Chapter 21

Bridging the Gap between the Agriculture and Health Sectors

Joachim von Braun, Marie T. Ruel, and Stuart Gillespie

As a unified set of global poverty reduction goals, the Millennium Development Goals (MDGs) in principle provide an opportunity for overcoming sectoral divides and forging effective links between agriculture and health. Both agriculture and health are important for most of the MDGs, and positive synergies could link agricultural and health policy, programming, and research in ways that would benefit both sectors and advance the MDGs as a whole. But these links have not materialized in satisfactory ways.

This chapter argues that while the MDG concept is clear on goals, it has never been clear on how to link goals to policies and on how to promote synergies between goals. A framework for linking agriculture and health in ways that alleviate poverty and hunger is missing, as is a set of policies to effectively exploit the synergies between agriculture and health. Such a framework requires an additional emphasis on context, governance, and policy tools.

Limitations of the MDGs in Fostering Action across Sectors

The MDGs have guided the planning and implementation of different development efforts. But their usefulness is limited unless they are combined with a policy framework, strategy, and implementation plan. Although they offer a shared vision of what is needed, they provide no common articulation of how to get there—and especially how to address the goals as a whole rather than through separated actions. The following limitations center on MDG1, on hunger and poverty, but they are also relevant for most other MDGs:

1. MDG discourse has been relatively silent about effective policies for achieving the goals. Economic theory emphasizes that achieving goals depends on the use

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of at least as many different policy instruments as there are goals. Moreover, pursuing each goal independently may result in an inefficient portfolio of policies.

2. The monitoring process is poorly defined and lacks transparency—a situation that raises questions about the measurement of progress. It is unclear whether the process is carried out independently, and discrepancies in results raise doubts about the reliability of the estimation methods and findings.

3. Monitoring also focuses on average change, which hides important information on changes in inequality and poverty gaps. The fact that the issue of inequity is not appropriately addressed in achieving and monitoring the goals also raises an ethical issue. In Sub-Saharan Africa and Latin America, the proportion of ultra-poor—those who live on less than $0.50 a day—has increased in recent decades, and it is perfectly conceivable that progress may be made toward MDG1 while ultra-poverty and hunger continue to rise.

4. For many countries, the MDGs are unrealistic and unachievable. Cost assessments of aid needed to achieve several of the MDGs suggest that they cannot be achieved in the context of past financial assistance and likely levels of assistance in the coming years. It is also important to note that while the MDGs were formally established in 2000, progress in achieving some of the goals is measured using indicators calculated from the year 1990. Reducing poverty by one-half from 1990 to 2015 depends on growth over the full 25 years. Nearly half of that growth would need to have occurred in the decade before the signing of the Millennium Declaration; countries with little to no growth in that period are unlikely to achieve it in the 15 years from 2000 to 2015.

5. Finally, partners and countries are not accountable for meeting the needs of the poorest and hungry and for improving the delivery of public services in order to achieve MDG1. Accountability also tends to be defined by individual goals, not the whole set of MDGs. Different groups of stakeholders and development agencies tend to invest in one or two goals while largely ignoring the rest.

Bringing the Agriculture and Health Sectors Together

Intersectoral cooperation is a mechanism for generating solutions to complex problems, not an end in itself. But promoting cooperation in research and policy between two different sectors is challenging—sectoral barriers provide disincentives to collaboration, and analyses and communications across disciplines can be difficult. Cooperation requires an enabling policy environment, effective institutional

arrangements, and the capacity of individuals to engage in an intersectoral dialogue. It relies on evidence generated by multidisciplinary research from credible sources.

Challenges in achieving intersectoral collaboration include

- the prevailing sectoral orientation of funding, budget control, planning, monitoring, and accountability;
- ignorance of intersectoral issues, with no one sector willing to take responsibility or advocate effectively for results;
- differences in paradigms, worldviews, mindsets, and professional language;
- competition among priorities, incentives, and decisionmaking processes;
- capacity constraints, including lack of knowledge about and training in multisectoral work, and rapid turnover of staff (technical, managerial, and political) that impedes the formation of the relationships and partnerships necessary to bridge institutional divides across sectors; and
- the tendency for students at universities and other institutions to be funneled into their respective disciplines without much exposure to peers, faculty, and professionals in other departments who share similar research interests but have a different professional language or view a common issue from a different perspective.

These challenges—and ways of confronting them—are researchable issues in themselves. Ultimately, there is a need to better understand how to promote a shared understanding that translates into integrated programs and policies for greater impact. A well-structured framework for implementing the MDGs could provide an excellent tool for integrating sectors in practice, and the effectiveness of the framework in fostering cross-sectoral collaboration and in accelerating progress in achieving the MDGs could be formally tested by research.

Despite the challenges, successful collaboration between sectors has occurred in some areas (see Box 1). It must be noted that effective intersectoral collaboration is complex and requires attention to the following lengthy list of actions and considerations:

- Facilitating early and inclusive engagement with relevant partners
- Ensuring an appropriate balance (in terms of numbers and skills) between agriculture and health stakeholders

- Recognizing the different cultures, incentives, and career structures of health and agriculture professionals

- Cultivating cross-sectoral consensus on common problems and on the mutual benefits of addressing them through joint work

- Developing innovative systems of communication between disciplines (based, for example, on agreed-upon shared values and principles, rules of engagement, and platforms for communication)

- Developing models and tools for assessing and analyzing joint problems (this work could identify appropriate indicators for monitoring and evaluation that could be linked to joint accountability for results and help highlight complete pathways from research outputs to development impacts)

- Strengthening capacity and incentives for development professionals to think and act intersectorally, whether in research, programming, policymaking, or funding of new initiatives—this might include joint training of "agri-health" professionals

- Synthesizing and promptly disseminating intersectoral research findings and experiences

How can national policy frameworks be oriented to promote synergies between agriculture and health? The following approaches—partially drawn from Bos (2006) and Bryce et al. (2008)—are promising.

