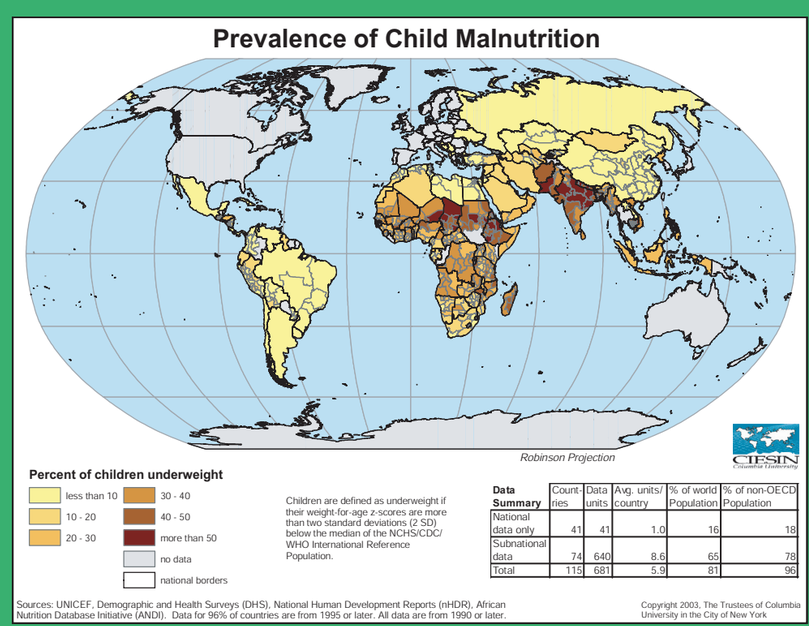
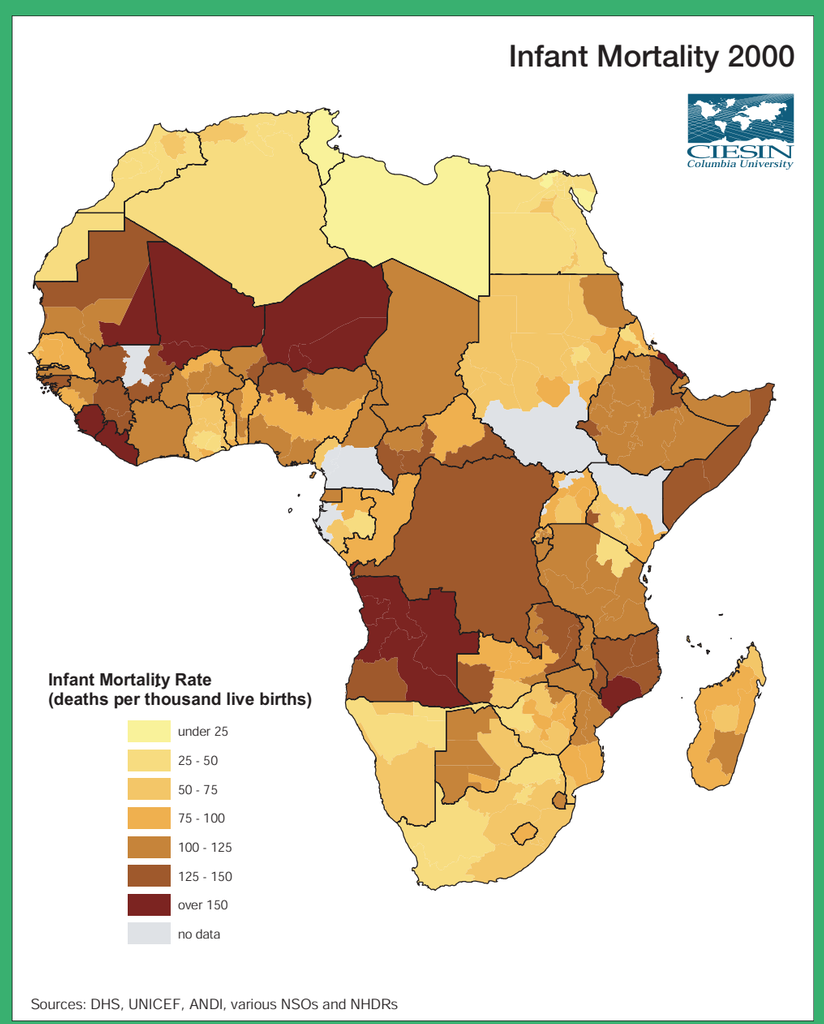
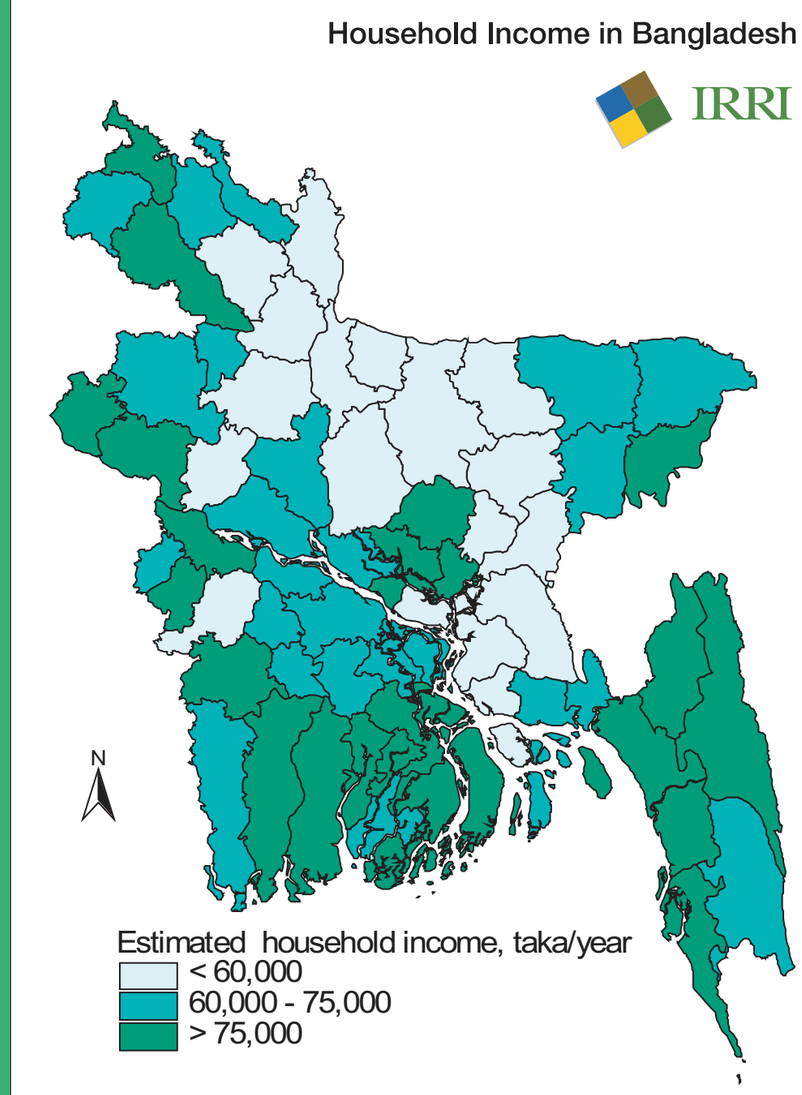
A review of 14 poverty mapping studies recommends that[1]:

