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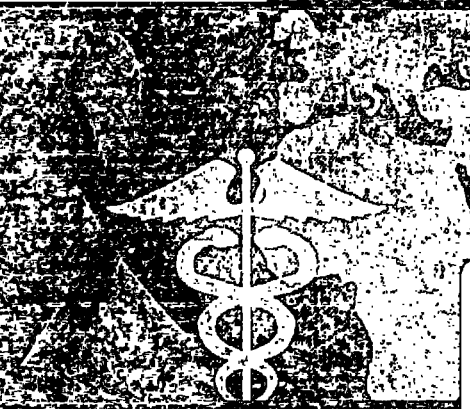

Combating Malnutrition

Time to Act

Stuart Gillespie
Milla McLachlan
Roger Shrimpton
Editors

THE WORLD BANK

Health, Nutrition, and Population Series

This series is produced by the Health, Nutrition, and Population Family (HNP) of the World Bank's Human Development Network. It provides a vehicle for publishing polished material on the Bank's work in the HNP Sector, for consolidating previous informal publications, and for improving the standard for quality control, peer review, and dissemination of high-quality analytical work.

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World Bank–UNICEF
Nutrition Assessment

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Contents

Tables

Figures

Boxes

Preface and Acknowledgments

The United Nations Children's Fund (UNICEF) and the World Bank joined forces in April 1999 to provide a fresh perspective on the global effort to address malnutrition, focusing on the roles of the two agencies in shaping the agenda and its implementation. The assessment drew upon several complementary strands, including review of UNICEF and World Bank portfolios, analysis of the evolution of key policy narratives, country case studies, and workshops with UNICEF and World Bank staff and selected external experts. It attempted to "get behind the headlines" to understand how policy change in nutrition happened, what influenced these processes, and what lessons can be learned.

To address these objectives, the following activities were undertaken sequentially.

- **Analyses of policy change.** The development of certain key ideas (or narratives) and their influence on policy were analyzed starting in late 1999. The ensuing five background papers (narrative theme papers) were reviewed in a January 2000 workshop that included the nutrition assessment steering committee, case study writers, senior representatives of UNICEF and the World Bank (including technical and evaluation sections), representatives of countries selected for review, senior advisers, and selected external advisers. Participants also formulated hypotheses to be explored in the country case studies.

- **Country case studies.** To assess the dynamics of nutrition-relevant policy processes at the country level and the role of the two agencies, case studies in India, Madagascar, the Philippines, and Tanzania were undertaken in 2000. A follow-up workshop was held 11–12 October 2000 to review these case studies and round out the assessment by bringing together key stakeholders to generate lessons learned.
- **Agency portfolio reviews.** UNICEF and the World Bank summarized two decades of experiences with nutrition policy and programming, describing their priorities and processes.

The assessment was initiated and managed by Milla McLachlan (World Bank) and Roger Shrimpton (formerly of UNICEF) and coordinated by Stuart Gillespie (International Food Policy Research Institute). A steering committee to guide its preparation was composed of Simon Maxwell of the Overseas Development Institute in London; Harold Alderman, Tim Johnston, and Edna Jonas of the World Bank; and Krishna Belbase, Rolf Carriere, Ian Hopwood, and Werner Schultink of UNICEF.

Background papers and country case studies were prepared by Lindsay Allen, Françoise Crélerot, Carmel Dolan, Ted Greiner, Richard Heaver, James Levinson, John Mason, Menno Mulder-Sibanda, David Pelletier, David Pyle, and Beatrice Rogers. The late R. V. Ramalingaswami, Fred Sai, Julia Tagwireyi, Kraisid Tontisirin, and E. V. Shanta served as external resource persons for the background papers and country case studies. UNICEF and World Bank staff at headquarters and in case study country offices participated in workshops and provided crucial input. Krishna Belbase, Edna Jonas, Leda Nemer, Ritu Chhabra, and Merced Doroteo managed the project and provided administrative support. Bruce Ross-Larson edited the final report. The Netherlands Ministry of Foreign Affairs generously provided financial support, which is gratefully acknowledged.

Background papers

"Toward a Common Understanding of Malnutrition: Assessing the Contributions of the UNICEF Framework" (David Pelletier)
"Ending Hidden Hunger: The History of Micronutrient Deficiency Control" (Lindsay Allen)
"Health and Economic Consequences of Malnutrition" (Beatrice Rogers)
"How Nutrition Improves and What That Implies for Policy Decisions" (John Mason)
"Searching for a Home: The Institutionalization Issue in International Nutrition" (James Levinson)

Country case studies

"India: Nutrition Assessment" (Ted Greiner and David F. Pyle)
"Madagascar Case Study" (Menno Mulder-Sibanda and Françoise Crélerot)
"Making a National Impact on Malnutrition in the Philippines: You Can't Get There from Here" (Richard Heaver and John Mason)
"Will We Ever Get Back? The Derailing of Tanzanian Nutrition in the 1990s" (Carmel Dolan and James F. Levinson)

Agency portfolio reviews

World Bank Nutrition Portfolio Review, 1984–2000 (The findings of this review are incorporated in World Bank, forthcoming.)
UNICEF Nutrition Portfolio Review, 1980–1999 (Roger Shrimpton, Joan Macleod, Patrick Metz, and Krishna Belbase)

PART I

RECOMMENDATIONS FROM THE ASSESSMENT

CHAPTER 1

What Is Needed to Eliminate Malnutrition?

Global nutrition has improved in the past decade, but slowly and unevenly. Worldwide, more than 180 million children under age five—nearly one in three—are stunted. Malnutrition, implicated in half of all child deaths, also causes considerable illness and cognitive underdevelopment.[1] About 1 billion adults in developing countries are underweight; an estimated 1.6 billion are anemic. They suffer from lower resistance to infection, impaired work capacity, and reduced economic productivity. As the growing evidence demonstrates, fetal malnutrition threatens survival, growth, and development in childhood—and increases the risk of chronic diseases in later life. That is why the Millennium Development Goals (MDGs) cannot be reached without significant progress in eliminating malnutrition.

The prospects for eliminating malnutrition are grim. The World Bank–United Nations Children's Fund (UNICEF) Nutrition Assessment reveals that:

- Nutrition is improving slowly in some regions but is stagnant in others.
- Nutrition is sidelined in poverty agendas despite its potential to improve health, mental development, and productivity.
- Nutrition professionals broadly agree on key interventions and on success factors for implementation, but this is not reflected in action.

- Few large-scale programs are rigorously monitored and evaluated.
- Inadequate capacity to tackle malnutrition is a major factor limiting progress toward poverty reduction.
- Per capita spending on nutrition is generally low and poorly targeted.

Understanding of how best to promote changes in policies, programs, and institutional capacities has grown over the past decade—but is still limited. The international nutrition community[2] has systematized its knowledge of *what* actions are likely to improve nutrition. However, much less effort has been devoted to systematizing knowledge of *how* to intervene in the sociopolitical processes—from community to national to international levels. Seasoned practitioners have great experience and insight in operational matters, but policy problems tend to be reduced to vague reference to "insufficient political will" and "weak institutional capacity."

The assessment recommends a five-point action program to apply the known solutions with the intensity needed to eliminate nutritional deprivation. Each dimension of the program is an entry point. Local conditions and existing capacity may favor one entry point over another, but for maximum impact, all five dimensions need action.

- Position nutrition squarely on the poverty and human development policy agenda.
- Ensure that large-scale actions incorporate best practices.
- Use information systematically for decisionmaking at all levels.
- Develop the capacity to address malnutrition.
- Increase financing for effective nutrition-relevant actions.

The assessment concludes that UNICEF and the World Bank have complementary approaches. In partnership with countries and

other agencies, they should jump start a global effort to eliminate nutritional deprivation once and for all.

This first section presents the main recommendations of the assessment. The second provides detail on findings that led to these recommendations.

Position Nutrition Squarely on the Poverty and Human Development Policy Agenda

Reducing malnutrition is central to reducing poverty.[3] As long as malnutrition persists, development goals for the coming decade will not be reached. This assessment calls for mainstreaming nutrition in human development and poverty reduction strategies. There are many opportunities for such mainstreaming, among them the United Nations Development Assistance Framework, the Comprehensive Development Framework (CDF), the World Fit for Children (UNICEF 2002), and national poverty reduction strategies (see box 1.1).

Statements of nutritional goals need to be challenging but realistic. Internationally agreed-upon nutrition goals—for example, from the Millennium Development Summit or the United Nations Special Session on Children in 2002—are useful for galvanizing political commitment and action. However, program goals and objectives need to be grounded in local realities. A common problem in the past was that the dramatic reductions in malnutrition were routinely declared as goals but seldom linked to project activities, even locally. Too often projects simply did not have the resources to bring about results, leading to disappointment. A move is needed toward more realistic planning and assessment of what is required for broad impact.

Nutrition goals and targets must be set jointly by all stakeholders. This requires engaging all the relevant actors from different sectors. These actors must frame and define the problem so that the resulting action plan embraces their understanding of the problem, their interests, and their agendas; this engagement also provides for political negotiation and compromise. The Interagency Group for

Nutrition in Madagascar exemplifies this approach (Mulder-Sibanda and Crélerot 2000).

Box 1.1 International Goals for Nutrition

Adopted at the Millennium Development Summit in September 2000, the Millennium Development Goals are derived from agreements and resolutions reached at U.N.–sponsored global meetings during the 1990s.

The first goal is to eradicate extreme poverty and hunger. Halving the proportion of people who suffer from hunger is one of the two targets for this goal; the prevalence of underweight children under age five is one indicator for this target.

Improving the nutrition of children will help reach other goals, such as the reduction of infant and child mortality and universal primary education. In turn, progress toward these other goals will help to improve children's nutrition.

The World Fit for Children declaration was endorsed by the 27th Special Session of the United Nations General Assembly in New York in May 2002. The plan of action for creating a world fit for children reaffirms the commitment to improve nutrition for every child. Providing all children with a safe, healthy start in life will halt the intergenerational cycle of malnutrition and poor health.

The World Fit for Children declaration outlines these two goals: reducing malnutrition among children under age five by at least a third (with special attention to children under age two) and reducing the rate of low birth weight by at least a third by 2010. The plan of action sets other goals that will contribute indirectly to improved nutrition: developing and implementing early childhood policies and programs, and reducing infant and child mortality by a third.

Box 1.1 (continued)

The declaration outlines strategies and actions for achieving these goals:

- Protecting, promoting, and supporting exclusive breastfeeding for the first six months.
- Promoting continued breastfeeding with complementary feeding up to two years of age and beyond; providing informed choices on infant feeding.
- Improving the nutrition of mothers, young children, and adolescents through improved household food security, access to basic social services, and better caring practices.
- Eliminating iodine deficiency disorders by 2005 and vitamin A deficiencies by 2010; reducing by a third the prevalence of anemia, including iron deficiency, by 2010.
- Accelerating the reduction of micronutrient deficiencies through dietary diversification and food fortification and supplementation.

Ensure that Large-Scale Nutrition-Relevant Actions Incorporate Proven Best Practices

Much is now known about what works in nutrition (see, for example, Allen and Gillespie 2001). Yet this knowledge and experience is not necessarily used in planning. Part of the problem is the lack of good evaluations and the difficulties in convincing decisionmakers that improved nutrition has multiple benefits. Overall, more attention needs to be paid to ensuring a good process in designing, implementing, and managing these programs. Efforts to design programs need to focus on the local context, looking at existing capacity as well as gaps. They also need to consider issues of coverage, scale, targeting, and the intensity of resources—all essential for ensuring a large-scale impact.

Programs targeting communities with high malnutrition rates not only should be based in these communities, they should be *driven* by stakeholders who live in them. That requires involving stakeholders actively in assessing the problem as well as designing, implementing, and managing the program. The art of effective program support for nutrition lies in meeting the dual requirements of (1) initiating and strengthening local processes for improving nutrition, and (2) achieving measurable results—both means and ends, processes, and outcomes. Local ownership and efficient integration of actions tend to go together. So, sectoral actions need to be geared more toward supporting local initiatives. Finally, while much is known about what does and doesn't work, program budgets need to allocate funds for research that will address important unanswered technical and operational questions.

Use Information Systematically for Decisionmaking at All Levels

Indicators of nutritional status provide a ready measure of a country's progress on its poverty reduction strategy. Nutrition data are inexpensive to collect; and nutrition indicators are reliable, sensitive, and timely for use in decisionmaking. Moreover, they complement information that is commonly used to describe poverty in terms of the monetary value of goods and services. Country leaders should be asked, "Are the children growing?" as often as they are asked, "Is the economy growing?" For communities, information on children's growth can be used to monitor poverty trends and mobilize actions that address the factors that cause malnutrition. And for parents, information on their children's growth can make the problem visible, form the basis for counseling on childcare practices, and empower them to demand appropriate health care services. This approach was first introduced in Tanzania and Indonesia. It is now used in several countries as the cornerstone for nutrition-focused poverty reduction strategies.

Sound action requires sound analysis. A knowledge-driven strategy empowers decisionmakers—at household, community, national,

and international levels—to take action to fight malnutrition and monitor poverty reduction. Such a knowledge focus would give greater emphasis to sound analytical work as the basis for investment and to systematic learning through project implementation—to build the evidence base for interventions.

Because context is so important, a situation-specific library on what drives success needs to be built, with lessons propagated more effectively through all relevant media. There is also a need to communicate success to those who can build on it. Program designers and funders often assume that evaluations will be used in some way, but that is not necessarily the case. Why? Because evaluation findings and recommendations are generally poorly communicated. The way that evaluation findings will be discussed and used needs to be built into the overall process and project plan, counterbalancing bureaucratic disincentives against taking initiative. Evaluations should not be shortchanged in the program budget; funds need to be set aside from the start.

Develop Capacity to Address Malnutrition

Capacity to address malnutrition at all levels—from households to national governments and international agencies—represents a major constraint. Capacity development, based on sound capacity analysis, should be an integral part of nutrition operations. And capacity assessment, using appropriate tools and methodologies, should therefore become an integral part of the causal and resource analysis undertaken before decisions are made on actions (see figure 2.3). Unsurprisingly, "inadequate capacity" is frequently cited in evaluations as a major reason for program failure.

