Nutrition, Food Security and Health:
Linkages and Lessons from the Asian Tsunami Relief Response

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Although a lack of food (in absolute terms) is not usually the immediate cause of death of today’s humanitarian emergencies, much crisis-related mortality can be ascribed to a lack of appropriate foods where key nutrients are concerned. It is the interaction among nutrient deficiencies, disease progression and trauma that matters. Since malnutrition is a major determinant of mortality food-based interventions play a role in saving lives through their impact on the nutrition and health of affected and at-risk populations.

This paper seeks to answer the 4 questions outlined for this session, with a focus on food security and nutrition:

- Emergency Needs Assessments. Did they go beyond a focus on food aid requirements? [Q1]
- How was nutrition and morbidity information used in assessments? What was national ownership of such data? [Q2]
- Nutrition-related relief responses—what was done? Did it go beyond saving lives? [Q.3]
- Lessons learned. Challenges and issues relating to nutrition in this context [Q4]

Food Aid and Nutrition
There are many forms of foods and food rations that contribute directly to the treatment of acute malnutrition and/or prevention of population wide nutritional deterioration. Some of these were very much in evidence in the food responses to the tsunami disaster, and contributed directly to the minimization of any nutrition crisis, and the successful avoidance of serious disease outbreaks (including micronutrient deficiency disorders).

Emergency Needs Assessments (ENAs)
The goals of the numerous ENAs initiated across the Indian Ocean region (from Myanmar to Somalia, not just Indonesia and Sri Lanka) were essentially as follows:

- Provide an understanding of the impact of the disaster on food security and analyze the profile and livelihoods of the different groups of population affected;
- Define the food security and nutrition needs of these groups, integrating issues related to household livelihoods and asset security;
- Provide recommendations on response options and follow-up actions in preparation of recovery activities.

In other words, while always focused on food security issues (as per WFP’s mandate), these ENAs also explicitly explored nutrition, health, income sources, breast-feeding practices, availability of clean water, sanitation arrangements, population displacements and need for shelter, sources of aid,

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coping mechanisms, etc. In each case, rapid assessments were to be followed by more in-depth assessments in subsequent months, important for establishing baselines for results reporting, and refining the scope, scale and duration of various relief and recovery options.

For the ENAs, common methods were sought across the countries assessed (Indonesia, Sri Lanka, the Maldives, and Myanmar). Sample frames certainly differed, based on need, timing, resources and focus. Thus, **ENA in Sri Lanka** was a large affair, conducted jointly by WFP and ILO with support from the government, and again a separate, largely autonomous nutrition survey was carried out. The **Aceh ENA** was much smaller, based on 72 household interviews at 18 sites (4/site), plus 20 group discussions, and many interviews with district administrators or other officials. The sites were stratified according to, a) livelihood typology, type of habitation (IDP camps, villages, urban wards), and distance from the coast (1 km, 1 to 10km, >10km). Unlike the WHO/Lincoln assessment, it included sites on the north coast where livelihoods were impacted and many IDPs congregated. One cannot under-estimate the importance of having well-training enumerators, and the time to have extended discussion within households (teams spent entire days at some sites, not just a few hours). Separate nutrition surveys were conducted by numerous organizations.

**What did the ENAs cover, and what did they find?**

One of the questions raised was ‘how did ENAs address food insecurity besides focusing on food aid requirements?’ The ENAs don’t only look at impact on food supply; far from it. They dealt with impact on assets and livelihoods, documenting loss of income through various sectors of activity (be it fishing, farming or retail trade), and loss of assets. Interestingly in Aceh while farming and trading may have been worst affected in absolute terms, in relative terms there were 100% losses in formal business and fishing among those interviewed.

The secondary impacts on markets and prices were also assessed. Naturally, the destruction of road and port infrastructure curtailed or stopped normal trade resulting in 80 to 225% increases in prices for various goods (depending on location, post-tsunami demand and size of pre-existing stocks). Food prices, and sanitary products (personal hygiene as well as cleaning agents) were among the worst affected. There was an immediate impact of this on food consumption patterns. An assessment of dietary intake through 24 hour recall indicated that in Aceh 15 % of households were eating only 1 meal/day at time of interview (up to 3 weeks after the shock) while another 30 % were only eating 2 meals/day. The foods that were most curtailed (not consumed regularly after the crisis), were fish, meat and other animal products (which are in fact good sources of micronutrients).

The assessments also considered demographic impact (deaths and displacement of household members) as well as morbidity. While major epidemic outbreaks were avoided, there was obvious increase in ARIIs, diarrhoea and fever, but mainly among camp-based IDPs, and in those camps least served with clean water and sanitation. It was not a lack of food. Attempts to provide clean water succeeded within Banda, but were limited outside.