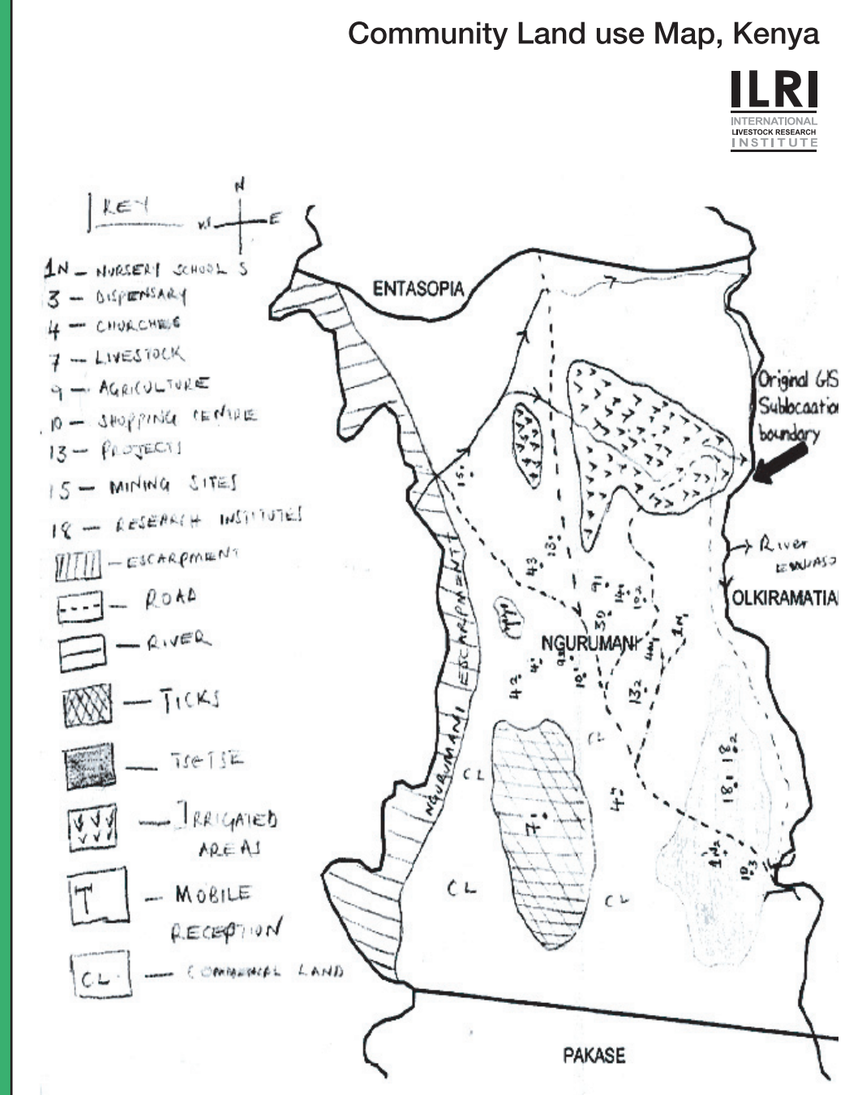
- Every country in the world should map the distribution of its poor
- Governments should sustain the technical effort and identify where capacities, infrastructure and skills are needed
- National legislation should support the distribution of poverty information to all those who want it
- Poverty mapping should be integrated into natural resource management and pollution control at the national and global level
- Research and development is needed to develop skills and techniques for tracking local and global change
- A long term strategy is necessary to support less developed countries in making regular poverty-environment assessments