The institutionalization of nutrition within government also relates to capacity. There has been much discussion over the past three decades on "where nutrition resides" in government. But the assessment argues that nutrition must be addressed through multiple sectors and subsectors—and that the real questions are what

types of capacity need strengthening at which levels and how nutrition policy can best be coordinated.

At the national and international levels, attention needs to be paid to building a cadre of policy entrepreneurs who are adept at advocacy. They need to have access, influence, personality, patience, and resources. One rapid way to increase capacity is through more effective use of partnerships. Concretely, this assessment has led to recommendations for ways in which UNICEF and the World Bank could better work together to achieve common goals.

Mechanisms for collaboration between partners will vary from country to country. New opportunities are emerging through the increasing coordination among agencies. Global initiatives such as the United Nations Development Assistance Framework and the Millennium Development Goals require common frameworks for operation; and progress toward common sets of goals needs to be monitored collaboratively.

Decentralization, which itself raises both challenges and opportunities, will also determine how partners can best collaborate. Decentralization demands greater advocacy by the center, greater capacity for local governments to undertake new functions, and usually greater integration of activities.

Increase Financing for Effective Actions

Information is not readily available on how much countries spend to achieve nutrition goals, because few countries collect data or have undertaken the expenditure reviews. Some estimates of average per capita spending on community-based nutrition activities have been compiled (Mason 2002). But international norms are not available. Better expenditure information would allow more accurate estimates of the cost to address malnutrition effectively. Yet increased resource commitments need not wait for perfect information. In countries where malnutrition is a major public health problem, information on general social sector spending—even

imperfect information—suggests that greater spending on nutrition is generally warranted.

There is broad agreement that developing country governments and donors are spending too little in the social sectors. The World Summit for Social Development proposed in Copenhagen in 1995 that industrial nations commit at least 20 percent of their aid budgets and developing nations commit about 20 percent of their national budgets to basic social services. Few countries have met those targets. More recently, the Commission on Macroeconomics and Health proposed at least a fourfold increase in health-related assistance to meet basic health needs (WHO 2001).

There is no reason to believe that spending on nutrition fares any better. Countries such as India and the Philippines devote substantial resources to poorly targeted food subsidy and food assistance programs that could do much to improve nutrition if better targeted to vulnerable groups. But in most countries with high malnutrition, per capita spending on social services, including health and nutrition, is so low that the impact is negligible. Realistic but challenging targets need to be set to increase resource flows from both governments and donors.

What Role for UNICEF and the World Bank?

Efforts to eliminate malnutrition will have to be expanded if the development community is to help in making progress toward the Millennium Development Goals. The focus in the present report is on the role of UNICEF and the World Bank—to show the kinds of activities that development assistance for nutrition should include. In the next decade, attention needs to be renewed on reducing general malnutrition while not losing sight of specific micronutrient deficiencies. This effort should reflect the growing body of scientific evidence on maternal nutrition that (1) it is the foundation for improving child survival, growth, and development, and (2) it ensures the health and well-being of the woman.

UNICEF has shown great ability to mobilize resources around specific nutrition issues, particularly for breastfeeding and micronutrient programs. But it has been less successful mobilizing resources for a broad-based effort to tackle overarching malnutrition. World Bank investments have focused on integrated community-based programs emphasizing micronutrient interventions and better feeding and care of infants. There have been notable successes, but the investments have been limited to too few countries. In both agencies, the volume of resources going to nutrition is small, as are the numbers of staff assigned to work on nutrition. In the Bank, for example, about 10 percent of lending in the Health, Nutrition, and Population sector is allocated to nutrition operations (World Bank forthcoming)

UNICEF and the World Bank share a vision for nutrition, but they differ significantly on processes and institutional means. Potential complementarities would be realized by allying UNICEF's country-level grassroots presence, technical expertise, and operational knowledge with the Bank's greater convening power and rigor in evaluation. UNICEF supports country programs and directly advocates for policy change, the Bank uses analytical work and the project process to influence policy at the macro level. Both approaches are needed and strongly inform each other.

To seriously tackle malnutrition, the World Bank and UNICEF should consider a special initiative in the context of their commitments to goals agreed upon at the Millennium Development Summit and the United Nations Special Summit for Children. Such an initiative would work with selected countries in Asia and Sub-Saharan Africa to mainstream nutrition in their poverty agendas. The initiative would develop capacity to implement proven, cost-effective interventions. To maintain focus on clear targets, ongoing analysis, monitoring, and evaluation would inform it. An endeavor of this sort can succeed if it involves multiple sectors and stakeholders at all levels and if it is backed by adequate resources and technical support. Nutrition has been sidelined for too long. The time to act is now.

CHAPTER 2

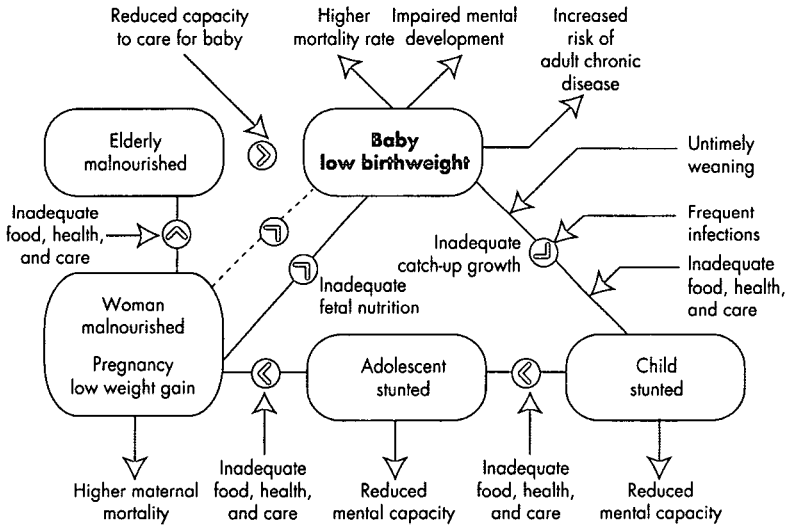
Key Findings

Malnutrition is a process, with consequences that can extend not only into later life but also into future generations. Becoming malnourished often starts in utero and, particularly for girls and women, may last throughout life (figure 2.1). It also spans generations. A stunted girl is likely to become a stunted adolescent and later a stunted woman. Besides posing threats to her own health and productivity, the poor nutrition that contributes to stunting and underweight increases the chance that a woman's children will be born malnourished. And so the cycle repeats itself.

Nutritional Status Is Improving Only Slowly—or Even Stagnating

Malnutrition remains a formidable global development challenge. Worldwide, more than 180 million children under age five—nearly one in three—are stunted. Malnutrition is implicated in half of all child deaths and is a major contributor to child ill-health and cognitive underdevelopment (Schroeder 2001). About 1 billion adults in developing countries are underweight, and an estimated 1.6 billion are anemic. They suffer from lower resistance to infection, impaired work capacity, and reduced economic productivity (Horton (2002). In addition, fetal malnutrition threatens survival, growth, and development in childhood—and increases the risk of chronic diseases later in life (Allen and Gillespie 2001).

Figure 2.1 The Nutrition Life Cycle



Source: Adapted from ACC/SCN (2000).

Although nutrition has improved steadily in most developing countries, progress has been slow (table 2.1). In South Asia, the high rates of child malnutrition are declining only sluggishly, while in East Africa malnutrition has increased (ACC/SCN 2000). The vast majority of countries have not met the goal—set at the 1990 World Summit for Children—of halving the prevalence of underweight children under age five by 2000. Unless action against malnutrition is intensified, 140 million preschool children—nearly one in five—will be malnourished in the year 2020 (Smith and Haddad 2000).

Beyond its serious direct consequences, malnutrition may also limit further reductions in infant and child mortality (Pelletier and Frongillo 2003). Malnutrition is both a cause and manifestation of poverty. It also represents a violation of the fundamental right to adequate food, health, and care as enshrined in international human rights declarations and conventions. Thus addressing malnutrition is both a development and an ethical imperative. Simply put, the

Table 2.1 Estimated Prevalence and Number of Stunted Preschool-Age Children by Region, Selected Years, 1980–2000

	1980		1985		1990		1995		2000	
REGION	PREVALENCE (PERCENT)	NUMBER (MILLIONS)	PREVALENCE (PERCENT)	NUMBER (MILLIONS)	PREVALENCE (PERCENT)	NUMBER (MILLIONS)	PREVALENCE (PERCENT)	NUMBER (MILLIONS)	PREVALENCE (PERCENT)	NUMBER (MILLIONS)
Africa	40.5	34.78	39.2	38.51	37.8	41.68	36.5	44.51	35.2	47.30
East	46.5	12.88	46.9	14.83	47.3	17.13	47.7	19.28	48.1	22.03
North	32.7	6.01	29.6	6.01	26.5	5.55	23.3	4.90	20.2	4.44
West	36.2	9.03	35.8	10.51	35.5	11.99	35.2	13.47	34.9	14.74
Asia	52.2	173.37	47.7	169.72	43.3	167.66	38.8	143.49	34.4	127.80
South Central	60.8	89.36	56.5	93.45	52.2	93.36	48.0	83.62	43.7	78.53
Southeastern	52.4	27.71	47.5	26.47	42.6	24.24	37.7	21.51	32.8	18.94
Latin America and the Caribbean	25.6	13.19	22.3	11.87	19.1	10.38	15.8	8.59	12.6	6.82
Caribbean	27.1	0.92	24.4	0.86	21.7	0.81	19.0	0.71	16.3	0.61
Central America	26.1	3.87	25.6	3.81	25.0	3.87	24.5	3.94	24.0	3.92
South America	25.1	8.38	21.1	7.35	17.2	6.05	13.2	4.55	9.3	3.16
All developing countries	47.1	221.35	43.4	220.10	39.8	219.73	36.0	196.59	32.5	181.92

Source: De Onis, Frongillo, and Blossner (2000).

Millennium Development Goals for poverty, education, and health cannot be reached unless global malnutrition is addressed.

Nutrition Is Sidelined in Poverty Agendas

Despite the positive impact of nutrition on health, mental development, and productivity, nutrition has been sidelined in poverty agendas during the last two decades. Knowledge about malnutrition, its consequences, and its links to poverty and other human development goals is fragmented and often inconsistently applied. Within the nutrition community different views still compete. But the consensus among nutrition professionals on the malnutrition problem and its causes appears to be greater today than at any other time in the past two decades. Two of the most influential tools for bridging the gap between nutrition theory and effective practice in recent years have been the conceptual framework of the causes of malnutrition and the operational Triple A construct of assessment, analysis, and action—both pioneered by UNICEF (figures 2.2 and 2.3).

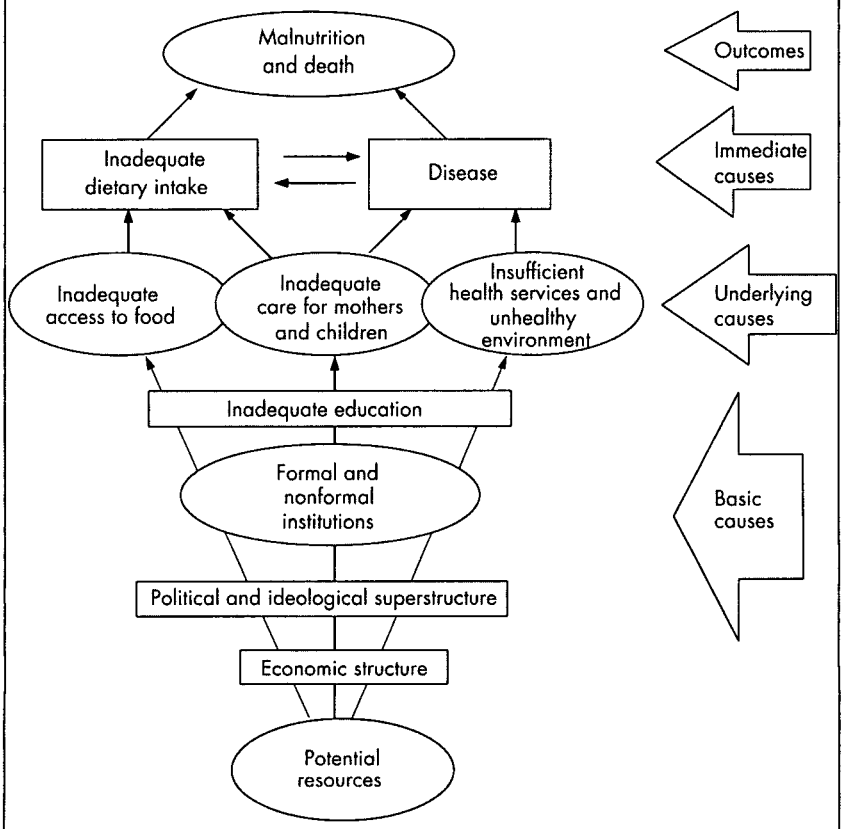
Advocacy Has Not Been Effective

The UNICEF Conceptual Framework has been well internalized by the nutrition community. But it has *not* been effectively translated into organizational agendas, particularly in developing country institutions (Pelletier 2002). The reason appears to be a failure of communication and advocacy.

The art of advocacy lies in effectively confronting the status quo. If advocates are to influence decisionmakers, they must understand the essential values, beliefs, and interests that condition decisionmaking. They need a solid grasp of the political economy of nutrition in order to understand the complexity of policy change. And they must draw on a menu of arguments that are specific to audience and context.

