

PROGRAM FACT SHEET

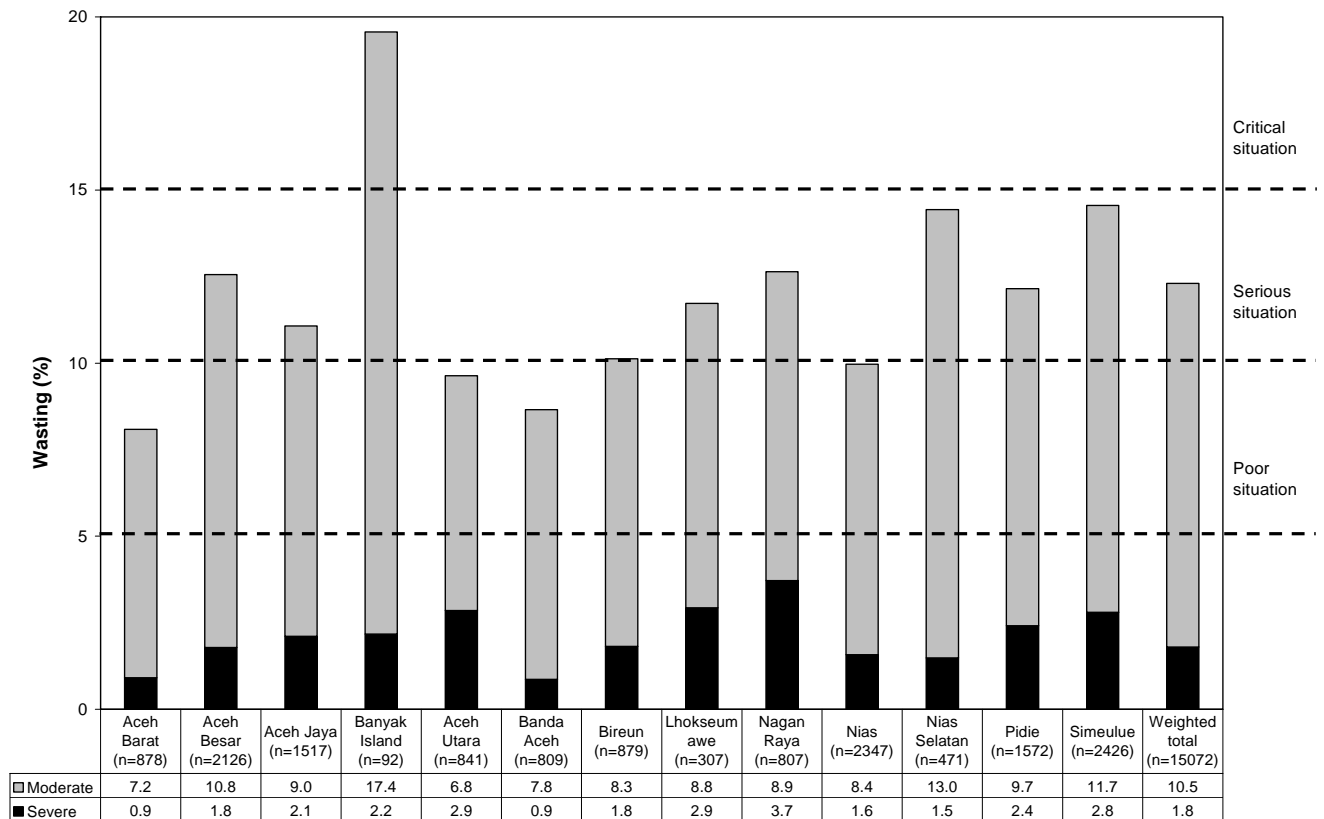
SUPPLEMENTATION WITH MICRONUTRIENTS (SUM) / ACEH / NORTH SUMATRA

Prevalence of wasting among 6-23 mo old children affected by the tsunami warrants additional efforts such as therapeutic feeding and provision of complementary food

The aftermath of an emergency warrants regular and thorough assessment of the food security and health situation in order to be able to address emerging needs. HKI, together with the GOI, several NGO partners (including Terre des Hommes, SurfAid, CARE, Plan International, CWS) and UN partners (WFP, UNICEF) implements the SUM program, which provides children and adults with vitamins and minerals to save lives, prevent disease and improve health and wellbeing. As part of the SUM, the health and nutrition situation is being monitored in order to assess the need for vitamins and minerals as well as for interventions that may be beyond the reach or scope of the SUM program.