1 Henninger, N., & Snel, M., 2002. Where Are The Poor? Experiences with the Development and Use of Poverty Maps. WRI and UNEP/GRID-Arendal, Norway.









Poverty Mapping:
A Tool to Improve Effectiveness of Agricultural Development Activities

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Each year the CGIAR invests US$360 million in research and development to alleviate poverty. Poverty mapping is a practical means to enhance the effectiveness of such efforts. With better information on where the poor are, on what drives poverty, and on what place-specific opportunities there are for interventions, we can diagnose poverty problems and target development solutions in agriculture, health, education and other sectors.

Poverty maps are spatial representations of poverty allowing exploration of relationships for example between economic and environmental or agricultural information. They enhance the understanding of what causes and compounds poverty, and can also highlight opportunities and priorities for development, such as areas of high agricultural potential or the need for access to markets.

Where are the poor?

Almost all sustainable development activities become more effective with better information about the location of the poor. We intuitively know where they are - on the outskirts of our crowded cities, in regions devastated by civil conflict, on lands marginal for agriculture, in areas where the natural resources have been depleted. Yet the larger international development community lacks a systematic and coordinated strategy for mapping and documenting the geographic dimensions of poverty and food insecurity. We know the country rankings for a range of poverty indices, but within-country distinctions between rich and poor remain out of our grasp. New global poverty maps with fine geographic resolution, showing such poverty indicators as infant mortality and GDP per capita, have attracted great interest, but more is needed. Although we have made many advances in measuring poverty, many new and innovative techniques and methods are unknown to the larger poverty mapping community or have not yet been adopted by national programs. There has been little effort to survey residents of local communities in efforts to acquire local knowledge on the dimensions of poverty.

What are the correlates of poverty?

Success in fighting poverty demands that we know what drives it and what strategies can alleviate, reduce, and ultimately eliminate it. In some areas, the declining quality of natural resources lowers agricultural productivity, while in others communities have been able to adapt to environmental problems. For many, poverty is chronic, the result of a combination of deeply rooted income, health, education and environmental problems. In other places poverty and food security problems are the result of external economic and environmental shocks, such as macroeconomic slumps or drought. Much remains to be done at the global scale to provide new spatial information on other key indicators of food security and environmental quality, and their relationship to poverty.