Much time has been spent developing and transmitting broad messages about the seriousness of malnutrition, and too little time understanding the differing perspectives, interests, values, and

Figure 2.2 Conceptual Framework of the Causes of Malnutrition

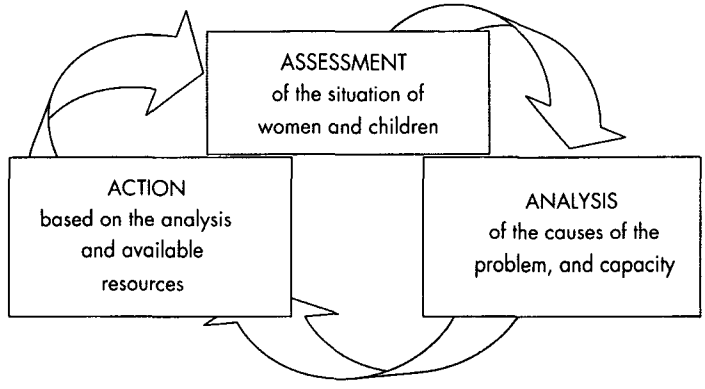


Source: UNICEF (1990).

assumptions of stakeholders. When advocacy strategies are developed, the broader context of decisionmaking that shapes agendas and implementation processes is rarely considered.

There are, nevertheless, some success stories. Advocacy campaigns addressing vitamin A and iodine deficiencies have responded to the perspectives and interests of donors and country leaders eager for rapid, measurable results. These successes need to be transformed into opportunities for initiating broader approaches.

Figure 2.3 The Triple A Cycle



Source: UNICEF (1990).

Nutritionists need to learn how to interact more strategically at all stages of policy development, from agenda setting to evaluation. They need informed understanding of other parties' values, priorities, and decisionmaking (Pelletier 2002). Change occurs in different ways over different time spans. Time is needed to cultivate alliances and networks and to foster a spirit of ownership to pave the way for effective advocacy. Advocates and policy entrepreneurs must also accept not always having evidence of impact.

The Impact of Nutrition on Poverty Reduction Needs More Emphasis

A limitation of the UNICEF Conceptual Framework is its depiction of nutritional status only as an outcome, underplaying nutrition's potential as a powerful input into other processes of human development, including health, education, and poverty reduction. More energetic thinking on fueling virtuous cycles to improve nutrition and reduce poverty could help reposition nutrition—in the United Nations Development Assistance Framework, in the Millennium Development Goals process, and in country-level poverty reduction strategies.

The conceptual framework may also be misused—for example, when invoked to characterize malnutrition as "too complex" or too rooted in basic societal causes for one sector to make a difference. Or, when it is used solely to legitimize attention to every determinant at every level. In the Philippines, for example, the framework has helped by providing a common point of reference and language. The problem is that Philippine national nutrition plans assume that nutrition programs must address livelihoods as well as nutrition problems because poverty is a cause of malnutrition (Heaver and Mason 2000).

The framework is a tool. Its main purpose is to pose questions and to gather information linking outcomes with causes from the malnourished child upward. Thus it helps to make strategic choices on actions. It is true that malnutrition is often a result of all three determinants—inadequate food, care, and health services. Analysis usually points to critical gaps in resources or practices in whichever of these areas needs priority attention.

Sound Data Build Understanding of Malnutrition-Poverty Links

Knowledge of nutrition problems and solutions is only one factor in advocating change. Such knowledge must be based on sound data. Differences in the measurement and interpretation of data lead to miscommunication. Without a shared understanding of the baseline, agreement cannot be reached on the type and intensity of effort required to reach nutrition targets.

In the Philippines, such differences relate primarily to the use of local anthropometric standards and cutoffs. At the time of the assessment study, these were neither in line with general scientific thinking nor internationally comparable. This led to official measures of malnutrition prevalence and trends that suggested that the problem would disappear in 10 years—in contrast to estimates based on the internationally recognized method indicating that malnutrition would persist for more than a century at the prevailing rate of decline. This clash in perceptions affects policy decisions. As the case study authors state, "If the perception is that

protein-energy malnutrition is not too much of a problem, with unsure consequences, and anyway by some measures is receding well, then . . . pressures for resources and decisions to tackle the problem can be resisted—and this is what is happening" (Heaver and Mason 2000).

Build on Success, Don't Compete with It

Globally, the past 15 years or so—the period covered by the assessment—represent "the era of micronutrients." Evidence of micronutrient deficiencies has grown on all fronts: on the nature of different deficiencies, their multiple consequences, their costs, and the application of simple direct interventions (usually vertical) to bring quick, visible results (Allen 2002). All these features make control of micronutrient deficiencies far more attractive to governments and donors than the slower, more diffuse community-based actions that prevent and control other forms of malnutrition over the long term. Micronutrient interventions such as mass vitamin A dosing require twice-yearly campaigns taking just a few days. They need little institutionalization because staff can be temporarily redeployed. Low cost and high profile make them even more attractive to politicians.

Micronutrients were given prominence at the 1990 World Summit for Children and the 1992 International Conference on Nutrition. But it was probably the Ending Hidden Hunger conference in Canada in 1991 that had the most impact. The rise of micronutrient interventions is a global narrative that has changed countries' policies. It is also a lingering legacy of the single-nutrient orientation of early approaches to malnutrition. The more complex narrative of preventing early childhood growth failure has been less influential—because it demands several actions rather than one, it takes longer to show results, and it costs more.

Nothing is wrong with technology-driven solutions, as long as they are effective, sustainable, and do not detract from addressing the main issues. Yet few would challenge the assertion that existing technologies for controlling micronutrient deficiencies have crowded out other approaches. Quick observable gains through high

profile, vertical interventions have generated visibility and financial support. But too often, they have left the more complex, locally appropriate, and sustainable programs (as well as capacity and institutional development) starved for support. The UNICEF portfolio review (Shrimpton and others 2002) provides clear examples of the disproportionate emphasis on micronutrient interventions, as do country case studies:

- With operating budgets financed entirely from external sources, the Tanzanian Food and Nutrition Centre pursued programs driven largely by the nutrition agendas of its donors. In the mid-1980s and increasingly in the 1990s, those agendas were dominated by the micronutrient emphasis; so, by the early 1990s, the center's main operating departments were heavily focused on activities aimed at vitamin A, iodine, and iron deficiencies (Dolan and Levinson 2000).
- The Philippine National Micronutrient Operations Plan (1996–98) established the perception that micronutrient malnutrition was visible, mattered for health and development, and could be tackled easily. Not surprisingly, the Philippine Senate responded by declaring that vitamin A and iodine programs were the only two nutrition activities worth pursuing (Heaver and Mason 2000).

The fact that technologies were available was more influential in setting priorities than was knowledge of the consequences of different forms of malnutrition. For example, despite disturbing evidence from Pelletier's (1994) widely cited research on the contribution of general malnutrition to the burden of disease, little enthusiasm exists for programs that would directly address the strong relationship between infant growth deficits and child mortality. Unlike the relative ease of tackling vitamin A deficiency (VAD) through supplementation, there is no single, simple technology at hand for tackling general malnutrition.

Iron deficiency, which shares many of the problems of general malnutrition, is the one important micronutrient that has benefited

little from the micronutrient era. Anemia has been recognized for decades as a complication during pregnancy and the postpartum period, and most health ministries in developing countries have programs to provide iron supplements to pregnant women. However, with iron deficiency attracting the lowest political commitment among the "big three" micronutrient deficiencies, these programs have been poorly funded and implemented.

The internal division in the nutrition community on priorities and the pervasive "either-or" mentality ("micronutrients *or* general malnutrition") have hurt advocacy. More creativity is needed to translate success with micronutrients into opportunities to initiate broader approaches.

Engage Stakeholders and Policy Entrepreneurs in Policy Development

Advocacy is about influencing action to achieve results. But how important are specific nutrition policies? A "nutrition policy" essentially comprises a coherent set of principles, objectives, priorities, and decisions that is driven by the goal of improving nutrition, adopted by a government, and implemented by its institutions as an integral part of its national development plans.

Experience in many countries, revealed through this assessment and elsewhere, suggests that national nutrition policy should emerge from consensus-building that involves bargaining among stakeholders. Such an approach demands that stakeholders enter the process with agendas that can be negotiated. A culture of constructive give-and-take needs to be cultivated, with all participants adhering to the tenet "the best may be the enemy of the good" and accepting the pragmatism of compromise. A multisectoral dialogue may prolong the process of drawing up a policy, but it may also catalyze a broader awareness of nutrition.

Policy entrepreneurs are "champions" who carry forward the policy process at international as well as national levels. These individuals need to have access, influence, and patience. And they need to have resources. In Madagascar, one community nutrition program, SE(E)CALINE (Sécurité Alimentaire et Nutrition Élargie)), was

particularly well promoted. Thanks to its national director, a tough, persistent, well-connected policy entrepreneur, the program moved expeditiously through the right political channels.

Take the Approach that "Policy Is What It Does"

The approach that "policy is what it does" (Schaffer 1984) avoids the pitfall of implementation being seen as something that happens separately *after* policy is made. Where policy and implementation are "delinked," accountability for results is lower or absent, and policies often fail. In India, for example,where "policy" only existed on paper, a National Nutrition Policy was declared in 1993 with the formation of a National Nutrition Council; yet, seven years later the council still had not met. Several of the National Plans of Action for Nutrition, which emerged some years after the International Conference on Nutrition in 1992, did not even discuss implementation.

Learn by Doing: Reforming Policy by Improving Programs

When appropriately designed and effectively implemented, nutrition programs can themselves change or trigger policy development. The World Bank took that approach in India, where it was hoped that the experience of the Tamil Nadu Integrated Nutrition Program would eventually be reflected in national nutrition policy. This did not come about immediately. For a long time, populist demands for loosely targeted food handouts and general child development services overshadowed the nutritional logic of targeting based on growth faltering. Nevertheless, with ongoing dialogue and state-level adaptation, Indian nutrition authorities eventually embraced key tenets of the Tamil Nadu program.

Approaches tested in Tamil Nadu have also transformed policies in other countries, such as Bangladesh. Another clear example of programs influencing policy comes from Zimbabwe in the 1980s, where the Community Food and Nutrition Program triggered the development of a nutrition policy aimed at galvanizing support and

other services from other sectors (Tagwireyi and Greiner 1994). A potential advantage of this learning-by-doing methodology is that approaches are tested "live" where the policies will be applied.

Ensure that Goals Are Shared, Realistic, Challenging, and Linked to Clear Actions

Agreement and realism are essentials in setting targets. Although dramatic reductions in malnutrition are routinely announced as goals, they are rarely linked to concrete activities, much less at the local level. And the lack of resources to bring about results leads to even greater disappointment. The key to broad impact is realistic planning and careful assessment of what is required. Goals agreed upon internationally may be useful politically, but program goals that are grounded in local realities are even more useful in the long run.

Policies need not be all encompassing in defining the problem or the solutions. In some cases, promoting targeted nutrition-relevant legislation (such as universal salt iodization) may be an effective route at the national level. However, advocacy for incremental approaches should still link to the big picture and highlight what is actually needed to address broader nutrition needs.

The Broad Consensus on What It Will Take Is Not Reflected in Action

Experience shows that malnutrition *can* be effectively addressed on a large scale, at reasonable cost, through appropriate programs, and with strategies that sustain political support.[4] Countries as diverse as Bangladesh, Brazil, Thailand, and Zimbabwe have demonstrated that rapid improvement in nutrition is possible. Most successful policies to overcome malnutrition have as their cornerstone participatory, community-based nutrition programs involving at-risk groups. Such programs, combined with health sector activities, are often supported by policies that improve poor people's access to social services, enhance women's status and education, and foster equitable economic growth.

Context is key: Community-based programs seldom target nutrition alone—communities have broader priorities—so the means must be found to embed nutrition and health activities in broader, multifaceted human development programs.

Decide What to Do

Where malnutrition is rife, a series of issues needs to be addressed so that an appropriate mix of actions can be agreed on. What are the causes? What capacities and resources can be mobilized? Which potential interventions are likely to work?

There is no blueprint, but in most cases the direct nutrition activities that emerge from the problem, assessment, and analysis are similar across countries and indeed across continents. For young children, these generally involve growth monitoring and promotion; promoting breastfeeding and appropriate complementary feeding; targeting at-risk populations for supplementary feeding; complementary health services; micronutrient fortification; and adopting new communication methods to change behavior.

Consider Coverage, Targeting, and Intensity

The coverage, targeting, and intensity of programs are key to the impact that they achieve (Mason 2002). *Coverage* refers to the share of the at-risk population participating in the program, and *targeting* refers to the degree to which the coverage is directed toward the neediest among those able to respond. For example, a program might initially target only children ages 6–24 months—the age group that is most vulnerable but most responsive to interventions. Programs will also usually include pregnant women because of their vulnerability and the relationship between their nutritional status and the birthweight of their offspring—and because they simply may be more accessible during pregnancy.

Intensity refers to the financial resources or program personnel per participant. Experience suggests that programs need to spend around $5–10 per participant per year to be effective. If additional

food is provided, the program's financial cost approximately doubles. The incremental personnel cost varies more widely country to country. In Thailand, the program used a ratio of 1 to 20—one community mobilizer per 20 households, and one facilitator or supervisor per 20 mobilizers (Tontisirin and Gillespie 1999). However, the programs in Tanzania and Tamil Nadu, India, maintained acceptable workloads despite lower ratios.

The relationship between intensity and impact is almost certainly not linear (Mason 2002). Below a certain threshold, resources are too thinly spread to have much impact. In addition, some well-conceived programs may be ineffective because their coverage is too low or because they fail to reach those most in need. Coverage and targeting often work at odds. Large-scale programs have wide coverage but are usually poorly targeted. Small-scale programs, often run by nongovernmental organizations (NGOs) are usually sufficiently intense to ensure good targeting, but their coverage is often low.

Ensure a Good Process

Beyond such design issues are critical questions about *how* these activities should be initiated, implemented, managed, and monitored. Indeed, these questions have proved to be the main stumbling blocks in realizing the large-scale potential shown by nutrition interventions in efficacy trials.

Success in nutrition requires more than just achieving desirable outcomes—such as less child malnutrition. Good outcomes require good process. In discussing development as freedom, Amartya Sen (2000) makes a similar distinction. "Culmination outcomes," he says, are those for which the outcome is paramount, and "comprehensive outcomes" are those for which the process of achieving the outcome is also important.

Increasingly a "good process" is defined as one in which participation, local ownership, and empowerment are the driving forces. Focusing on process aligns with the human rights rationale for action wherein beneficiaries are active subjects of their own growth and development rather than passive recipients of welfare transfers.

