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Linking Research and Action

STRENGTHENING FOOD ASSISTANCE AND FOOD POLICY RESEARCH

What Can Poverty Maps Tell Us for Food Assistance Programming?

Poverty maps are easily used, easily understood, and objectively verifiable. Using them for politically sensitive decisions, such as where to locate food assistance projects, is likely more acceptable than basing such decisions on obscure and complex or subjective criteria. Coupled with timely information on the occurrence of events that increase the risk of households facing food shortages, poverty maps can be used to map vulnerability to food insecurity.

Programmes to alleviate poverty and hunger are most effective when they provide assistance in those areas where the poorest reside. Historically, the ability to target such interventions was limited by the difficulty in obtaining information that would allow targeting on a local level. A recently developed technique in poverty analysis—**small-area estimate poverty mapping**—provides a method to estimate and map poverty levels for population groupings as small as 500 households. Can such maps inform the design, implementation, and evaluation of programmes to alleviate poverty and hunger?

Insights from IFPRI Research

Small-area poverty mapping takes advantage of the wealth of detail found in household surveys and the universal coverage of a census in order to estimate welfare levels for all households in the population.

Using data collected from the 2.2 million households enumerated in the 1998 Census, and information from the 1997-98 Integrated Household Survey, IFPRI researchers developed a poverty map for Malawi to calculate poverty measures for the approximately 850 local government wards in the country. The poverty map is used here to retrospectively assess how well the poor were targeted by WFP's food-for-assets public works projects in Malawi that had used Vulnerability Analysis and Mapping (VAM) to locate project sites in Malawi. To provide a benchmark for comparison, the same assessment of the targeting of the Malawi Social Action Fund's (MASAF) Public Works Programme projects was also done. The analysis demonstrates the potential contribution that poverty

into the VAM methodology itself, the basic information generation process used by WFP to guide its activities in the countries in which it works.

Using poverty maps to assess targeting and programme placement

The weighted mean poverty headcount and severity of poverty levels from the Malawi poverty map for the wards in which the WFP and MASAF public works programmes are located is compared to the same measures for those wards where programmes were not placed. As shown in the table at the *national scale*, both programmes are shown to do relatively well in targeting the poor and the poorest, although WFP is the more successful. WFP food-for-assets projects are selectively located in many of the poorer districts of the country, whereas the MASAF projects are found in virtually all districts and urban centres. Political considerations in the targeting of MASAF are likely to be at work reducing the efficiency of the targeting of the poor.

Program	Poverty headcount (%)			Severity of Poverty		
	Wards without projects	Project wards	Overall	Wards without projects	Project wards	Overall
WFP Food for Assets	63.1	69.7	64.3	0.151	0.185	0.157
MASAF PWP	63.1	67.0	64.3	0.152	0.168	0.157

Note: The higher the value, the more poor or the more severe the poverty is in an area.

maps can make for targeting food assistance. This consideration of the value of poverty maps is then extended to examine the manner in which poverty maps can be incorporated

At the *district level*, results are more mixed for a number of reasons. The two programs have multiple targeting criteria and, while poverty is a dominant concern, it is not their sole

concern. Other programme requirements may prevent projects from being located in the poorest areas. Poor communities may be less able to organize themselves to mount a project and thus be left out. The MASAF projects are selected from previously identified government projects, and the criteria upon which these were originally identified may not have included the incidence of poverty. Finally, the VAM vulnerability assessment used by WFP to target the food-for-assets projects is dynamic, responding to changing circumstances, whereas the poverty map used to assess poverty targeting efficiency here is a static representation of the distribution of poverty as of 1997–98 and so will present a different basis upon which to target the projects than the VAM.

Vulnerability analysis and mapping methodology

Parallel to its efforts at alleviating poverty, the Malawi government is committed to alleviating problems of food scarcity when they arise in the country. WFP, working with the Government of Malawi, has developed a VAM methodology for Malawi to identify populations most at risk of having insufficient food to meet their needs following agricultural production shortfalls or economic shocks.

There are opportunities for and constraints to incorporating the Malawi poverty map into the VAM as employed by WFP. Although poverty does not correlate perfectly with vulnerability, it is often used as a proxy. Poor households are less able to compensate for and respond to shocks. If one accepts that poverty is a good indicator of household vulnerability to food insecurity, the poverty map is a useful tool in locat-

ing vulnerable households. Moreover, poverty mapping analysis also provides measures on the depth and severity of poverty, which permits the identification of where the most vulnerable of these vulnerable households are found.

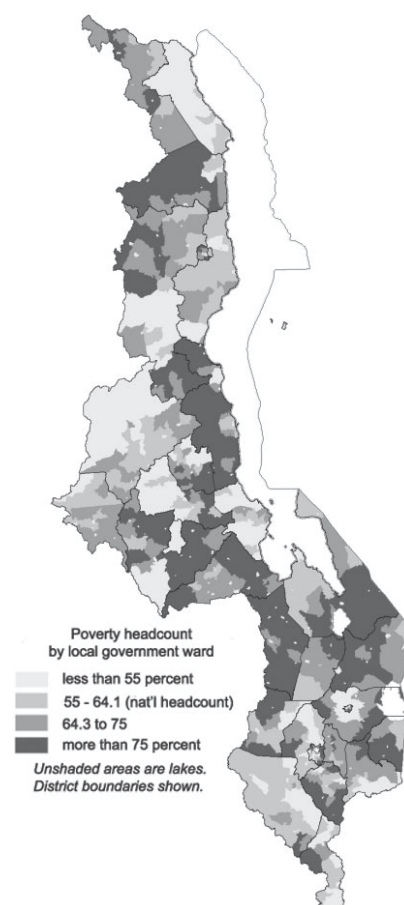
Implications for Food Assistance Programming

Poverty maps are easily used, easily understood, and objectively verifiable. Therefore, using them to make decisions of political consequence, such as the locations of public works projects, is more likely to be accepted than basing such decisions on obscure and complex or subjective criteria. The poverty map's local scale information on poverty permits its use for refined geographical targeting. If a poverty map exists for a country, and is judged reliable, it should be used. However, the maps are not easy and quite time-consuming to construct. Consequently, WFP should not devote its resources to their construction, but support other specialized institutions in doing so.

By itself, a poverty map will not meet all the targeting needs of WFP or other programmes geared towards targeting food assistance to the poorest. For example, poverty maps do not explain why conditions of food insecurity and vulnerability exist in an area or for a population, nor do they identify which sub-populations within a vulnerable area are most at risk. The poverty map does not provide much support to deciding which is the best action to take in the face of localized food insecurity. Poverty maps are not as flexible as one might desire, and cannot be used to track important seasonal changes in food security status and welfare, or demographic or educational attainment characteristics of a household—the

variables that are shown to be important correlates of household welfare in the poverty map models.

Consequently, poverty maps are best used in a complementary manner with short-term, temporal information. Rather than tracking changes in welfare or vulnerability, the important contribution that poverty maps can make to the VAM is in establishing baseline vulnerability. These kinds of baselines are key to determining what effect programmes are having on both hunger and poverty, as well as in providing the broader overview of national conditions necessary to identify those areas where additional information needs to be gathered and interventions are most likely to be required.



Todd Benson (2003) "Applications of Poverty Mapping to World Food Programme Activities in Malawi—Assessing the Poverty Targeting Efficiency of a Public Works Programme and Vulnerability to Food Insecurity," forthcoming, International Food Policy Research Institute, Washington, D.C. Contact author at t.benson@cgiar.org.

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