How can poverty mapping contribute to poverty reduction?

1. Maps can be powerful communication tools, especially for busy decision-makers, highlighting specific issues or geographic locations.
2. Maps of poverty and environmental conditions can pinpoint opportunities for development.
3. Poverty maps are useful to donors and development agencies in allocating investment and targeting activities.
4. Poverty mapping can involve the poor directly in analyzing the extent of poverty problems and identifying opportunities and solutions.
5. Poverty mapping can be integrated with monitoring of demographic change, vulnerability assessments and establishment of early warning programs, improved education and health planning, and coordination of development activities.

What can we do to support poverty mapping?

Although poverty mapping has been used effectively in a number of instances, additional work is needed to fulfill its potential. The time is ripe to strengthen such work so that it can support monitoring of progress towards the Millennium Development Goals (MDGs). In March 2003, a group of international experts-including several CGIAR centers-representing approximately 20 institutions from 10 countries and 12 international agencies convened at Columbia University, in New York City.

This workshop was the first to bring together such a wide range of developers and users of poverty maps, and representatives of data centers. The workshop synthesized the current state of the art in poverty mapping and proposed next steps in three key areas: methods, applications and institutions. There was general consensus that further work should facilitate data sharing, undertake explicit methodological comparisons, experiment with new spatial and temporal scales, and strengthen networks and institutional capacities. Below is a brief summary of some of the priorities that were agreed upon:

Create mechanisms for sharing data, expertise and best practices
Few poverty-mapping datasets are readily available to researchers and decision-makers, and holders of data typically lack the resources to document and disseminate data. Therefore greater capacities to identify, catalog, document and distribute poverty-mapping data are needed. Similarly, more effective mechanisms are needed to share expertise and best practices among parties interested in carrying out poverty mapping.

Pool, compare and assess poverty-mapping information across different spatial scales
The bulk of the poverty mapping work in the developing world has taken place at fairly fine spatial resolution. This is time consuming and resource intensive. Comparatively less work has been done assessing the feasibility of generating coarser-level poverty maps using alternative sources of information. These maps would have greater extent and require fewer resources, and could be useful in planning, targeting and assessment activities that are carried out across regional, continental or global scales.

Compare poverty-mapping methodologies
Different methods have been developed to generate poverty maps, some relying on radically different statistical and modeling techniques. More research is needed to clarify the strengths and weaknesses of different approaches, which in turn will help interpretation of results from different methodologies.

Identify and fill high-priority data gaps
A serious investment in spatial data is needed; spatial data on, inter alia, transportation infrastructure, water and sanitation technology, market access, health and educational facilities, are urgently needed to improve understanding of the spatial dimensions of poverty. In addition, countries vary in the type of income and asset data that they collect. Further cataloguing of these data types will highlight the areas of greatest need.

Deepen understanding of correlates of poverty
More widespread and intensive poverty mapping, and greater integration of environmental variables, can support improved understanding of many drivers of poverty, e.g. climate variability, soil fertility, market access, ecological zone, and so on. Likewise poverty mapping can also support better understanding of the impacts of poverty, for example on water quality or forest cover. Although discerning causal connections can be quite difficult, even knowing simply what the spatial correlates of poverty are can be helpful in planning and targeting interventions.

Communicate results of poverty mapping and integrate into decision-making
Decision-makers across a wide range of organizations, from global to local, are making vital choices concerning strategies to achieve poverty reduction as manifested in many different dimensions (as expressed in the MDGs, for example). Such decision-makers are asking for improved sophistication in understanding synergies and tradeoffs across goals, in understanding fundamental underlying biophysical constraints and opportunities, and in being able to undertake robust intervention planning. Poverty mapping can play a crucial role in bringing to light much of the information that is needed and making it accessible to decision-makers.

Next Steps

In order to follow up on the ideas developed at the March meeting in New York, we will be convening a number of working groups to implement specific activities described above. The working groups will bring together decision-makers, scientists, donors, and local experts. We invite you to participate in one or more working groups, starting with a joint workshop in early 2004. If there are relevant funding programs that might help support our activities we are eager to learn of them. If there are specific needs you have for poverty maps they will help us to set priorities.

For more information, please contact:
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Or
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Workshop on Global Poverty Mapping
March 11-12, 2003
Sponsored by the Earth Institute of Columbia &
the World Bank
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