The resultant nutritional status of affected populations was assessed in parallel to the main ENAs. In **Indonesia** it was found that wasting was rising (but this was not a representative sample). Surveys by NGOs (including HKI) found roughly similar levels of wasting in and around Banda
Aceh, while additional surveys on the islands of Nias and Simeuleu (N=375) found higher levels of wasting (among children 12-24mo rather than 6-59)—in the range of 23%. In Sri Lanka WHO was not, apparently, receptive to the nutrition survey (they were invited but did not participate). Full results are still being awaited.

In Aceh, UNICEF, WHO and WFP linked with GOI to establish a more representative baseline on nutrition and health, that would also link with food security indicators, and serve as a platform for more regular surveillance and feedback. The baseline conditions found high anemia but wasting generally less than 12%.

**Constraints to the ENAs**

These were unusually difficult conditions in which to work. While WFP’s ENA in Darfur and the national nutrition survey in North Korea, some months before both were difficult, this one had many dimensions to it. Including, **Logistics** (a lack dedicated helicopter assets (USS Lincoln’s ‘displacement’ effect), road conditions (including loss of hundreds of bridges), and a lack of office and sleeping quarters; **Human Capacity** (national staff were overwhelmed; finding good multilingual, numerate enumerators was not easy at short notice; lack of institutional capacity to support this kind of quick action); **Insecurity** (many aspects of personal insecurity, which also affected the representativity of surveys, and hence findings).

**The Relief Responses**

WFP’s case load for the main operations stands at around 900,000 beneficiaries. The logistics of getting appropriate foods to such large numbers when roads/bridges are still washing out in the season’s heavy rains is extreme. WFP’s role as lead agency in UNJLC allowed for at least some form of coordination, but this was not always easy. The sub-marine topography has also changed, making delivery to shore by boat very hazardous (one boat lost off Nias recently).

There are, at least for WFP, clearly defined phases to the response, each involving a variety of intervention modalities for different periods of time. Many of the operations seek to combine nutritionally-sound food with rebuilding schools (WFP-UNICEF), with multiple micronutrient distribution (WFP-HKI-UNICEF), with building institutional capacity for surveillance and distribution of fortified foods to pregnant women and infants. The provision of clean water is essential, and in fact the IDP and IDP-host households appear to be receiving more of what they need. But ‘non-affected’ families may be losing out!

**Lessons Learned**

What was done well? A few positives. First, there were serious attempts at inter-agency cooperation which often worked (UNICEF/WHO/WFP cooperation that also included HKI, SCF etc). Indeed intra-sectoral communication and coordination was good. But that begs questions about where nutrition should sit, since it is not a sector. The ENAs clearly crossed sectoral boundaries; as a result information and resource sharing was not possible since water people did not meet with health people who did not meet with food people.

Secondly the importance of micronutrients was very much at the fore. The relevance of seeking to prevent disease as well as VMD disorders both through supplements and foods was widely
discussed and quickly acted on. Fortified foods as well as supplements got in fast and we sometimes distributed as complements.

Third, the ENAs were truly multi-issue assessments, not simply focused on health only, or food only. This meant that a much more nuanced picture emerged quickly, and many different organizations could act on the results. And indeed they did, which is the fourth positive. There was fast response to defined needs, resulting in few post-crisis deaths. This is important to recognize, and the skills used should be a platform on which to build the recovery.

On the flip side, many problems remain unresolved. First, there were too many cries for help that did not emanate from ground zero. Over-dramatizing the situation led to a huge waste of human and other resources. The flood of medical personal and inappropriate medical resources into Aceh (at least) threatened to overwhelm living conditions, transport capacities, and the functioning of the airports. This also implies that we should not prejudge conditions. While Aceh, for example, was a ‘closed province’, many assumptions were made about the effects of protracted conflict that were not borne out on the ground.

Secondly, the role of military assets, including the USS Lincoln needs to be carefully re-assessed in light of information gained vz. its cost (given that much more and much richer data of the same kind was available at the same time from other sources), and its displacement effects on other assessments. What did the other agencies get out of it that they did not get from other ENAs?

Third, in future can purposive sampling of food and livelihood security assessments be combined with the more rigorous statistical sampling used in nutrition and mortality surveys? Even when small numbers of children were measured in accessible camps in one part of one district, those data were immediately cited as if representative at a province-wide level for all affected populations (including those not in camps). We need to find ways to better coordinate ahead of crises, on what to measure, how, and when. We also need to find ways to better embed nutrition surveys into broader livelihood surveys. Done in parallel they can inform each other, but done using separate sampling universes with separate sample frames (and time frames) there are many questions about what nutrition data actually mean when set against dietary recall data from another district.

Fourth, much better screening of incoming health/food materials was needed to prevent a huge waste and an overloading of logistics facilities (such as the military airport in Banda Aceh). Far too many unsolicited items showed up, including fancy scanning equipment, prosthetics, vast quantities of drugs of dubious use, and inevitably, milk powder and infant formulas that often contravened the international code of marketing of breast-milk substitutes. In other words, systems were needed at the outset to screen incoming the incoming tonnage of material that still had to be off-loaded and stored, even if the only users were bored soldiers on the tarmac.