One such condition included in the monitoring is wasting, or too low weight for height, which indicates recent weight loss, due to an inadequate intake of food often combined with illness that causes further weight loss.

Figure 1. Prevalence of severe and moderate wasting (WHZ-score <-3 and between -3 to <-2 SD, respectively) among children aged 0-59 months affected by the tsunami, as observed between 13 Jan – 12 Aug, per district.



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Design and Data Collection

Between January 13 and August 12, more than 570 camps in 13 affected districts were visited. The vast majority of these were officially listed camps, while some were not listed but encountered by the data collectors. Data from Simeulue and Banyak islands (part of Aceh Singkil district) were collected as HKI joined the outreach by SurfAid International teams to affected coastal communities. Some of the so-called 'camps' were in fact villages that accommodated survivors within host families. At each camp, all children aged 6 mo – 12 years receive a vitamin A capsule (unless they already received one in the last distribution round of February or August, whichever was applicable) and a 30-days supply of sprinkles. Zinc tablets as adjunct for diarrhea treatment are left at the clinic. From all children younger than five years (n=15,500), anthropometric measurements were taken and the prevalence of diarrhea on the day of interview and in the preceding week was assessed.

The monitoring and evaluation was conducted by 53 Indonesian data collectors. Initially, HKI recruited data collectors with 1–5 yrs experience working for the GOI-HKI Nutrition and Health Surveillance System (NSS) in other parts of Indonesia,ⁱ and who are graduates of schools of dietetics, agriculture or related fields. Gradually, members of the Acehnese population with a similar background began to be recruited and trained for this work. At the moment, of the 53 personnel in HKI's field teams for monitoring and evaluation, 47 are Acehnese.

Weight was assessed using an AND scale (Tokyo, Japan), height with a microtoise (for children aged 24 mo and older) or a length board (for children aged <24 mo old). Quality of the data collected is assured through various measures, including careful selection and training of data collectors, close supervision in the field, quality checks of anthropometric data per data collector, and automated validity checks of values during data entry. Data collectors who are found to perform unsatisfactorily are either retrained or dismissed, depending on the level and nature of their poor performance.

ⁱ S. de Pee, E. Martini, R. Moench-Pfanner, M.A. Firdaus, A. Stormer, S. Halati, M. Sari, J. Palmer, S. Kosen and M.W. Bloem (2004). Nutrition and Health Trends in Indonesia 1999 – 2003. Nutrition & Health Surveillance System. Annual Report 2003. Jakarta, Indonesia: Helen Keller International.

Prevalence of wasting by district

Figure 1 shows the prevalence of wasting by district, for each of the 13 districts where the SUM program is being implemented. In the reference population, the total prevalence of wasting (any children with WH Z-score < -2 SD) is less than 2.5% and under normal circumstances in Indonesia this is ~3-7%.⁽¹⁾ At present, the prevalence of wasting among the IDPs younger than five years in the tsunami and earthquake affected districts of Aceh and North Sumatra ranges from 8-19%. In 8 districts, the prevalence is serious (>10-15%), in 1 district critical (>15%), and in 4 districts poor (>5-10%).⁽¹⁾

The observed overall prevalence of wasting of 12.3% is very comparable to that found in the assessment by UNICEF/CDC among surviving children aged 6–59 mo in Aceh province, mid-January, of 12.7%.⁽²⁾ And the Rapid Nutrition Assessment by GOI/UNICEF that was conducted among the population of tsunami-affected districts in Nanggroe Aceh Darusalam in March, which was composed of 10% of IDP families, 8% of host families and 80% of households living in the affected districts but themselves not affected by the tsunami, found a wasting prevalence of 11.4% among children aged 0–59 mo.⁽³⁾

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A further in-depth assessment of the severity of wasting, the age groups most affected, the districts with the highest estimated numbers of wasted children, and trends of prevalence since the tsunami and earthquake near Nias, follows below.