In programs involving multiple partners, good process means that a working consensus is generated on the problem and its main causes before solutions are designed. The Triple A Cycle in many ways simply institutionalizes common sense. Its virtue lies in its straightforward sequencing of the three key stages in problem solving and decisionmaking: assessment, analysis, and action. Maximizing participation is the best way to produce a workable consensus.

Top-down, outcome-focused, service delivery–oriented nutrition interventions (such as micronutrient supplementation) have dominated nutrition. However, their limited attention to community ownership and strengthening of local processes may undermine their long-term effectiveness and sustainability. By contrast, bottom-up, process-focused initiatives (often supported by NGOs) are typically fairly small in scale and their impact may be limited by their focused coverage. However, with their greater emphasis on participation and empowerment, they tend to be more sustainable and effective in the longer run. Most successful programs combine both outcome and process orientations. Large-scale examples warranting close monitoring include the Integrated Nutrition Program in Bangladesh and the Nutrition Enhancement Program in Senegal.

Promote Sectoral Convergence and Local Integration

The complexity and multifaceted character of malnutrition poses challenging problems on how to coordinate program implementation across sectors. Evidence suggests that packaging multiple interventions into a single, centrally financed program should give way to local convergence of separate programs. Indeed, the shift toward decentralization is in line with this approach. Moreover, local governments and communities seldom see interventions for health and nutrition, or interventions for women and children, as separate from one another.

In the Philippines, packaging multisectoral interventions into a single program has not worked well (Heaver and Mason 2000). Either the interventions were not implemented coherently as a program (as in the Expanded Malnutrition Prevention Project) or the components (especially microcredit and livelihood creation) were

poorly designed and implemented. Trying to do everything in a single, poorly financed program usually leads to patchy coverage and not much impact.

The Triple A approach offers a methodology for maximizing participation and ensuring appropriate targeting of actions. Growth monitoring helps to identify families in need of primary health care services and health and nutrition education. In Thailand, minimum basic needs indicators and growth monitoring are used to help identify the food-insecure households, on whom livelihood creation programs are then targeted. Asset surveys and household characteristics can identify the ultra-poor for the targeting of food stamps and other social safety-net interventions.

In Madagascar, there is reportedly divided emphasis between ensuring wide coverage and fostering sustainable processes. (Mulder-Sibanda and Crélerot 2000). Two community-based nutrition programs illustrate this divide. Nutrition à Assisse Communautaire (NAC) is supported by UNICEF and managed by the ministries of health and agriculture, while SE(E)CALINE, a much larger program, is supported by the World Bank, implemented though the prime minister's office, and managed by NGOs. The ministry of health recently declared its intention to scale up the NAC to the national level, though it lacks the means, vision, and management capacity to effectively do so in reasonable time. SE(E)CALINE has effectively reduced malnutrition but is criticized for too little emphasis on sustainability, calling its future into question once external funding ends.

Different coordination mechanisms are clearly required in Madagascar. There have been two promising signs. First, an interagency task force was created in 1997 to regulate information dissemination and education, and to standardize the communication materials and guidelines that can now be found in community-based nutrition initiatives and health centers. Second, with support from the LINKAGES program and funding from United States Agency for International Development (USAID), the Interagency Action Group for Nutrition was established, also in 1997, as a forum for sharing experience in nutrition.

Carry Out Operational Research As Needed

Several important technical issues require further operational research. More needs to be learned on improving the nutrition of adolescent girls and women, putting life cycle approaches effectively into operation, and building in systems for rapid operational learning and consensus-building. Overall, more needs to be learned on how to scale up effective projects.

Operational research also needs to emphasize iron deficiency. The main cause of anemia, iron deficiency is also the most understudied of the key micronutrient deficiencies. A few programs are addressing iron deficiency in pregnant women. These programs have adequate supplement supplies, logistical capacity to ensure that women are reached, counseling services to improve compliance, evaluation systems to study impact, and support from public health programs addressing other causes of anemia, such as parasites. More operational research is urgently needed on large-scale iron supplementation and how to address iron deficiency and anemia in vulnerable groups. Even though anemia is endemic among children under age two in many developing countries, only a handful of countries have policies to provide iron to this age group, and even fewer have programs that effectively reduce the high prevalence.

There is also a need to experiment with and document food-based approaches to reducing malnutrition— for example, the conditions under which food supplementation should be considered the intervention of choice. Food policy and food security, and their links to nutrition outcomes, also need more attention.

Few Large-Scale Programs Are Rigorously Monitored and Evaluated

Good evaluations are valuable fuel for future program design and for advocacy—because they state what works and why. Yet as shown in all four case study countries, there are few good evaluations of large-scale community-based nutrition programs. For example, an evalu-

ation in the Philippines reported the prevalence of severe and moderately underweight preschoolers fell in one area from 80 to 35 percent in just a year—an impressive but implausible rate of decline. When rigorously scrutinized, the widely cited evaluation turned out to be deeply flawed.

There is no escaping the fact that more and better evaluations—addressing the challenges highlighted in box 2.1—are urgently needed. In Madagascar, community-based nutrition projects have claimed dramatic reductions in malnutrition rates—two to four percentage points a year. However, the data, originating from the projects' weighing sessions, are highly sensitive to selection bias and cannot be taken as evidence of effect without other supportive data. Two demographic and health surveys showed no reduction in malnutrition rates. In fact, in the regions where community-based

Box 2.1 The Challenges for Nutrition Program Evaluations

Demonstrating the full range of beneficial outcomes may be more difficult in nutrition than in other interventions — such as immunization. Evaluating nutrition programs poses unique challenges for several reasons:

- Nutrition is the outcome of a myriad of interacting social processes.
- These causative processes are markedly site specific.
- A central aim of many nutrition programs is to change human behavior.
- The benefits from improving nutrition vary widely in type, level, and timing.
- Many common indicators of outcomes, based on anthropometry, are quite sensitive, but not specific to the causes or the benefits from alleviating malnutrition

Source: Gillespie (1998).

nutrition projects focused their activities, the surveys found rates that were the same as or significantly worse than those in other regions.

The model for successful nutrition programs is based on suggestive evidence from only a handful of countries. The case for nutrition must be made on stronger empirical grounds. Knowing what works and why is essential, but it is just as important to know why programs fail.

Inadequate Capacity Limits Progress Against Malnutrition

Inadequate capacity at all levels—from household to national government to international agencies and across the range of policymaking tasks and actions—represents a major constraint to overcoming malnutrition. "Capacity" is complex, both conceptually and operationally. Here we define capacity as the ability of a person, community, or organization to take control of its destiny and manage and direct its development through an iterative process of assessment, analysis, and action. Capacity goes beyond the quantity and quality of human, economic, and organizational resources. It also includes factors such as authority, power, responsibility, incentives, and leadership. It includes systems of problem solving, decisionmaking, and communication. Different actors need different capacities to undertake the tasks required for a common goal.

Developing the Capacity to Achieve Nutrition Goals—Wherever Needed

Demand for nutrition programs tends to be weak at all levels—itself a capacity constraint stemming from the weaknesses in advocacy and communication. At the community level, malnutrition (at least moderate malnutrition) tends to be invisible because it is so widespread. It may be considered a domestic issue, not worthy of concerted public action. At the government level, nutrition generally resides in relatively weak ministries with little voice in economic policymaking. Its importance to economic development is seldom discussed in

economic circles. In sectoral ministries, nutrition must compete with other "worthy causes" for limited resources, but it is invariably outside the mainstream of the sector's concerns (see, for example, box 2.2, the case of Tanzania).

Box 2.2 Institutionalizing Nutrition in Tanzania

In Tanzania in the 1980s, the Swedish International Development Authority (SIDA), the Tanzanian Food and Nutrition Centre, and UNICEF developed conceptual and operational tools for nutrition programming. Their common efforts led to the Joint Nutrition Support Program in Iringa, a landmark project emphasizing social and community mobilization, local problem assessment and action planning, and nutrition and food security programs tailored to communities.

The program's dramatic success led to national replication in the 1980s and early 1990s as the Child Survival and Development Program. Nevertheless, aligning nutrition with community development had a price. In the 1980s, the era of reform and cost cutting, community mobilization processes were considered "too slow." Emphasis shifted toward vertical micronutrient programs, and nutrition was considered distinct from health reform. In addition, two important institutional changes took place:

First, the planning ministry, which had given serious attention to the Child Survival and Development Program, was stripped of much of its responsibility and authority during the 1990s. Viewed by reformers as a symbol of central planning, the ministry became a shadow of its former self; its authority now rests with the ministry of finance. With this shift in authority and responsibility, the Child Survival

Box 2.2 (continued)

and Development Program (intentionally protected from domination by the ministry of health by UNICEF and other donors) lacked a home in the central government.

Second, the Tanzanian Food and Nutrition Centre also suffered. The decentralization effort in Tanzania failed to change the institution's centralized operational strategy, leading to inadequate monitoring and evaluation, quality control, and logistics.

Meanwhile, the ministry of agriculture's nutrition unit was only generally concerned with food security and home economics extension work. And communities remained largely voiceless. Thus nutrition fell through the institutional cracks.

UNICEF Tanzania in recent years has focused on developing capacity—emphasizing clear, workable systems for responsible and accountable service delivery and systematically providing essential skills to village workers, their supervisors, and their colleagues in the health system who support them. Strengthening districts' ability to use monitoring data from communities in a decentralized version of the "management by exception" system is another UNICEF Tanzania priority. Nationally, there is recognition of the need to develop capacity for state-of-the-art operations research and program evaluation—ideally in a revitalized and now program-driven Tanzanian Food and Nutrition Centre.

Source: Dolan and Levinson (2000).

The debate over institutionalization of nutrition has moved through at least two stages, and it may now be entering a third (Levinson 2002). In the late 1970s, multisectoral nutrition planning

was the vogue, including among social science activists. The aim was to direct non-nutrition policies and programs toward nutrition outcomes. Nutrition units were often set up in planning commissions. Their scope was typically limited, with little authority or political support. In fact, planners were offered few incentives to change what they were doing.

In the 1980s, the pendulum swung toward isolated nutrition interventions. The era was characterized by internal struggles over the organizational locus of nutrition—whether it "belonged in" the food and agriculture ministry, the health ministry, or an independent agency. Debate raged on whether the science or the practice of nutrition should determine its location, and who would have responsibility.

In recent years, the trend has increasingly been toward goal-oriented nutrition action. There is more coordination among agencies, creating new opportunities for shared operations and common sets of goals—such as the United Nations Development Assistance Framework (Levinson 2002). Today the question is not so much where nutrition resides institutionally, because there may be several locations, but what types of capacity need strengthening at different levels and in different institutions.

Decentralization Provides Challenges and Opportunities

The terms *participation*, *involvement*, and *ownership* are all used to describe the role of communities in nutrition improvement. "Community-based" does not automatically equal "community-driven." "Community participation" is sometimes used as code for co-opting local people to undertake certain tasks cheaply, furthering goals set by external agencies. Programs are seldom sustained where community participation in implementation is not matched by power in decisionmaking and control over the use of resources. Active community participation needs to be clearly distinguished from passive or coerced participation. Rhetoric must be set aside, and practical ways must be found to turn community-based into community-driven approaches.

Threats to decentralization persist. In India, for example, the practice of active community involvement lags far behind its rhetoric. Indian nutrition programs may be community based, but few are community *driven*. For decades, India has referred to itself as "decentralized" through the *panchayati raj* governance system. However, until recently these local bodies had neither real decisionmaking power nor the authority to raise or control funds. Decentralization of responsibility was not matched by decentralization of power.

Spending on Nutrition Is Generally Low and Poorly Targeted

Measuring resource flows for nutrition is difficult.[5] Yet, by any reasonable standard, nutrition spending is clearly inadequate—both nationally and internationally—when judged against the magnitude of the problem that it addresses (box 2.3). The limited resources invested in nutrition translate to low coverage and intensity, and in turn have a low impact.

The 20/20 Initiative, adopted at the 1995 World Summit for Social Development in Copenhagen, urged industrialized nations to devote at least 20 percent of their aid budgets to basic social services, including nutrition, primary education, safe water supply, and reproductive health care. Few countries achieve this target. Moreover, although aid for health has grown, little goes to nutrition. Member countries of the Development Assistance Committee (DAC) of the Organisation for Economic Co-operation and Development (OECD) have increased their aid allocations for health by about 3 percent a year in real terms since 1975, from a few hundred million dollars a year to $3.5 billion today. The share for health has also increased, from about 4 percent in the early 1990s to around 7 percent of total aid in 2000 (OECD 2000). Nonetheless, DAC countries direct only 10 percent of their aid for health to basic health care, the component that includes nutrition. For multilateral aid, this share is 8 percent. The amount actually spent on nutrition is minimal. To actually improve the health and nutritional status of

Box 2.3 Efforts by UNICEF and the World Bank Are No Match for the Scale of the Problem

A third of the goals emerging from the 1990 World Summit for Children relate to nutrition. UNICEF offered clear policy guidance on how to achieve these goals in 1990. The UNICEF strategy centered on empowering families, communities, and governments to improve the nutrition of women and children through efforts based on adequate information and sound analysis. In 1993, the executive board endorsed three mid-decade goals: promoting breastfeeding, eliminating iodine deficiency disorders, and eliminating vitamin A deficiency.

The impact of the nutrition strategy has been mixed. Program support for nutrition broadened, and country programs expanded beyond general malnutrition to give more attention to breastfeeding, iodine deficiency disorders, and vitamin A deficiency. However, the number of country programs aimed at general malnutrition declined, and the share of programs on maternal malnutrition and low birthweight fell to less than a third.

On the positive side, an enormous increase in coverage was achieved for iodized salt, vitamin A capsules, and exclusive breastfeeding. For children, these achievements translated into millions of lives saved, disabilities prevented, and development improved. Nonetheless, these advances against micronutrient malnutrition were made at the expense of UNICEF's commitment to the nutrition strategy and its contributions to reducing general malnutrition.

