ACUTE FOOD INSECURITY IN MEGA-CITIES: ISSUES AND ASSISTANCE OPTIONS

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1. Introduction

This paper focuses on acute food insecurity[1] as a contributing factor to disasters in mega-cities, cities of more than one million inhabitants (Mitchell:14). The case is presented that food insecurity can be a significant risk for some mega-cities, that this risk can transition to a state of disaster due to natural or political conditions, but that food insecurity is not usually considered as a cause or consequence of disasters in mega-cities, and that mechanisms for responding to food disasters in mega-cites are not well developed. The paper also reviews how the nature of a mega-city impacts the assessment of food security conditions and the provision of assistance in response to acute urban food insecurity. A summary of a project in response to a food crisis in Jakarta is presented to highlight unconventional mechanisms which can be used to deliver food aid in a mega-city. The paper concludes with suggestions on how monitoring and responding to food crises in mega-cities can be improved.

Relatively little attention has been give to acute food security problems and disasters in large urban populations. This paper provides a starting point for further discussions on improving the resistance and resiliency of mega-cities to acute food insecurity. The material presented in this paper is based on cited sources and the author's work in assessing food security conditions in the mega-cities of Luanda, Port au Prince, Yerevan, Monrovia, Lagos, and Jakarta, and involvement in food needs assessment and food aid operations in rural and urban settings over the past 22 years.

[1] Acute food insecurity is where individuals rapidly lose access, from production, purchase or non-commercial sources, to sufficient food for normal life. Famine is when this access has been lost and lives are in immediate jeopardy. Famine is a failure of supply, coping and relief options. Acute food insecurity is the condition before this failure occurs.

Acute Food Insecurity in Mega-cities: Issues and Assistance Options

economic crisis and political conflict (Peta), underline how threats to food security can result from, or contribute to, disasters in mega-cities.

Specifically in the case of conflict disasters, the links with acute food security can be two-way and reinforcing. As Bonnard points out, real famine may be "an unlikely outcome of urban food insecurity . . . famine is replaced with riots and mayhem . . .

finished products on hand,
- At the commercial level, where retail outlets have only a few days stocks on the shelf, and,
- At the family or personal level, where stores of food are not kept against supply shortages.

Disruption of this tight supply system at any level can lead to consumer shortages and increasing prices. For the poorer mega-city residents, with limited income and limited supplies of stored food, market shortages and increased prices will have an immediate impact on food security.

An additional factor contributing to acute food security problems for mega-cities is that rural areas around mega-cities may have limited food reserves. If large numbers of urban residents displace from a mega-city they take their demand for food with them to destination areas which themselves may be food insecure. Perversely, residents fleeing a mega-city food crisis may, like plague victims, take the disaster with them.

Finally, urban agriculture and livestock production contribute to urban food security, in some cities significantly (see Mougeot). At the same time, it is unlikely that urban agriculture can quickly produce the volumes of food needed to sustain mega-city populations during periods of quick-onset acute shortages. Similarly, the large scale selling off of livestock for income with which to buy food in response to decreasing supplies and increased prices will likely result in an oversupply on the market and falling livestock prices. Thus, while urban agriculture may serve as an important supplementary source of food (e.g., Vitamin A from vegetables), it does not appear to be a complete solution for acute urban food insecurity.

4. Defining Acute Urban Food Insecurity

Defining food security and identifying vulnerable populations in urban areas can be exceedingly difficult. Simple self-identification, e.g. people protesting high food prices, is not generally considered credible.

Bart and Bonnard separately discuss a number of approaches to defining and assessing urban food insecurity. Several of the key challenges faced in using these approaches to assess mega-city food security are discussed below.

The initial challenge in using standard food security assessment methods is that many of these methods, such as focus meetings, price and income surveys, and drive-by surveys, are more expensive and administratively more demanding in urban areas. This cost and workload

combination has two impacts. First, it tends to make assistance organizations (which are usually resource-poor) shy about committing limited resources to working in urban areas.

Second, it tends to push assessors to draw the greatest conclusions from the least amount of work. Together these impacts make it likely that urban food security assessments collect less data in proportion to population size than in rural areas, run a greater risk of misstating the severity of food security problems and do not contribute significantly to the accurate targeting of assistance when it is provided.

Another challenge to assessing mega-city food security is that these cities are often demographically fluid. Mega-cities can absorb large numbers of people in short periods without the obvious indicators, such as camps, found in rural areas.

In a similar way, large numbers of people can move out of one part of a city to another, seemingly with little advance warning and in response to ill-defined triggers, such as rumors of fighting. Monitoring and measuring the impact of this fluidity, and its causes, is an important but difficult part of understanding food security and vulnerability.

Defining food security parameters is further complicated by the multiplicity of ways in which urban residents make a living. Not only are there a great range of opportunities in urban areas, but the ability of individuals to move from one profession to another (e.g., construction laborer to hawker or sex worker to seamstress) is much greater than in rural areas.

One of the most complex challenges in understanding food security in a mega-city comes from the city's high density and heterogeneous geography of wealth and poverty (Kelly 1995, 1997). Mega-cities can contain tens of thousands of people in small physical areas. In many mega-

is that a large portion of an individual's available assets is used for food security. This makes wealth ranking[3] a useful tool in defining who has insufficient wealth to sustain a minimum food intake, and thus could be targeted for food aid.