Severe and moderate wasting

In all figures in this fact sheet, a distinction is made between severe wasting (WHZ-score <-3 SD) and moderate wasting (WHZ-score between -3 ; <-2 SD). In emergency operations, the cut-off for severe wasting is used to identify children that are in need of therapeutic feeding in order to avoid death and to restore health. Most of these children need not just extra food, but liquids and foods of special composition (appropriate electrolyte balance, high energy density) as well as medical care, and are best admitted to a special therapeutic feeding centre to be treated rather than receiving treatment to be provided at home. Without such special care, these children are likely to die. The children with moderate wasting are at risk of becoming severely wasted and need foods of appropriate composition, both macro-nutrients (protein, fat, carbohydrates) as well as vitamins and minerals, in order to restore or maintain their health and increase their body weight. Figure 1 shows that 0.9-3.7% of underfives per district were severely and 7.2-17.4% moderately wasted.

As of yet, vitamins and minerals are being distributed for all children aged 6 mo – 12 years (multi-vitamin/mineral sprinkles, vitamin A capsules and zinc as adjunct for treating diarrhea) and food aid, including iron-fortified soy sauce, is provided for the entire population. Some therapeutic feeding centers have been set up in Aceh, with CARE and UNICEF support the IMCI training. Seven out of 13 affected districts (Banda Aceh, Pidie, Bireun, Lhokseumawe, Aceh Timur, Aceh Barat, Aceh Selatan) have therapeutic feeding centers set up in general hospitals, and they have trained all *puskesmas* in these areas.

Estimate of total number of children wasted

Based on the estimated total size of the IDP population in the 13 affected districts and the observed prevalence of wasting among underfives, an estimate of the total number of severely and moderately wasted children can be made (see Table 1, page 4). For this it is assumed that the proportion of underfives in the population is 7%, which is lower than the 10% observed under normal circumstances, and based on the fact that proportionally more young children lost their lives during the tsunami. Based on this calculation, 1000 children aged 0-59 mo are severely wasted and 5600 are moderately wasted. The largest numbers of affected children are found in districts with a high prevalence and/or a large population of IDPs.

Age groups most affected and changes through time

A closer look at the prevalence of severe and moderate wasting by age group shows that children aged 6-23 mo are most affected, with 3.8% of children aged 12-23 months severely wasted and 17.3% moderately wasted (Figure 2, page 5). An assessment of the trend through time (number of months since the tsunami struck) among 6-23 mo old children (Figure 3, page 5) shows that the prevalence of wasting, including severe wasting, among 6-11 mo old children is increasing and that among 12-23 mo old children, particularly the prevalence of severe wasting is increasing.

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Table 1. Estimated total number of moderately and severely wasted children among the IDP population of 13 tsunami-affected districts, based on estimated population size and observed prevalence of wasting

	<i>Estimated number of IDPs^a</i>	<i>Estimated number of underfives (7% of all IDPs)</i>	<i>Severely wasted (WHZ-score <-3 SD, %)</i>	<i>Moderately wasted (WHZ-score -3; <-2 SD, %)</i>	<i>Estimated number severely wasted</i>	<i>Estimated number moderately wasted</i>	<i>Estimated total number wasted</i>
ACEH BARAT	72689	5088	0.9	7.2	46	365	411
ACEH BESAR	98223	6876	1.8	10.8	123	741	863
ACEH JAYA	40422	2830	2.1	9.0	60	254	313
ACEH SINGKIL ^b	24847	1739	2.2	17.4	38	302	340
ACEH UTARA	30510	2136	2.9	6.8	61	145	206
BANDA ACEH	49921	3494	0.9	7.8	30	272	302
BIREUN	49945	3496	1.8	8.3	64	290	354
LHOKSEUMAWE	2494	175	2.9	8.8	5	15	20
NAGAN RAYA	17040	1193	3.7	8.9	44	106	151
NIAS	24555	1719	1.6	8.4	27	144	171
NIAS SELATAN	205805	14406	1.5	13.0	214	1866	2080
PIDIE	81532	5707	2.4	9.7	138	555	693
SIMEULUE	71550	5009	2.8	11.7	140	588	729
Total, weighted	769533	53867	1.8	10.5	991	5645	6635