The World Bank focuses resources strategically at the country level. It emphasizes broad-based policy dialogue combined with investment in stand-alone projects and in components of sectoral programs. This approach has served some countries well. Projects with substantial nutri-

Box 2.3 (continued)

tion components gave visibility to the problem, provided a substantive basis for policy discussions, and created an opportunity to test and refine interventions. The Bank has learned much from careful review of its work in this area, and it produces a steady stream of global and country analyses. Nevertheless, food and nutrition have rarely been featured in the Bank's higher-level policy discussions with client countries.

Nearly 30 years after initiating work, nutrition remains outside the Bank's institutional mainstream. Nutrition is not dealt with systematically in country assistance strategies or in poverty assessments. It has not generated more than one or two substantial operations a year. World Bank annual nutrition investment is less than $100 million, which is around 5 percent of total annual investment in health. Overall, the Bank's effort falls far short of what the scale of the problem and its centrality to poverty reduction, human development, and economic growth warrant.

Source: Shrimpton and others (2002); World Bank (forthcoming).

people in developing countries, donors would need to increase the aid available for country-level health and nutrition-related programs substantially over the next few years (WHO 2001).

The 20/20 Initiative asked developing nations to commit about 20 percent of their national budgets to basic social services. Few are meeting this target. A 1999 survey by UNICEF and the United Nations Development Programme (UNDP) found that only three countries in Africa were doing so: Namibia (30 percent), Mali (23 percent), and Kenya (20 percent). The rest were far below target. For some 30 African countries, the average was 13 percent (IPS 1999).

Most direct spending on nutrition is subsumed under health expenditures, which are low in the first place. One study showed that the poorest African countries—those with gross national product (GNP) per capita of less than $300—spend just 1.4 percent of their GDP on health, or $3.20 per capita (Peters and others 2000). Nutrition spending, often poorly targeted, represents only a small fraction of these meager amounts.

The assessment's case study data broadly align with these findings. In India, for example, spending for direct nutrition activities by the central and state governments amounted to less than 0.2 percent of GDP during the 1990s. And India is a country where one child in two is malnourished! Even if budgeted, it is not certain that funds are actually available, much less that they go to the community-based programs effective in improving nutrition. In the Philippines, only 11 percent of the funds budgeted for the 1993–98 national nutrition plan were actually available.

Poor targeting of nutrition funding is another serious problem. Both India and the Philippines spend large sums on food security, yet most studies find that this spending is not cost-effective. An evaluation of the consumer subsidy for rice in the Philippines found negligible benefits for nutrition or poverty reduction, yet the subsidies cost $25 million to $75 million a year (Heaver and Mason 2000). This expenditure, applied more productively, could substantially finance a national child nutrition program or a safety-net program for the very poor.

Better Collaboration Could Strengthen Nutrition Action

An underlying theme of the UNICEF–World Bank Nutrition Assessment is that more effective collaboration between the two agencies could strengthen nutrition action at the country level. While the assessment acknowledges that differing organizational cultures and procedures can hamper collaboration, the country case studies also note instances of improving relations and effective joint

action. In the Philippines, for example, the World Bank drew on UNICEF experience and staff assistance in designing the Urban Health and Nutrition Project and the Early Childhood Development Project, and UNICEF helped to resolve procurement bottlenecks through its Copenhagen procurement services.

In a groupware session in January 2000, participants outlined concrete steps for closer collaboration. It is recommended that the two agencies select three to five countries in which to jointly support the government in an intensive effort to achieve nutrition goals. These efforts would be based on national priorities and endorsed by the government and the agencies' country office managers. The effort should emphasize sound analysis, learning through monitoring and evaluation, and capacity strengthening. The starting point in such a joint initiative would be a thorough understanding of how each agency works, joint training of staff, and ongoing learning and reflection on the collaboration process. The benefits of a joint effort would include greater support for advocacy on nutrition issues and would lead to better use of limited resources.

For the Future

As the international development community looks to the future, where should it focus its knowledge-research efforts against malnutrition? More and better evaluations of nutrition programs are critically needed. Sound evaluations are needed not just of programs that are clear successes but of those that are not—for it is as important to know why programs fail as it is to know why they succeed. And the lessons of both success and failure need to be effectively disseminated.

Better information on the nutritional situation is also needed—so that practitioners can target programs where they are most needed, know the baseline before launching a program, and closely monitor progress. More information is also needed on national spending for nutrition. This will support realistic estimates of what it costs to address malnutrition effectively.

Applied research is needed to answer unsolved technical and operational questions. We need to know more about how to improve the nutrition of adolescent girls and women, how to put life cycle approaches into operation, and how to set up systems for rapid operational learning and consensus building. We need to know more about how to scale up effective projects. Operational research is urgently needed on how best to tackle iron deficiency and anemia in vulnerable groups, and on how to apply food-based approaches to reduce malnutrition.

Efforts in all these areas will provide valuable input for sound programs. Combined with adequate human and financial resources and, most important, strong political commitment, they can lead to the sought-after result: accelerated improvement in nutrition.

CHAPTER 3

A Framework for Improved Strategies

David Pelletier

A Framework for Policy Change

The approach adopted in this assessment, which analyzes key ideas (or narratives) and their influence on policy choices, provides a valuable perspective for understanding changes in nutrition policy and practice over the past two decades. Its great strength is its focus on how policy communities take up "new" knowledge and ideas and translate them into policies and programs to reduce malnutrition. This focus is important because knowledge and ideas are key resources that the World Bank and UNICEF use in their interactions with government and NGOs when trying to shape nutrition policies and programs. Even while using this lens, however, it is important to maintain a simultaneous focus on the larger policy process so that the impact of knowledge and ideas is kept in proper perspective. The literature on policy processes is vast and diversified, as revealed in Sutton's (1999) overview, such that a variety of highly detailed but partial views of policy processes can be found. A simplified meta-framework for examining the larger policy process can be a useful tool for trying to understand specific policy situations and recommending strategies for improvement. The more detailed

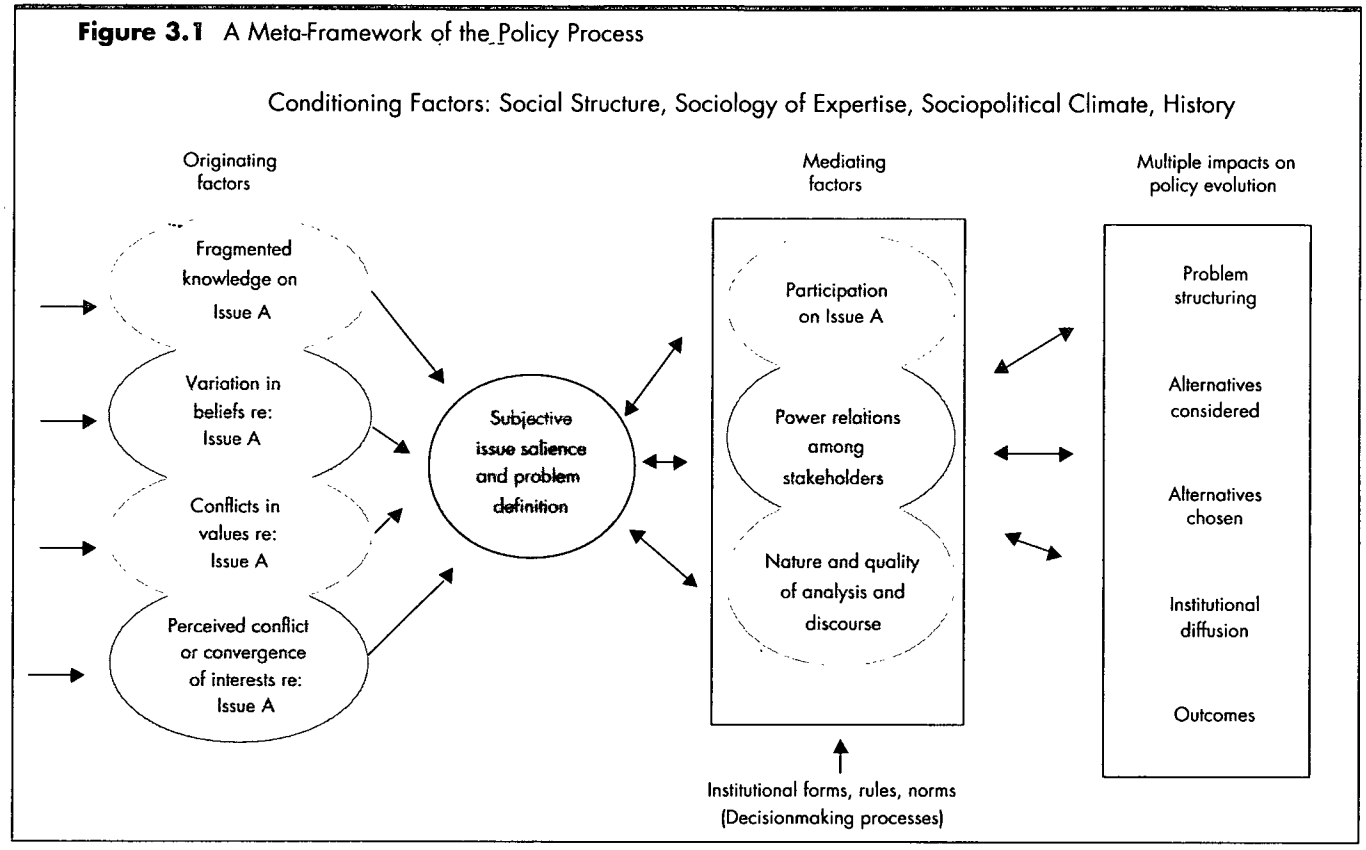
models, such as those reviewed by Sutton, are complementary tools that *deepen* the analysis related to specific aspects such as agenda-setting or program implementation

Key features of the policy process are represented in figure 3.1.[6] The figure shows that knowledge—for example, about the causes of malnutrition shown in the UNICEF Conceptual Framework, or about the consequences of malnutrition described in chapter 4—is indeed a factor contributing to policy change. However, the figure also highlights the interaction between knowledge and several other factors, which are described below.

Knowledge is fragmented. Knowledge is spread across disciplines, sectors, organizations, and participants. This fragmentation is important because it can create strongly competing narratives and incomplete understandings of problems and solutions.[7] Nutrition has a long history of competing narratives, even within its own community—for example, food-based versus supplement-based approaches to micronutrient malnutrition. Moreover, an even wider range of development narratives guides priorities and policies in sectors whose cooperation is needed to achieve nutrition goals, further complicating the task of developing an effective consensus among policy participants. For instance, many economists view the commercialization of agriculture as an important instrument for improving rural incomes and the welfare of the poor, in contrast to some nutritionists who view commercialization as a threat to nutrition. Each of our five theme papers and four country case studies provides vivid testimony that fragmented knowledge and competing narratives are and have been major forces in international nutrition.

Knowledge interacts with other sociocultural factors. There are strong interactions between knowledge and sociocultural factors such as beliefs. These range from political ideology to professional or personal beliefs; they include values, which are the ultimate goals and principles held by various participants,[8] and interests, ranging from material and economic to professional, organizational, personal, and

Figure 3.1 A Meta-Framework of the Policy Process



political forms of interest. Again, beliefs, values, and interests vary widely among nutritionists, and they vary even more across the diverse sectors with which nutritionists work. The five theme papers bring out many of the debates and conflicts arising from these differences in knowledge, beliefs, values, and interests. To highlight just a few: food-based approaches versus capsule distribution; nutrition as a human right versus as a means toward other ends, such as economic productivity; small-but-healthy (the position that small stature is the result of genetic variation—at the population level—and does not have adverse health consequences) versus small-as-malnourished; malnutrition as lack of food, (resolved through food supplements, food aid, and food production) versus malnutrition as a context-dependent combination of food, health, and care; and promotion of community-driven priority setting versus promotion of nutrition at community level. Debates such as these contain claims and counterclaims. They reflect not only variation in scientific understanding, but also more fundamental variation in goals, interests, values, and beliefs.

The significance ascribed to a problem is a function of knowledge, beliefs, values, and interests. Participants in a policy process may have widely different positions, ranging from strong support to indifference to strong opposition, because of their different constellations of knowledge, values, beliefs, and interests—rather than from just knowledge alone. Therefore, how problems and solutions are framed is critical in determining the social patterns of support or opposition. Framing malnutrition as a human rights issue is likely to arouse very different patterns of support or opposition than framing it as a human capital (economic) problem or public health (biomedical) problem. These considerations suggest that improving knowledge alone may not be sufficient to resolve nutrition policy issues. This is reflected in the examples above. Participants bound by their beliefs, values, and interests may hold strongly to views or entrenched positions that are difficult to change through advocacy alone. On the other hand, the background papers and country case studies (see chapters 4 and 5) also revealed many instances in which

changes *did* occur and the conditions that enabled these changes to happen.

What determines the dominant issues? The above paragraphs focus analysis on individual positions, but analysis also needs to consider the group, network, or subsystem where policy views are shaped and decisions are made. Since each individual, group, or organization in a policy process has their own subjective perspective on the problem, several factors shape what the dominant narrative themes and responses are. These include:

- **Participation.** Who participates, when, how, in which forums, with what strategies, and with whom?
- **Power relations among the participants.** What are the formal and informal power relationships, who has the ability to withdraw from participation or resist implementation, what assets and resources can be used to promote support for one's views?
- **Analysis and discourse.** What are the nature and quality of the analysis and discourse, how are they reflected in problems and potential solutions?

Efforts to promote a single, empirically verified scientifically "correct" view (for example, the food, health, and care framework) or a normatively "correct" view (for example, nutrition as a human right) are often doomed—even if they happen to be correct—because such views reflect beliefs, values, and interests that key participants may simply not share with promoters. Implicitly or explicitly, a competition takes place. Its outcome is a function of participation, power relations, and analysis and discourse. Examples from the theme papers include the rapid but resounding defeat of the small-but-healthy view by a more powerful, politically connected set of actors within the international nutrition community; the success with which Alan Berg's internal participation strategy led to acceptance of the basic tenets of *The Nutrition Factor* (1973) within the World Bank; the

ascendancy of the micronutrient focus even within institutions like UNICEF, which had ostensibly embraced its own broader nutrition strategy; and the failure of multisectoral nutrition planning to redirect development policies in favor of nutrition, despite many attractive arguments to support it (see chapter 4). In each example, and many others, there was a competition among narratives—or more baldly—among interests. The outcome was decided not by knowledge but by the sociopolitical factors, namely participation, power relations, and prevailing climate of analysis and discourse.