In a mega-city, using only three or four wealth groups (e.g., very poor, poor and wealth) can lump tens of thousands of people into one group. Using more wealth groupings results in groups with smaller absolute numbers, but can create far too many groups to be useful for monitoring or targeting assistance.

Wealth ranking is further complicated by the fact that the range of expenditures in an urban setting is potentially greater than in a rural setting. Urban residents need to pay for water, housing, protection and a number of other legal and extralegal costs which are not present, or not paid directly, in rural areas.

In an urban area, it may be the proportion of wealth which goes to food and other basic needs which is the better indicator of food security. But collecting expenditure information is much more complicated than wealth ranking and not likely to be possible on a large scale in a crisis-affected mega-city.

Finally, mega-cities seem to generate new problems, adding new poor to old poor. This was the case in Jakarta in 1998. A group of officially poor existed and was well documented.[4]

However, the economic crisis, which began in late 1997 and resulting layoffs in 1998, created a new group of poor, the "newly disadvantaged",[5] principally composed of construction, factory and service workers and some professionals who had lost work when major segments of industry ceased operations and many banks went into a state of suspended animation.

This group, while not as asset poor as the officially poor, was faced with poor prospects for re-employment (due to the overall economic collapse), limited official access to private or state-financed welfare support, and a resulting need to mine assets to maintain food security and cover other needs (e.g. health care, education).

[3] The process of segregating populations into groups of relative poverty and wealth.

[4] The official poor were enumerated by the Indonesian government and received regular welfare-type benefits.

[5] Coined by the World Bank in Indonesia and used widely to identify those affected by the economic crisis.

Acute Food Insecurity in Mega-cities: Issues and Assistance Options

Disaster Studies Working Paper 7

Acute Food Insecurity in Mega-cities: Issues and Assistance Options

Disaster Studies Working Paper 7
Benfield Hazard Research Centre

way around.

Unfortunately, food for work and supplementary feeding are not a cure-all for a mega-city affected by acute food insecurity. Simply put, the scale of a food for a work program targeted to

concessional financing. Donor governments also took the risk of food shortages seriously and embarked on a variety of food assistance programs, targeted at rural populations most likely to be affected by production shortages. While the El Niño related drought created a serious risk of food shortages, the problem gained sufficient attention and generate sufficient response. Aside from early problems in physically isolated parts of Irian Jaya, large scale severe food insecurity was avoided.

The food security safety net weakened considerably in mid to late1998, as Indonesia's economic system began to fall apart concurrently with a pained sueaker1.0/sgtna98, as Indonesia

affecting a sizable part of Jakarta's population,[9] and that this impact needed to be addressed to avoid a loss of the progress which had been made in Indonesia in improving nutritional status and general welfare.

5.3 Mainstream and Alternate Responses

As the economic crisis worsened, the Government of Indonesia (GOI) and donors agreed to continue a number of mainstream food security programs, including subsidies of rice and other

Acute Food Insecurity in Mega-cities: Issues and Assistance Options

Food industry sources in Jakarta indicated the wheat could be used to produce packaged noodles. While rice is the major cereal consumed in Jakarta, market research by food production

Geographical Union, Seoul.

von Braun, Joachim, John McComb, Ben K. Fred-Mensah and Rajul Pandya-Lorch (1993), Urban Food Insecurity and Malnutrition in Developing Countries: Trends, Policies and Research Implications, International Food Policy Research Institute, Washington (cited in Bart, op cit.).

FEWS (Famine Early Warning System) (1999), "Current Food Insecurity in Southern Africa for 1999/2000", FEWS Special Report, December 29, 1999 (SR 99-3), FEWS Project, Associates in Rural Development Inc., Arlington (also see www.info.usaid.gov/fews/fews.html).

Helen Keller (1999), Indonesia's Crisis: A Comparison of its Impact on Nutrition and Health in Urban and Rural Populations, Helen Keller Indonesia, The National Institute of Health Research and Development, Ministry of Health, Republic of Indonesia, Jakarta, August 1999.

Kelly, Charles (1995), "Assessing Disaster Needs in Megacities: Perspectives from Work in Developing Countries", Geojournal, Vol. 37 # 3, pages 381-385.

Kelly, Charles (1997), "Megacities and Disasters: Research Concepts and Practical Actions", Proceedings, International Conference on Natural Disaster Management, 11 to 14 October 1996, Merida, Venezuela.

Mitchell, James K. (ed) (1999), Crucibles of Hazard: Mega-cities and Disasters in Transition, United Nations University Press, Tokyo.

Mougeot, Luk, J. A., (1994) Urban Food Production: Evolution, Official Support and Significance (with special reference to Africa), Cities Feeding People, Report 8, International Development Research Centre.

Peta, Basildon (2003), "UN brings food aid to cities as Zimbabwe's plight worsens", Independent on Sunday (April 6 2003), located at Zwnews.com: http://www.zwnews.com/issuefull.cfm?ArticleID=6533.

Prettyman, David (2003), Personal Communications.

Rain, David (1999), Eaters of the Dry Season: Circular Labor Migration in the West Africa Sahel, Westview Press, Boulder.

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