^a Source: *Satuan Koordinasi Pelaksana Penanggulangan Bencana dan Penanganan Pengungsi di Provinsi Nanggroe Aceh Darussalam/Laporan Harian 27 April 2005* and Nias IDP data from the Government of Indonesia

^b Aceh Singkil was particularly affected by the earthquakes near Nias at the end of March and data were collected from its Banyak Islands. The IDPs in the district are on these islands as well as near the coast.

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Figure 2. Prevalence of severe and moderate wasting (WHZ-score <-3 and between -3 to <-2 SD, respectively) among children affected by the tsunami, as observed between 13 Jan – 12 Aug, by age group.

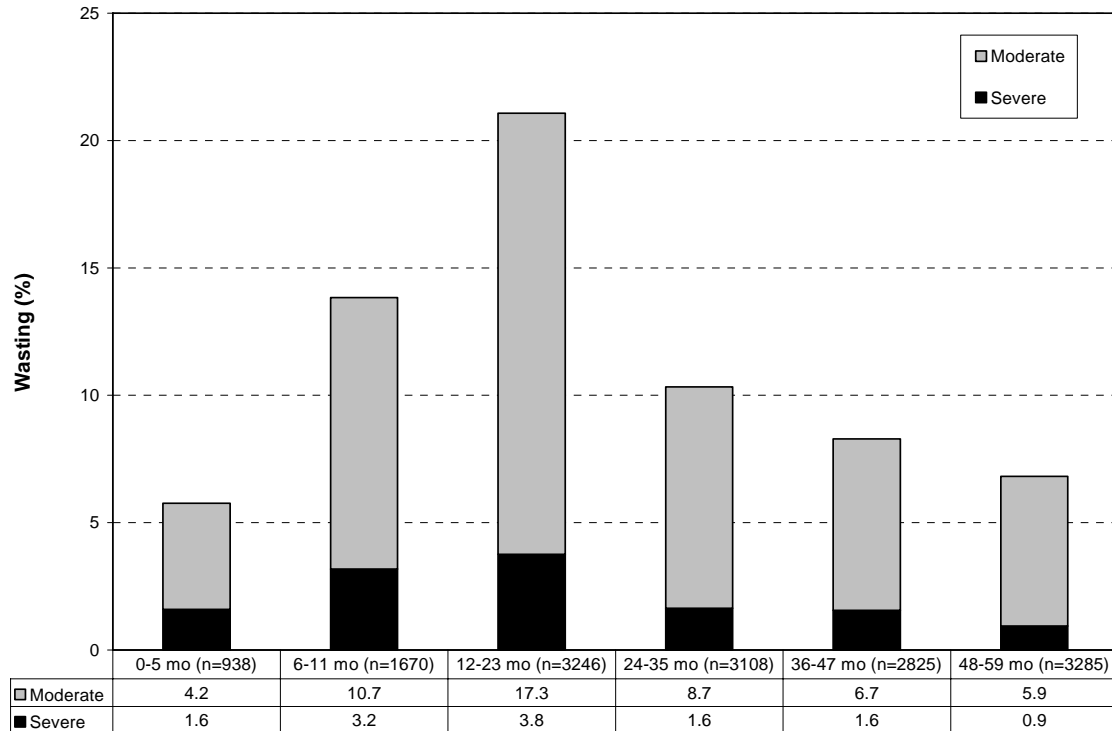
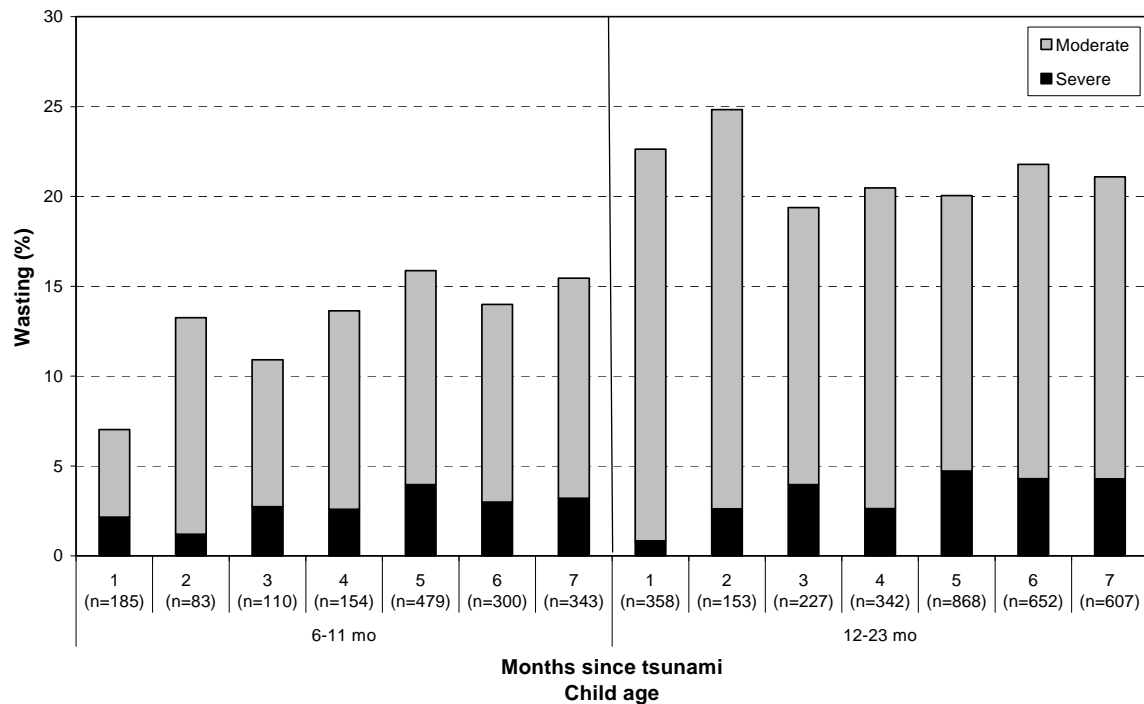