Decisionmaking processes matter: The effects of participation, power, and analysis and discourse on the evolution of policy are mediated by the nature of the decisionmaking processes, including institutional arrangements. These arrangements act to structure formal authority, responsibility, and decisionmaking. However, informal processes also come in to play, shaping the degree to which diverse perspectives can be integrated and, therefore, the degree of cooperation and support (or opposition) for various decisions and implementation processes. Arguably, these informal processes can be more important than formal institutional arrangements, as happens when policy entrepreneurs act strategically to bypass or overcome inefficient institutional arrangements. Pyle and Greiner (see chapter 5) cite a positive example from India, where the action of a small group of policy entrepreneurs focused attention on the sensitive issue of targeting.

Subjectivity and social process affect all the decision-related components of the policy process. As shown in figure 3.1, these include how the problem is structured and understood; the nature of the alternative actions considered; the actions chosen; the degree to which and ways in which decisions and actions are implemented or diffused; and the evaluation of outcomes.

The broad range of participants in the policy and program process, and their widely divergent views, need to be taken into account. This would, for example, affect how one understands and approaches ministries of health when designing strategies for advo-

cacy and promoting policy or programmatic change. One would approach standard administrative functions such as planning, training, supervision and evaluation less in a hierarchical fashion and more in a community mode, by incorporating participatory approaches, advocacy, demand creation, coalition building, alliance formation, and agenda setting.

The country case studies contain numerous examples where informal processes were used. In Madagascar, the Interagency Action Group for Nutrition (GAIN) grew from a small, project-specific task force to a consortium of 70 organizations. Through informal processes, it has achieved a higher level of effectiveness than many of the formal institutional structures discussed by Levinson in chapter 4.

Context matters. Finally, country-specific factors can significantly affect the relative importance of various elements in the policy process, and they need to be considered in recommendations to improve national policy processes

Toward Improved Strategies

The utility of the policy sciences framework is not that it can predict policy outcomes with great precision in any given situation. The high degree of context-specificity and contingency precludes such prediction. Rather, the framework suggests the kinds of factors to consider when assessing and analyzing nutrition situations and when designing appropriate actions or strategies. By calling attention to a wide range of processes and considerations, the framework can guide decisions about what to look for in an assessment and analysis—that is, the questions to ask and factors to consider—and guard against conclusions or predictions based on erroneous, often implicit conceptions of the processes at work.

Three examples, particularly revealing in the present context, illustrate the utility of the policy sciences framework—and the price paid for *not* using such a framework in the past.

- Nutrition workers rely heavily on advocacy or "information, education, and communications" (IEC) strategies to seek support for nutrition improvement at community and policy levels. This strategy overly emphasizes the knowledge component and neglects the powerful role that subjectivity, values, interests, and beliefs play in problem definition, problem salience, and decisionmaking.
- Nutritionists commonly urge participatory processes at the community level on the assumption that nutrition—in particular, the nutritionists' view—will emerge as a priority. This practice neglects the importance of other participants' values, interests, and beliefs and how they are significant for sustained commitment to actions at community level.
- Nutritionists have a particular type of analysis and discourse that affects the choice of interventions and may limit political effectiveness. Until the recent introduction of the human rights perspective, technical rationality dominated analysis and formal discourse in the field. This rationality is focused on cause-effect relationships and effectiveness of interventions; and it contributes to a high degree of specialization, fragmentation, and lack of internal agreement. The heavy reliance, even insistence, on technical rationality hinders the field's capacity to understand and be understood by (more powerful) development participants using other forms of rationality and "languages," such as economics, which predominantly uses economic rationality.[9] Internal divisions have prevented nutrition from developing a stable political coalition and coherent policy agenda.

As these examples illustrate, the policy sciences framework not only can help increase understanding of the dynamics in policy systems "out there" that nutritionists seek to change; it also can help to recognize, discuss, and potentially resolve collective features that limit the effectiveness of the nutrition community. All of the narrative theme papers and country case studies cited the negative impact

that collective behaviors and biases have on achieving nutritionists' common goals. Strategies for improving effectiveness were suggested by the theme papers, country case studies, workshop discussions, and literature on policy change. Some of these have been acquired through experience and are used by some practitioners but not by others, and some may pose challenges for all practitioners. In no case did this assessment uncover a systematic body of knowledge on these strategies that could be examined, critiqued, tested, evaluated, and shared in an effort to improve practice. Indeed, the assessment process itself revealed that some members of the nutrition community feel this to be neither necessary nor worthwhile. The following suggestions may provide some initial guidance for increasing self-awareness, and thereby lay the groundwork for systematizing knowledge about collective policy practice over time. These suggestions are offered in addition to the more specific lessons presented in other chapters.

Assessment of Social Context

A hallmark of the policy change process is its context-specific and highly contingent character. A change may come about without controversy in a single meeting in one setting; it may require years of advocacy in another setting; and it may be impossible in a third. Targeting programs and services to specific groups provides a good example. Policy participants may agree completely and cooperate fully on some issues but oppose each other on others. Some goals may require new initiatives and high-level decisions in one setting, but they can be met by changing the way existing programs are implemented in another. This context-specificity highlights the need for ongoing assessment and vigilance on social context. To shape a policy agenda, it is necessary to develop and continuously modify context-appropriate strategies. The factors contained in the policy sciences framework (figure 3.1) provide guidance on what to assess. Among these are the participants; their perspectives as shaped by knowledge, beliefs, values, and interests; how modifiable these perspectives are; the assets and resources that participants bring to

the situation; the strategies they use; roles they play; and the situational and contextual factors that could facilitate or inhibit the overall effort.

Assessing Nutritionists' Practice in the Social Context

In addition to assessing "others" in the policy situation, the nutrition community must acknowledge and scrutinize its own perspectives, potential strategies, and assets. Internalizing the key principles of the UNICEF Conceptual Framework helped to question the implicit notions of the causes of malnutrition and of the best solutions. Nevertheless, nutrition practitioners may be unaware, or unresponsive to the ways in which their own knowledge, beliefs, values, interests, and forms of analysis and discourse affect their views of problems and processes. Nutritionists hold firm but often implicit views on the importance of nutrition within the landscape of development problems. They have specific notions about the most effective and desirable strategies and solutions and about the "correctness" of the forms of analysis and rationality that are employed to arrive at them (see table 3.1).[10] The fact that others, including others within the international nutrition community, may see things differently is seen as the problem to be overcome if one's views are to prevail. Do nutrition practitioners represent a better solution or simply a different part of the problem? An alternative, discussed below, is to develop socially constructed strategies that are more consistent with the character of the problems, solutions, and processes.

Working in the Social Context

The above considerations underlie a series of process suggestions that arose from the second workshop of this assessment:

Make use of policy networks, alliances, and entrepreneurship. Policy entrepreneurs are people who are well aware of the socially constructed character of problems and solutions. They are knowledgeable of the prevailing social context and actively seek strategic

opportunities to advance an agenda. They are constantly mindful of their alliances and networks, seek to expand them whenever possible, and view them as sources of information and reciprocal support when agendas overlap. Policy entrepreneurs, alliances, and networks can be purposely identified and created. They can be cultivated and supported with a view toward inclusiveness and strategic positioning.

Build flexible agendas. For alliances and networks to succeed, an agenda is best built from informal processes of negotiation and compromise involving all parties. The intent is not so much to convince others to "buy into" a nutrition agenda preset by advocacy, but to shape an agenda that corresponds to the interests and values of various parties. There are limits on how far each party will compromise. These must be weighed against the short- and long-term benefits of continuing collaboration. A critical asset is the capacity to strategically frame and reframe problems and solutions to meet diverse interests and values. This requires good knowledge of each other's situations and active participation in the process.

Advocate more effectively. Implicit in the above is the notion that political support will be stronger if the agenda is a product of negotiation and compromise rather than advocacy. In reality, however, the lines are often not so clear. First, negotiation and compromise often require multiple advocacy in which each party tries to persuade the other of the value of his or her part. Second, if the alliance or network is paying proper attention to the larger social context, the agenda will anticipate and reflect the interests and values of stakeholders who are outside the immediate network, those who may not have participated directly in the process. Advocacy to those other stakeholders will be more effective if it demonstrates that the agenda is consistent with their values and interests. The wide range of causes and consequences associated with malnutrition can be important in this process because it provides for flexible framing of problems and solutions

to meet the needs of a more diverse range of stakeholders. Equally important, arguments based on causes and consequences often appear abstract to stakeholders. They may be far more animated toward support or opposition based on their perception of the nature of the inputs implied in a given agenda or strategy—in other words, the prospects for receiving food aid, vehicles, bicycles, per diems, promotions, increased work load, and so forth. The main danger to guard against is goal substitution. Gross distortions can occur if the focus on inputs completely displaces the goal of improving nutrition-related outcomes.

Plan with stakeholders. The above suggestions are consistent with a view of policy changes as a dynamic, often incremental sociopolitical process. This contrasts with the comprehensive rational view that has met with so many past disappointments—multisectoral nutrition planning, national nutrition policies, commitments made at the International Conference on Nutrition (ICN), and the like. Neither planning nor plans should be pursued for their own sake, and they should never be divorced from resource commitments and a realistic appraisal of what is required for sound implementation. Planning and plans are a useful part of the policy mobilization process, but only if that process is sensitive to the social context and grows out of the kinds of strategies suggested here. Ideally, planning should be conducted within and by those sectors responsible for the implementation. The process should include those most knowledgeable of the constraints and possibilities for implementation—from headquarters to the community level. Among other things, this means that higher-level coordinating structures, such as national nutrition councils, need to support but not displace or compete with the implementing institutions in these roles.

Set realistic goals and targets. The setting of goals and targets requires the same caution as for planning and plans. Experience has taught that international goals and targets can be useful politically for pol-

icy mobilization, stimulating an in-country process that leads operationally to more realistic goals and targets. Nevertheless, realism is crucial. If national leaders sign on to grand but impossible targets, they are being set up for failure at the outset.

Attend to the macro context. The constraints and opportunities presented by the macro context need to be carefully considered. Current thinking about the roles of markets, governments, and civil society in addressing nutrition and other development concerns favors an expanded role for markets and a more limited role for central governments. This may pose enormous challenges for some strategies proposed in this assessment, such as community-based programs that require large expansions in staff or budgets for implementation and supervision. Creative solutions, including the use of NGOs, and the empowerment of local groups to manage and deliver services, need to be tested. Similarly, the current macro context may create an environment for creative use of market-based strategies—for example, distribution of fortified beverages and other products via commercial channels linked in turn to the distribution of vouchers to vulnerable groups via health facilities. The global commitment to the MDGs and widespread support for country poverty reduction strategies creates further opportunities for nutrition. The inclusion of underweight as an MDG indicator opens a wide window of opportunity for nutrition in related policy discussions.

Nutritionists need to participate in efforts to influence, rethink, and refine current views on the roles of markets, government, and civil society. This includes linking with and supporting NGOs and other civil society groups; promoting and supporting democratic reforms, including free press; cultivating and using relations with the media to influence the tone and content of national discourse; and building social alliances beyond relatively small and elite policy networks. Such actions may be worthy in their own right, and they are necessary for developing community-based programs that are sustainable over the long term.

Table 3.1 Forms of Rationality Underlying Public Policy

RATIONALITY	KEY FOCUS	ILLUSTRATIVE CONCEPTS AND ELEMENTS
Technical	Causal analysis	Cause-effect relationships and mechanisms, dose-response, exposure, objectivity, uncertainty, methodology
	Intervention analysis	Efficacy, effectiveness, coverage, targeting, quality, technical efficiency, unintended consequences
Economic	Allocative efficiency	Opportunity costs, incentives, self-interest, social welfare, consumer sovereignty, marginality, public and private goods, net social costs/benefit, externalities, information failures, market failures, government failures
Normative/ethical	Equity, Ethics, Democracy	Fairness, distributive justice, rights, duties, obligations, autonomy, beneficence, non-malfeasance, participation, consent, legitimacy, accountability, sovereignty
Political	Social allocation, freedom, power	Sovereignty, participation, resources, groups, identities, alliances, interests, values, compromise and reciprocity, ideologies, rules, norms, institutions
Administrative/organizational	Performance, risk avoidance, survival, expansion, control, reputation	Routines, rules, authority, jurisdiction, discretion, professionalism, expertise, planning, management, political pressures, timing, opportunism, coping, negotiation, context, interests, beliefs, culture
Legal	Conformity	Laws, rules, precedents, rights, enforcement, contestation, due process
Multiple/integrative	Effective, appropriate	Wisdom, judgment, justice, dignity, fairness and competence in analysis, deliberation and participation, legitimate representation of public values and interests

Source: Pelletier (2001).

Conclusion

This section has proposed an explicit framework for the policy process and a series of perspectives and suggestions derived from it. This is a logical complement to the UNICEF Conceptual Framework for the causes of malnutrition developed about one decade ago

and now a familiar tool in international nutrition. The UNICEF strategy is intended to guide decisions concerning *what* actions to take. By contrast, the policy sciences framework proposed here concerns the *how* questions insofar as they relate to the interface of policy, programs and politics. Just as Berg (1992) proposed a cadre of nutrition engineers to address the *how* questions at the program design and operational level, the present assessment proposes that a cadre of policy entrepreneurs is needed at the interface of policy, program, and politics. More specifically, this framework calls attention to a range of factors that influence the evolution of policy within a given setting and suggests that actions to improve policy should be based on an assessment of these factors in a given social context. Relevant factors to consider are the perspectives, approaches, and strategies that nutrition practitioners bring to the situation, as opposed to exclusively focusing on "others." Just as the UNICEF framework helped to systematize work during an era when there was no consensus on causes and actions, the policy sciences framework can help systematize efforts to promote more effective and appropriate policy today.