- *Develop a joint metric for research and policy in agriculture and health.* Setting priorities for research and policy in agriculture and health requires a unified framework to avoid "ad hoc-ism." Two complementary approaches need to be merged: one approach that focuses on lives saved and livelihoods improved (as measured by mortality, morbidity, and disability-adjusted life years saved, for example), and another approach that focuses on economic productivity, growth, and returns to investment (as measured by human productivity and lifetime earnings, for example). In view of the different positions of health and agriculture in society and the economy, an integrated framework approach that includes both of these concepts would help generate an informed policy discourse on priority setting. Developing such a joint metric is essential for results-oriented action in both sectors.

BOX 1 Examples of Successful Agriculture and Health Collaboration

Homestead food production. The linkages between agriculture and nutrition are particularly strong and direct for farmers and agricultural laborers. The work of Helen Keller International (HKI) on homestead food production in four Asian countries offers an example of agriculture's positive contributions to good nutrition. The HKI program aimed to improve the nutritional status of vulnerable members of low-income households in Bangladesh, Cambodia, Nepal, and the Philippines by promoting small-scale production and consumption of micronutrient-rich crops and small animals. As a result of the program, households are producing and consuming more micronutrient-rich foods; they are earning increased incomes from the sale of high-value products; and mothers, infants, and children have better micronutrient intakes (HKI/Asia-Pacific 2001).

Biofortification. Biofortification—the process of breeding food crops that are rich in essential micronutrients—is another agricultural strategy with proven benefits for health and nutrition. Orange-fleshed sweet potato (rich in vitamin A), for example, represents a successful agriculture and health partnership that has had well-documented impacts on vitamin A intake and status of young children in Mozambique (Low et al. 2007 and Hotz et al. 2011).

Irrigation and malaria control. Irrigation brings higher agricultural yields and incomes but can heighten the risk of malaria transmission, thus decreasing agricultural productivity. Successful partnerships between agriculture and health have allowed implementation of preventive measures to control malaria while modifying or manipulating agricultural water systems. Options include location-specific drainage techniques, intermittent wetting and drying of rice fields, alternation of rice with a dryland crop, and use of livestock as "bait" for mosquitoes (Mutero et al. 2005).

Agriculture and HIV/AIDS response. The majority of people affected by HIV and AIDS depend on agriculture, and their livelihoods are undermined by the disease in many countries. There is tremendous scope for agricultural policy to become more HIV-responsive and further both health and agricultural goals. For example, to overcome the lack of land and labor often facing AIDS-affected households, the Livelihoods Recovery through Agriculture Programme, implemented in Lesotho in 2002 by CARE and the Ministry of Agriculture, promotes production of crops with high nutritional content on small plots of land close to the home. Fifty-three percent of participants reported that they had stabilized or increased their food production (Abbot et al. 2005).

- *Create incentives for results-oriented intersectoral collaboration.* Governments can create incentives for results-oriented intersectoral collaboration that benefits the national good over and above strict sectoral division. These incentives would have to emanate from the highest policymaking level, such as the prime minister's office, and have the support of the ministry of finance (which would allocate financial resources for proposed intersectoral actions).

- *Apply incentives and build capacity at the local level.* Incentives—financial or otherwise—would need to apply at the local levels where implementation occurs. Because key decisions about priorities and resource allocation are often made at subnational levels, local as well as national capacity to develop contextually appropriate interventions will need to be strengthened.

- *Implement multisectoral policy reviews.* Multisectoral policy reviews could be undertaken to harmonize existing policies, identify opportunities for reciprocal action to address each other's concerns, and formulate new policies that support the concept of intersectoral collaboration. For example, countries with increasing water scarcity could formulate policies for water's optimal use in agriculture and simultaneously ensure that this resource is used in ways that protect the health of agricultural producers, their families, and the consumers of products cultivated with wastewater (Bos 2006). Such reviews could also identify perverse policies—that is, sectoral policies that contradict and counteract each other. An HIV lens, for instance, could be applied to agricultural policies to ensure that they do not inadvertently provide the conditions for more rapid spread of HIV infection or reduce households' options for responding to the impacts of AIDS (for example, agricultural diversification is associated with resilience and a strengthened ability to respond to AIDS) (Gillespie and Kadiyala 2005).

- *Carry out health impact assessments.* Health impact assessments should be undertaken (along with environmental impact assessments) to ensure that the health impacts of any new agricultural development project or new agricultural policy are considered in a timely fashion and that a public health management plan incorporates intersectoral action. This approach also requires bilateral and multilateral development agencies to review their decisionmaking criteria for projects ahead of time and adopt policies that ensure that health safeguards are incorporated.

Conclusion

The current approach toward achieving the MDGs needs an overhaul, and planning beyond the MDGs offers opportunities for more comprehensive approaches to improving human well-being. To realize this potential, it is important to stop singling out individual MDGs and instead to start recognizing the linkages among them and their functional relationships and interdependence. Strategic use and strengthening of the linkages between agriculture and health offer particularly strong opportunities for achieving poverty reduction and health goals in many low-income countries. Exploiting these opportunities requires a new initiative for evidence-based and knowledge-intensive action across the agriculture and health sectors.

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