Figure 3. Prevalence of severe and moderate wasting (WHZ-score <-3 and between -3 to <-2 SD, respectively) by months since the tsunami struck among children aged 6-11 and 12-23 months affected by the tsunami.



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Figure 4. Prevalence of severe and moderate wasting (WHZ-score <-3 and between -3 to <-2 SD, respectively) by months since the tsunami struck (1-4 or 5-8) among children aged 6-11 and 12-23 months affected by the tsunami, in four selected districts.

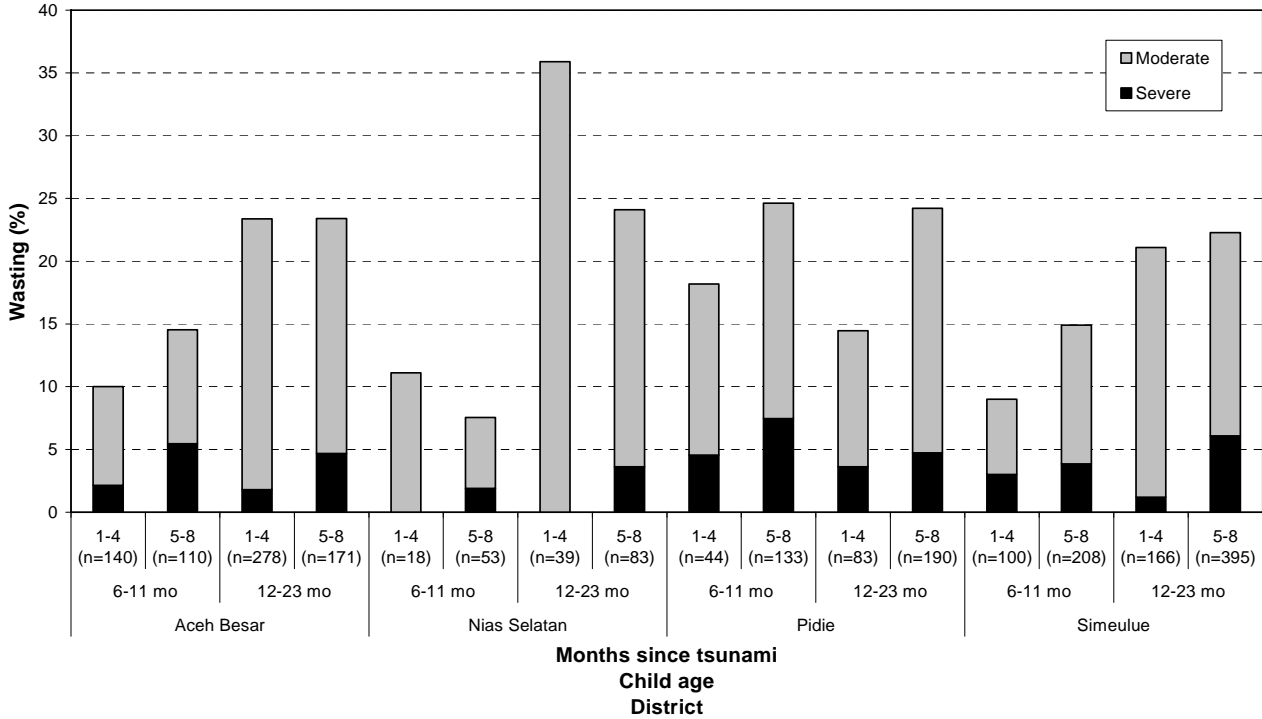
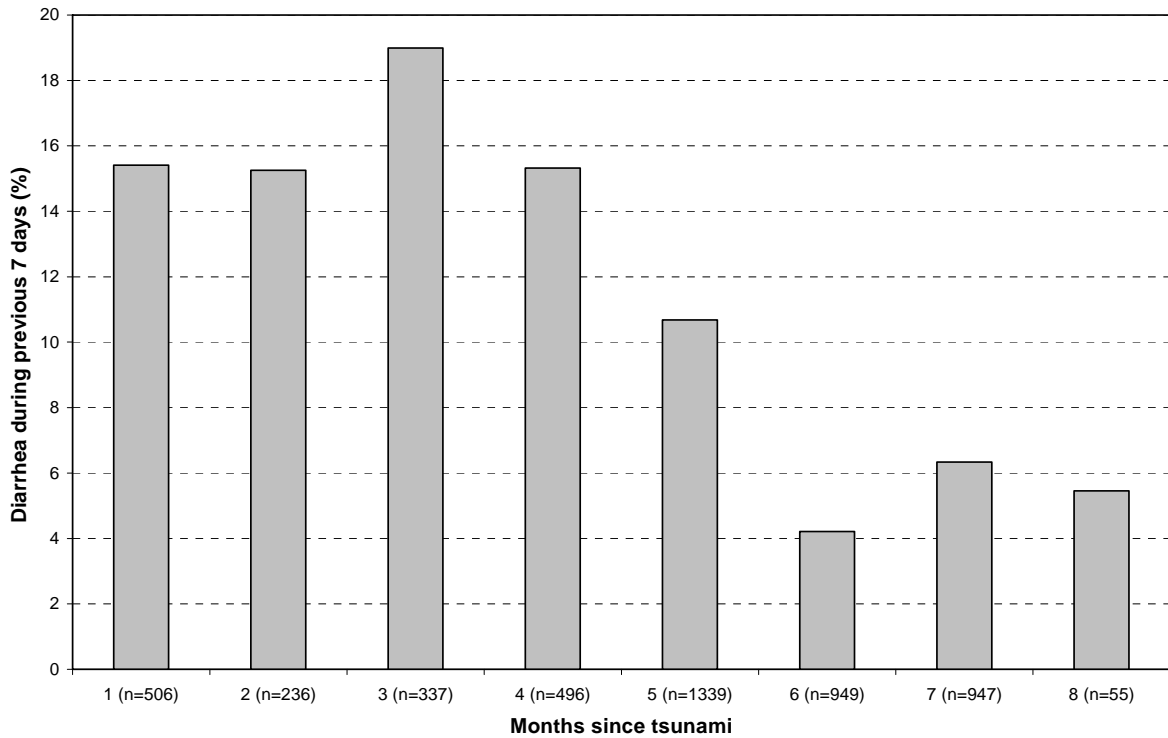


Figure 5. Prevalence of diarrhea during the 7 days preceding the interview among children aged 6-23 months affected by the tsunami, by months since the tsunami struck.