Comparing these two frameworks leads usefully to further suggestions about what might happen in the future. First, the four criteria of internalization of this framework will vary among sub communities.[11] Second, if the framework is used selectively to promote a narrow view of nutrition, it will likely be resisted or rejected because it is not consistent with stakeholders' personal, professional, and institutional situations. Third, the framework might inadvertently be used for purposes other than those intended—for instance, to justify the continuation of inauthentic participatory processes that serve nutrition professionals rather than the broader interests of a community. Finally, another nutrition assessment may be undertaken a decade hence. Progress in promoting appropriate public policy will be scrutinized. The policy sciences framework presented here can be used both to predict and to alter the outcome of such an assessment.

PART II

NARRATIVE THEMES AND COUNTRY CASE STUDY SUMMARIES

CHAPTER 4

Narrative Themes

During 1999, five narrative theme papers were prepared by leading public nutritionists. In the first instance, the narrator documented how particular themes unfolded during the past 15–20 years. The factors that precipitated changes in policies were analyzed, guided insofar as possible by the checklist in box 4.1 (on page 60). Our purpose was to better understood the forces driving change, and ultimately how these factors can be influenced or harnessed. Each narrator was encouraged to interview those who were most involved or influenced, providing contrasting perspectives. This chapter summarizes the narrative themes that emerged.

How Nutrition Policies Change: Lessons from the Promotion and Use of the UNICEF Conceptual Framework*

Introductory Synthesis

In 1990, UNICEF published its *Strategy for Improved Nutrition of Children and Women in Developing Countries.* The two key features of this strategy were a method for assessment, analysis, and action related to nutrition (the Triple A Cycle) and a conceptual framework

* David Pelletier is the author of this section.

Box 4.1 Policy Change Factors

New Research/Data

Policy change happens when:

- a new groundbreaking piece of research is completed that defines a problem and clarifies appropriate courses of action to remedy it;
- a development problem is analyzed in a scientific, technical way, producing tangible data that offer something concrete to act on;
- the publication of research work happens at a time when a policymaking organization is interested in the issue being researched;

Networking

Policy change happens when:

- there are good links between and within agencies whereby lessons learned from practical experience can be shared and acted upon;
- there are good connections between interested parties such as aid organizations, the research community, and government, creating a network through which ideas are exchanged and thoughts clarified about possible policy directions;
- there is a dominant epistemic community, a particularly influential group that has close links with policymakers, and forces an issue onto the agenda and shapes policymaking.

Authority/Influence

Policy change happens when:

- a person in authority has a particular interest in a certain issue and as a result those around him or her are influenced to work on it and develop policy in that area;
- events are timed in such a way that a person who is particularly interested in pushing forward an agenda is working at a time when a powerful political authority has reason to be interested in the same agenda;
- policymaking and implementing bodies have sufficient authority to push a new policy through, even if it is not widely supported.

Box 4.1 (continued)

Simplification

Policy change happens when:

- a development problem is turned into a story that simplifies it and sets out an agenda for action;
- a dominant discourse or way of thinking becomes established, which makes clear certain priorities, thereby simplifying a situation and providing guidance toward certain policy directions;
- a situation develops that is represented in a widely accepted scenario or narrative as a crisis, requiring rapid and dramatic action to avoid catastrophe;
- there is a code of conduct or best practice regarding a particular issue, creating guidelines as to how to act.

Organizational Opportunities

Policy change happens when:

- there is a general consensus within an organization or wider network (which may include the general public) that change is needed, a new policy direction is required, and that old strategies are not working as well as they could;
- an organization and the individuals within it are open-minded and consider it important to adapt to new ideas from the external world, rather than seeing these as a threat;
- an organization fosters innovation. People are encouraged to develop new ways of doing things and are confident their ideas will be considered with an open mind by others;
- there is an individual or a group of people who have an idea for a new policy direction. These change agents carry the idea forward, explaining it to others and building a consensus toward the new position;
- there is a network of people around the change agents who will respond to them and help them carry the process forward;
- an organization has a sufficiently flexible organizational structure to enable the development of new groups or units, which will be effective in seeing a policy change through;
- resources within an organization exist, or can be gathered together, to respond to a new way of working;
- there is the required motivation and energy to use and mobilize these resources to achieve the goals of a policy innovation.

to guide the analysis of the causes of malnutrition in a given context (see figures 2.2 and 2.3). This strategy was developed and disseminated vigorously within the international nutrition and development communities with the realization that the understanding of the "nutrition problem" had changed dramatically over time; that there was great diversity in understandings across sectors, agencies, and disciplines; and that this diversity was contributing to fragmented and often contradictory actions at national and international levels. The UNICEF Conceptual Framework in particular provided an explicit and unified perspective on the nature and causes of malnutrition; it contributed coherence and rationality to the effort to alleviate malnutrition.

This paper provides a narrative concerning the ways in which UNICEF promoted this framework, the extent to which it was adopted and used, reasons for adoption versus resistance, and the implications for future policy work. This narrative considers several theories regarding policy change; it draws upon the knowledge and experiences of several nutrition experts closely involved in the promotion and use of the framework.

The Chronology of the UNICEF Framework

The UNICEF framework was developed partly in reaction to the chaotic proliferation of causal schemas and actions in the 1970s, the multisectoral era of nutrition planning. These models generally sought to be comprehensive and to detail all the major causes of malnutrition and relationships among them. They were highly complex, difficult to communicate and use, and they were unavoidably incomplete in one respect or another. Inevitably, they reflected the sectoral or disciplinary biases of those who created them. Reflecting nutrition thinking at the time, the frameworks could generally be characterized as follows:

- **Monofocal.** They emphasized a limited set of potential causes.
- **Universal.** They underestimated context-specificity.

- **Insular.** They underestimated the linkages among causes of malnutrition.
- **Supply-oriented.** They emphasized problems in the supply of food, nutrients, or health services.
- **Macro or micro in perspective.** They either focused excessively at the individual behavioral or biological level, or at the aggregate level of markets or food supplies.
- **Discipline-bound.** They saw the world from one or a limited range of disciplines.
- **Expert-oriented.** They overestimated the ability of experts, outsiders, and governments to comprehend and control the complex process of social and behavioral change. On the reverse side of the coin, they underestimated the importance of communities and local knowledge in bringing about social change (Kavishe 1993).

In contrast, UNICEF's framework and nutrition strategy were drawn from a set of explicit premises based on both theory and practical experience in Tanzania in the 1980s (Kavishe 1993). The *basic framework*, as it was widely understood, included features such as the distinction among immediate, underlying, and basic causes, and the potential importance of food, health, and care in a given situation. However, the *full framework* and associated nutrition strategy included other important notions often overlooked by users at the time:

- **Malnutrition as a manifestation.** In the UNICEF nutrition strategy, malnutrition is viewed as a manifestation of a much larger problem. As such, the goal is not only to address the symptoms but development, the problem itself.
- **Context-specificity of underlying causes.** The framework does not imply that food, health, and care are everywhere inadequate. Rather, it implies that these define the full range of possibilities; and the relative importance of food, health, and care must be ana-

lyzed in each setting in order to define priorities for action, as proposed in the Triple A Cycle.

- **The effects of food and health are contingent on care.** In the full framework, adequate care is recognized as requiring household food security and health services in order to translate into improved nutrition.
- **Triple A as applied to causes, resources, and power.** The Triple A Cycle , is widely used for analyzing the potential importance of food, health, and care; however, in the full framework it also should be applied to more basic causes of malnutrition, such as lack of resources, weakness in formal and nonformal institutions, and disparities in power. All are relevant at the household, community, national, and international levels.
- **The poor as participants in their own development.** The nutrition strategy stressed the importance of engaging households and communities in assessment, analysis, and action, in contrast to the prevailing reliance on external institutions and expert analysts.

The distinction between the basic and full framework is fundamental to understanding how the framework was (and was not) internalized and used by those outside the UNICEF core group. With leadership from the senior nutrition adviser in UNICEF headquarters, this core group consciously promoted the framework as a guide to developing nutrition actions (see box 4.2 on page 66).

Analysis

Table 4.1 shows an analytical framework for discussing the extent of internalization of the UNICEF Conceptual Framework. As shown, internalization is defined by four criteria—awareness of the visual image of the framework, degree of understanding the nuances and implications of the full framework, incorporation of the framework into one's own written and verbal communications, and translation

into organizational agendas. In addition, four epistemic and policy communities are distinguished: UNICEF headquarters and field offices, international agencies and NGOs, developing country institutions and NGOs, and research institutes and universities.

As shown, nutrition staff in all four settings are hypothesized as being highly aware of the visual image of the conceptual framework and the Triple A Cycle and incorporating at least some elements of the framework into their written and verbal narratives. The most commonly incorporated elements are the "food, health, and care" concept; the notion of immediate, underlying, and basic causes; and the notion that the framework should be used in conjunction with the Triple A Cycle to assess causes in a particular context. It is hypothesized that these staff have a medium (or mixed) degree of understanding of the full framework. These results were assigned knowing that these staff are part of the nutrition epistemic community targeted and reached by UNICEF and its core group. In particular, these are the staff likely to have received the UNICEF "paper of the month mailings" and to have participated in meetings where the framework was discussed (notably but not limited to those leading up to and following the International Conference of Nutrition in 1992). Despite the relatively high awareness attributed to these categories of staff, it is likely that significant variation exists across countries and settings.

In contrast to the high awareness on three of the criteria, nutrition staff in international agencies and developing countries are hypothesized as "low" in translating the framework into changes in their organizational agendas. These staff were likely to have had less control over the actual decisions, actions, and resource allocations of their organizations than over their own awareness, understanding, and internalization. In support of this hypothesis, first, there has been a shift in institutional agendas and resources (in absolute terms and as a proportion of the whole) toward actions such as micronutrient strategies, breastfeeding promotion, and low-cost packages of health services. It is presumed that other aspects of the UNICEF strategy received less attention as a result. Second, in Sub-Saharan Africa,

Box 4.2 Chronology for Development and Promotion of the UNICEF Framework

1981–89

Design, implementation, and evaluation of Iringa Nutrition Program (Tanzania) shows dramatic impacts on child nutrition. Joint effort of Tanzania Food and Nutrition Centre and UNICEF with funding from Italian government.

1989–90

Consolidation of experiences and insights from Iringa. Richard Jolly, Deputy Executive Director of UNICEF, learns of Iringa approach and invites Urban Jonsson to become nutrition adviser at UNICEF-New York

James Grant, Executive Director of UNICEF, and UNICEF Board adopt a nutrition strategy based on the Conceptual Framework, Triple A Cycle, and related concepts from Iringa.

1990

UNICEF's Nutrition Section declines opportunities to make nutrition a UNICEF priority in order to focus on operations and avoid high levels of scrutiny and fanfare.

Nutrition Section identifies 15 priority countries based on known receptivity of country representatives to the nutrition strategy; these countries become the laboratories for expanding the framework and broadening its network of advocates.

Nutrition Section identifies and develops about 12 UNICEF "believers" in the framework who become the core group of promoters and trainers, 35 consultants and strategic allies outside UNICEF, 40–50 allies in governments and NGOs, and a mailing list of 800 people in country offices, government institutions, and NGOs for "Nutrition Paper of the Month." About 150 country staff are trained in 10-day training programs.

1992–93

The ICN is organized around the theme of "food, health, and care" because of strong promotion at the annual meeting of the U.N. Subcommittee on Nutrition (SCN), despite strong resistance from other agencies. National Plans of Action after the ICN were not greatly influenced. Jonsson leaves New York for post as regional director in South Asia.

Box 4.2 (continued)

1994
Internal evaluation in UNICEF reveals high recognition of the visual image and familiarity with "food, health, and care," but poor understanding of the full strategy and how the framework is linked to the Triple A Cycle.

1993–95
UNICEF-New York and the Nutrition Section shift their attention and resources to micronutrients. Many country offices follow suit. Mid-decade goals contribute to this focus on pursuing achievable results. Momentum is lost in promoting the framework and nutrition strategy through training of staff; its use at country and community levels declines. Countries such as India and Brazil (see boxes 4.3 and 4.4) continue to use it in selective ways.

1998
Carol Bellamy replaces Grant at UNICEF. The Triple A Cycle and a modified conceptual framework are adopted as generic tools for all of UNICEF programming.

where capacity building is most needed, a coherent, vigorous, donor-supported effort at capacity building has yet to emerge. Similar examples could be cited elsewhere. Translation into organizational agendas is scored as "medium" in universities and research centers, primarily because staff in these centers have relatively more autonomy with which to adjust their research agendas and curricula in response to new thinking. Even here, however, we hypothesize heterogeneity because of the entrenched nature of institutional research agendas and curricula. Changes that have occurred are likely to have been led by a relatively small group of individuals directly involved with UNICEF's framework and strategy over the past decade.

With regard to non-nutrition staff, it is hypothesized that all criteria other than awareness of visual image are low or very low in all

Table 4.1 Hypotheses Concerning the Internalization of the UNICEF Nutrition Framework and Strategy

	UNICEF		INTERNATIONAL AGENCIES AND NGOs[a]		DEVELOPING COUNTRY INSTITUTIONS AND NGOs[b]		RESEARCH INSTITUTES AND UNIVERSITIES[c]	
CRITERIA OF INTERNALIZATION	NUTRITION STAFF	OTHER STAFF	NUTRITION STAFF	OTHER STAFF	NUTRITION STAFF	OTHER STAFF	NUTRITION STAFF	OTHER STAFF
Awareness of the visual image	High	High	High	Medium	High	Medium	High	Low
Degree of understanding of nuances and implications	High	Medium	Medium	Low	Medium	Low	Medium	Low
Incorporation into own written and verbal narratives	High	Low	High	Low	High	Low	High	Low
Translation into organizational agendas	Medium	Low	Low	Very Low	Low	Very Low	Medium	Very Low

a. International agencies include WHO, Food and Agriculture Organization of the United Nations (FAO), World Food Program (WFP), World Bank, ACC/SCN and bilaterals. NGOs include, among others, Helen Keller International, CARE, World Vision.
b. Headquarters staff in ministries of health and agriculture and national NGOs.
c. National universities and research centers in developing countries focusing on nutrition-related aspects of "food, health, and care" as well as international or developed country institutions actively involved in international nutrition research.

three settings. There are doubtlessly exceptions, but these low ratings reflect the fact that most non-nutrition staff are only tangentially and irregularly part of the nutrition epistemic community, and they do not necessarily share institutional and professional goals, values, beliefs, and incentives.

