plan together.
  - 4.3 National partnership meetings – Meetings with the national-level government and other NGOs working on SHN are held to create understanding about the different programs.

### 4 Key Achievements

In 2008, 306,322 (78 %) school children received de-worming medicine (Albendazole), and 214,184 (54 %) children received a complete course of iron supplementation<sup>13</sup>. The data shows that 49.7% schools have conducted screening for vision and hearing. The annual reporting data shows that 58.5% schools have access to potable water, and 63.3% schools have functioning latrines. A total of 295 teachers received SHN training and 166 school have a functional SHN committee. Similarly, a total of 163 hand pumps were installed and 209 toilets were constructed in the early childhood development centres and schools. Arsenic tests have been carried out on the water from 310 hand pumps in 191 schools of program districts. Beginning in 1999 as a small project reaching fewer than 10,000 children, SC with support from partners reached over 300,000 children in 2008 (Figure 2).

Some preliminary findings from a recent evaluation indicate that the SHN has been successful in reducing anemia and

<sup>13</sup>HmCO Annual Report for FY 2008 (October 1, 2007 through September 30, 2008) Draft

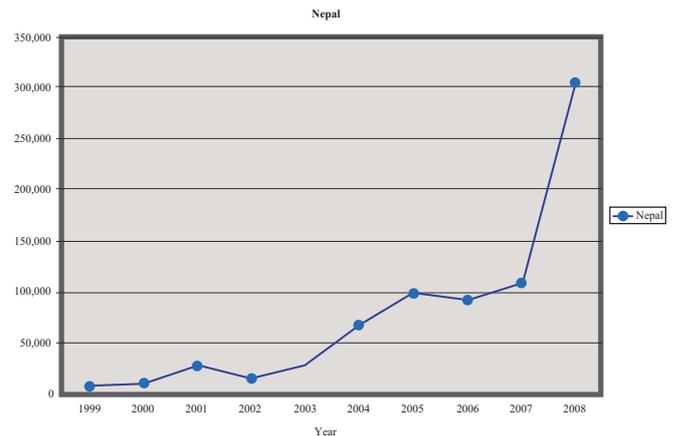
parasite infection rates as well as improving behavior and the general knowledge level regarding nutrition and health<sup>14</sup>.

## 5 Key approaches to make the SHN program successful in Nepal

Before the development of the national SHN strategy, SHN programs were implemented by the different organizations independently. The strategy made two different ministries and different stakeholders work together to bring SHN into an existing service delivery system and standardizing the program. The two ministries jointly initiated some of the interventions in the different districts in a stepwise manner.

These actions made the SHN program successful in Nepal:

- National SHN Advisory Committee (NSHNAC) of two ministries – based on the National SHN strategy 2006, a NSHNAC was formed by the DoE, MoE and DHS, MoHP. The NSHNAC will continue to plan jointly to bring the program into the system.
- SHN network at a central level – an SHN network working group was formed by the SHN stakeholders for regular meetings and discussions to share each other's programs and issues for program standardization and improvement. A Terms of Reference of the Network has been officially approved by the governments.
- Formation of SHN Coordination Committees at the district level – like the central level committee, district level SHN Coordination Committee (DSHNCC) formation was recommended by the National SHN Strategy 2006 for joint planning, resource mobilization, monitoring and supervision. The DSHNCCs have been formed in all four program districts.
- Each school has its own School Management Committee (SMC) comprised of teachers and representatives from the communities. The partner NGOs coordinate with the SMC and community from the beginning of program implementation at schools. A contribution of at least 20% is made by the community/school for constructing toilets, drinking water points and waste disposal at the school. Once construction is completed, the SMC and NGOs conduct social auditing with the communities to make the program transparent. The SMC and program staff determined that social auditing is one of the good practices of sharing program plans and accomplishments, including financial expenditure with the community, especially in the building and construction development work.
- Each school has formed a child club for the school children to encourage the Child Initiative Program (CIP). Through school child club participation, children are actively involved in the different extra curricular



**Figure 2.** Total number of children reached by SHN programming of SC in Nepal<sup>15</sup>.

activities; for example, involvement in the First Aid Kit refilling, street drama and radio programs.

## 6 Challenges encountered while implementing the program

- During the long insurgency and political conflict period, general strikes were a common way of expressing discontent. Frequent general strikes hampered and/or closed schools, sessions and activities. Delivery of weekly iron supplementation and its compliance were greatly affected.
- Not all stakeholders understood or desired the comprehensive approach of SHN programming.
- Currently the program is implemented in government – owned primary and high schools in the stepwise manner. The program will need to consider reaching children in the private schools since there are 308 private schools (G1-5) in the 4 districts where SC works (hence the 84% coverage rate), and this will have national-level impact as well since there are 3,424 private schools<sup>16</sup> in the country.

## 7 Solutions provided to address the challenges

Over the difficult period of time, the following measures were taken to address the different challenges:

- Alternative plans were developed by the school teachers and NGOs to ensure compliance of iron supplementation during breaks in the school schedule. The practice of taking iron tablets home with full instructions for their use was initiated by the schools when long general strikes and school closings were expected. The SHN

<sup>14</sup>Draft SHN/Watsan endline report, 2009, not yet completed.

<sup>15</sup>SC/US Global Education Indicators and SHN global reach data, 1999-2009.

<sup>16</sup>Flash I report 2007-2008 Annexes, May 11 2008

program orientation was provided to parents so that they were aware of the iron supplementation, deworming and other services provided through the SHN program.

- A national-level SHN program orientation was conducted to sensitize policy makers, planners and implementers from the central to community level. The SHN network group agreed to conduct workshops regularly where all stakeholders were invited to share a description of their program, lessons learned and evidence-based best practices of the SHN program.
- Discussion of the role of private schools in the SHN program was planned in the SHN network group and recommendations regarding their inclusion will be made to the NSHNAC.

## **8 Recommendations for future directions of the program**

With continued efforts by the government and the stakeholders, progress is being made on the implementation of the SHN program nationwide. In addition to this ongoing effort, exploring the following areas would improve the program in Nepal:

- Continue advocacy of the program to donors, policy makers and planners to scale up the program nationwide.
- Pursue monitoring and evaluation of the program through developing indicators and including them in either the Health Monitoring Information System (HMIS) or the Education Monitoring Information System (EMIS).
- Work with the Curriculum Division, Department of Education to incorporate the SHN program into the school curriculum.
- Research effectiveness in the local context:
  - Cost analysis of the program by each intervention to understand the cost for planners and donors internally and externally.
  - Impact on educational outcomes
- Involve private schools to reach all school children of Nepal. The private schools are run by the different associations therefore implementing the SHN program in the private schools may require different approaches than traditional techniques or responses.