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For the five districts with an estimated total number of wasted children above 600 (see Table 1, page 4), we have also assessed the trend through time, comparing the first 4 months since the tsunami to the next 5-8 months (see Figure 4, page 6) and found an increase of prevalence, particularly of severe wasting, among all five districts and both among 6-11 as well as 12-23 months old children.

Notes

The data shown in this fact sheet are observational data that were collected among IDPs in 13 tsunami and earthquake affected districts between 13 January – 12 August 2005. Because no pre-tsunami data are available for comparison, it is difficult to judge how much of the wasting is due to the tsunami and how much is due to pre-existing and/or chronic food insecurity. A comparison with the data from the Rapid Nutrition Assessment by GOI/UNICEF in March, which was for 82% gathered from non-tsunami affected households of the same districts, and found a wasting prevalence of 11.4%, suggests that the problem of wasting is not limited to just the IDPs. While that survey found the prevalence of severe wasting to be below 1% for some districts and above 1% for others, the data reported in this fact sheet found a prevalence above 1% in 11 out of 13 districts. This suggests that the problem of severe wasting may be higher among the IDPs. However, reports of cases of severe malnutrition have also emerged from other areas of Indonesia (West Nusa Tenggara, East Nusa Tenggara, South Sulawesi etc).

An analysis of the prevalence of diarrhea during the seven days before the interview among 6-23 mo old children revealed that the prevalence has decreased from 15-19% to 4-6% (see Figure 5, page 6). Therefore, it appears that the increase of particularly severe wasting is more likely due to a lack of enough and appropriate food rather than to an increased prevalence or severity of disease.

In summary, the data reported here are not to be used to determine causes of the high prevalence of wasting, particularly severe wasting, or of the inadequate consumption of appropriate food, but are meant to stimulate action to save the lives of vulnerable children in affected areas.

CONCLUSIONS

1. The prevalence of wasting, in particular severe wasting, among younger children affected by the tsunami and by the earthquake near Nias is very high. Children aged 6-23 months are most affected.
2. Over the past 8 months since the tsunami struck, the prevalence of severe wasting has increased.
3. The total number of severely wasted children is estimated to be nearly 1000 and the number moderately wasted is approximately 5600.

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RECOMMENDATIONS

Because of the highly increased risk of death among wasted children, interventions should prioritize providing sufficient food of appropriate quality to young children.

1. While the multivitamin/mineral sprinkles, vitamin A capsules and zinc tablets as adjunct for diarrhea treatment, provide a good supply of vitamins and minerals that are necessary for preventing and reducing morbidity as well as mortality, children should also receive 3-4 energy-dense meals per day.
2. For the severely wasted children, therapeutic feeding centres should be set-up together with screening and referral facilities.
3. Continued assessment of the health and nutrition situation among the population of the tsunami and earthquake affected districts, including both those directly and those not affected by the tsunami and earthquakes, should be undertaken.

References

1. WHO (1995). Physical status: the use and interpretation of anthropometry. Report of a WHO expert committee. WHO, Geneva, Switzerland.
2. Mokdad AH (2005). Rapid Nutrition Assessment Banda Aceh and Aceh Besar, Sumatra, Indonesia. January 17-19 2005. UNICEF/CDC.
3. Ministry of Health of Indonesia/UNICEF (2005). Rapid Nutrition Assessment in Tsunami-Affected Districts in Nanggroe Aceh Darussalam. Presentation given at Ministry of Health, Jakarta, 20 April 2005.
4. *Satuan Koordinasi Pelaksana Penanggulangan Bencana dan Penanganan Pengungsi di Provinsi Nanggroe Aceh Darussalam/Laporan Harian 27 April 2005*

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