While table 4.1 shows the overall pattern of internalization, insight that is more detailed can be gained by examining specific cases of how the framework was used. Box 4.3 summarizes the case of Brazil, where civil society groups used the framework to advocate social change related to food insecurity. Box 4.4 summarizes the case of India, where a small team of policy entrepreneurs and strategic allies used the framework and survey data to wage a successful fight with the bureaucracy to convince government officials to focus on care rather than supplementary feeding in a large public health program. These two illustrations, taken with international experience summarized in table 4.1, highlight a number of important lessons that are discussed in the following section.

Lessons Learned

Experiences with the UNICEF framework and associated nutrition strategy reveal several features of the policy process relevant to future efforts.

Theory and practice. The framework and nutrition strategy evolved through the cross-fertilization of theory and practice. The Iringa program in Tanzania provided a concrete opportunity to improve theory and practice, but also made subsequent promotional efforts more concrete, credible, and practical. This was especially important in two ways. First, the renewal occurred during a time when the view was taking hold that nutrition is "too complex and nothing works." Second, it put into practice the principles of capacity building, community participation, and context-specificity.

Opportunism in policy change. The cases of Tanzania, Brazil, and India, among others, reveal that the adoption and use of the frame-

Box 4.3 Brazil Uses the Framework to Focus on Underlying and Basic Causes

The UNICEF framework was introduced into Brazil by public nutrition academics in the late 1980s and adopted by activists in the early 1990s. The UNICEF country office played no significant role—and indeed, it was never called the "UNICEF framework." One of the attractions to the groups that adopted it was its simplicity (without being simplistic). It fostered a common language for food and nutrition problems. The framework also identified malnutrition and death as manifestations of deeper societal problems, notably food insecurity. This provided powerful motivation for civil society groups active in promoting food security. Using the framework to manifest this larger point, these groups advocated actions at the household, community, and society levels, versus health actions to be targeted solely at children. These same groups used the framework to guide the development of a national food and nutrition policy in 1998–99 through an inclusive democratic process. Although the "manifestations and food security components" served the interests and agendas of activists committed to addressing food insecurity through social change. However, many in the health and medical community viewed it as a threat to their own narrative, which generally favored health interventions as the best means to improve child health and survival. Thus, although the framework did not lead to a consensus on the nature of child nutrition and health problems, it greatly broadened the social debate on these issues and provided powerful ammunition for activists.

Box 4.4 India Corrects a Food Bias

In 1994, in one state in India, a window of opportunity was seized by a team of three policy entrepreneurs well-versed in the UNICEF nutrition framework. Reinforced by a small network of strategic allies, and backed by the Secretary for Women and Children, their initiative led to a politically and nutritionally significant change in program policy. The window was created during the planning for the redesign of the national health and nutrition program, a program that has used supplementary feeding for decades and was, in the eyes of the secretary, "ready for a change." With the UNICEF framework in mind, the core team highlighted the ages of 6 to 18 months as crucial to the incidence of growth failure, using recently collected Demographic and Health Survey (DHS) data and promoting the childcare narrative contrary to the then-dominant food narrative. This evidence and narrative exerted significant influence in a series of consensus-building workshops in which participants from 10 states highlighted care and capacity building. In the process, two energetic representatives from indigenous NGOs emerged as advocates to carry and promote the message to the government of one state that supplementary feeding should not play a prominent role in Integrated Child Development Services (ICDS) activities supported by the World Bank. They were able to persuade government to exclude supplementary feeding in one part of that state, a move made possible because political patronage related to food aid had not yet been established in that area. This decision was considered politically sensitive and was approved for only one pilot area. The long-term and wider impact of the decision is not yet clear.

work is associated with a high degree of opportunism and reinterpretation to fit organizational agendas. In Brazil, this took the form of emphasizing the potential link between food insecurity and child malnutrition in advocacy efforts by civil society groups. There is little evidence, however, that the strength of this relationship was explored or confirmed either nationally or locally in Brazil. In India, the framework was used to interpret the DHS data highlighting malnutrition in the 6- to 18-month age group as being due to inadequate caring practices, strongly reinforcing advocacy against the use of supplementary feeding in ICDS. In UNICEF-New York headquarters, the framework was used to justify the micronutrient focus because food, health, care, and capacity building all were involved in micronutrient problems and solutions, in addition to those pertaining to protein energy malnutrition (PEM). In general, all three cases highlight that the UNICEF framework and strategy were used selectively. Stakeholders advance their own preferred notions of critical problems and appropriate actions, a feature of the policy process that is well documented in the literature. While selectivity and creative interpretations may be necessary and unavoidable, there is a high risk of converting the framework simply into an advocacy tool. It can be misused to justify self-serving actions in the absence of legitimate local assessment and analysis. This risk highlights the importance of distinguishing between the basic and the full framework in analyzing how it is used.

Policy entrepreneurs and networks. The three cases clearly reveal the importance of key individuals and strategic alliances within a network of actors promoting policy change. This network need not be large in numbers of individuals. In all three cases, a few committed individuals developed change strategies and seized windows of opportunity for pursuing their shared goals. Strategic alliances among a small number of well-placed or effective individuals occurred at early stages in several cases. At the same time, UNICEF headquarters was developing a strategy for mass promotion of the framework because of its international perspective, pointing to

potentially high payoffs for efforts to train and mentor policy entrepreneurs among nutritionists. As noted, some entrepreneurs and networks will use the framework selectively. Because they are often guided by institutional self-interest, the risk is that they will advocate favored problems and pet solutions whether or not they are associated or consistent with sound assessment and analysis.

Influence can lead to authority. Nutrition promoters are typically disadvantaged because they have little authority, institutional backing, and resources for advancing and implementing nutritionally favorable actions. However, as these three case studies and many others in the policy literature reveal, this does not mean that they are without power. In all three cases, the nutrition promoters relied on their ability to influence others, and that influence eventually led to authoritative changes. For UNICEF, this change included the adoption of the framework by headquarters and many field offices, as well as by other stakeholder categories noted in table 4.1. In Brazil, this took the form of a national food and nutrition policy based on the framework. In one state in India, it led to government authorities deciding to focus on care—particularly on infant feeding practices and activities to empower women so that they have time for childcare, instead of pilot supplementary feeding in a few areas. When taken together with the emergence of the human rights perspective, these cases reinforce the notion that efforts to train and support policy entrepreneurs may have many benefits.

Policy process variations on some basic themes. The cases examined here differed significantly in institutional setting, type of policy decisions, identity of the change agents and other stakeholders, countervailing forces, and so on. Yet some overarching themes are worth highlighting: committed and capable policy entrepreneurs, strategic alliances and networks, windows of opportunity, creativity in using the framework, and the use of information and influence as a strategy. In addition, some larger contextual factors may have facilitated these successes—for example, confidence that the framework represents an

accurate summary of current scientific knowledge and experience, that a consensus exists or is forming concerning its validity, and that the framework can be communicated easily.

Further lessons could probably be derived through encouragement of researchers and practitioners to document their experiences in promoting policy change in general (not solely in relation to the framework) and through forums in which these experiences could be compared and discussed. A tradition of this sort does not exist in the international nutrition epistemic community. It could, however, emerge as a vital feature of the next generation of work in public nutrition.

Health and Economic Consequences of Malnutrition*

Introduction

Malnutrition increases the risk of illness and death; it impairs physical and mental development; and therefore it reduces the productive capacity of individuals. Because of its effect on productivity, a high rate of malnutrition reduces the potential of national economies to grow. Simply stated, this is the understanding that drives development agencies to invest in programs to combat malnutrition. Beyond this, malnutrition and ill health are synergistic, so that both malnutrition and illness can be seen as components of any measure of human well-being. Agencies whose primary concern is human welfare therefore invest in improved nutrition for its own sake and for its effects on other direct measures of welfare: healthy development and longer, healthier life.

The basic understanding of malnutrition as a force affecting survival, health, and productive capacity has persisted for 50 years, though the emphasis has shifted as research has contributed to a greater understanding of the precise ways in which malnutrition—

* Beatrice Rogers is the author of this section.

both PEM and specific micronutrient deficiencies—affects individuals, their households, and the larger economy. Specifically, as research has elucidated the effects of specific micronutrients, there has been a shift in focus from a concern with general lack of food (PEM due to poverty) to efforts to address individual micronutrient deficiencies, sometimes through interventions such as micronutrient supplements or food fortification that do not address household food supply or individual food consumption. At its most general, though, the basic underlying narrative linking nutrition with health and productivity has not been fundamentally changed; rather, it has been strengthened as evidence has mounted concerning the connections between nutritional status and human capacities.

Of course, human capacity is also a determinant of nutritional status. An individual's productive capacity determines, to some extent, his or her command over resources (that is, over income); and to a large extent, an individual's income determines the household's ability to obtain adequate food, live in a healthy environment, and even to obtain the education that may guide the choice of health-promoting behaviors.

The causal connections between nutrition and health and productivity are clear and relatively direct. Children who are born well nourished grow bigger and stronger, and as adults they have a higher capacity for work output. Their cognitive capacity—ability to learn, remember, and perform complex tasks—is also greater. Well-nourished children are more resistant to disease; when they are infected, severity and duration of illness are less, and the children are less likely to die. Children who are healthy and energetic are able to learn better, both in school and through active play; better learning capacity and less school absence due to illness affect their likelihood of completing formal education. Adults whose food intake is adequate are generally more productive in work than those whose intake is insufficient, though these relationships depend to some degree on the nature of the task being performed: some kinds of work permit compensation for lower strength and endurance and other consequences of malnutrition; others do not. Moreover, indi-

viduals may compensate for low work capacity by adjusting their leisure time activities in order to protect their work output.

The connection between productive capacity and real income is less direct; it is mediated by the relationship between individuals and the larger economy. Specifically, productive capacity translates into income to the extent that an individual has access to employment, to productive resources (such as land, livestock, tools and equipment), and to other elements of human capital such as education and training. This means that the effect of improved nutrition of individuals on their households and on the larger economy depends on the social and economic infrastructure: the labor market and other aspects of the mesoeconomy.

The basic understanding that nutrition is essential to both health and productivity has not changed, but experience has contributed to a better understanding of what kinds of interventions—nutrition programs, health programs, and social and economic policies—are effective in improving the nutritional status of populations, and what are realistic expectations for their impact; and this has indeed changed policy with regard to nutrition. Thinking has changed among development practitioners and public nutrition professionals along two major lines. First, there has been an evolution from the belief that economic growth per se would resolve problems of malnutrition through the reduction of poverty rates to recognition that growth strategies must be specifically designed to address poverty. Second, there has been recognition that specific nutrition interventions may be needed in the short and even the medium term, to complement the growth in real income in improving nutritional outcomes. An important element in this evolution has been research that demonstrated the importance of intrahousehold dynamics in determining individuals' access to food and other household resources. Income at the household level may not translate into nutritional improvements if it is not used to improve household food availability and the consumption of vulnerable members—a function in part of who in the household makes decisions and of which members are given preference in consumption. Second, there has been a

recognition that malnutrition cannot be addressed by the simple provision of supplementary food. Malnutrition is the result of a complex of factors (as reflected in the UNICEF framework of food, health, and care), and food, to be effective in reducing malnutrition rates, must be provided, if at all, in the context of interventions that address the other aspects of the nutrition problem.

Adequate incomes and effective health-promoting practices are both essential to ensuring good nutritional status of poor populations. These two concerns are united in the relatively recent concept of household food security, which includes three components: first, availability of food (in the market or through home production), access to food (through adequate income or productive resources), and use of food, which includes storage and preparation of food to maintain nutrient quality; second, allocation of food among individuals within households; and third, the ability of individuals to make biological use of the food, a reflection of their illness status and activity level.

Chronology

In the 1960s, protein shortage was considered the key nutrition problem. Research at the time and into the 1970s focused on the development of protein concentrates and isolates from novel sources and on means of increasing the protein content of conventional foods—technological solutions to the nutrition problem. The United Nations formed the Protein Advisory Group to advise the secretary general on nutrition interventions. However, subsequent analysis of household food consumption patterns showed that if diets were adequate in quantity, then protein too would be adequate, with the possible exception of cassava-based diets. This change in understanding implied that the solutions to malnutrition lay not in the realm of food technology but in the economic arena of access to sufficient food by the poor, and thus focused attention on the importance of poverty alleviation. In the early 1980s, Sommer's research (1984) showing the role of vitamin A supplementation in reducing mortality was one factor in catalyzing a shift to focus again

on specific nutrients rather than overall food adequacy, raising the possibility of technological solutions.

In 1971, a conference was held at the Massachusetts Institute of Technology on nutrition and development. This conference provided an opportunity for senior nutrition and development professionals to interact with academics studying the relationship of nutrition to economic development. This focus on nutrition as an input to development was advanced further with the 1973 publication of *The Nutrition Factor* by Alan Berg, a publication whose preparation was used strategically to advance the idea that nutrition was an essential input into economic growth.

The World Food Conference in 1974, held at FAO in Rome, focused attention on what was perceived as the world's food crisis. In the early 1970s, bad weather in many food-exporting regions of the world and policy changes among some key importing nations resulted in food shortages and high prices, making many nations' food policies unsustainably expensive. Research in the wake of the conference demonstrated at the global level that distribution and access to food rather than aggregate food supply was at the root of nations' food problems.

In the 1970s and 1980s, Amartya Sen's work on famine and entitlements (for example, Dreze and Sen 1989) received considerable attention in the development community. Sen focused on the importance of entitlements in ensuring food adequacy. He made a persuasive case that income distribution and poverty alleviation must be explicitly considered in economic policy if adequate nutrition is to be ensured and contributed to the shift in focus from economic growth per se to growth with equity. Within the Bank, Reutlinger and Selowsky (1976) published an influential study showing that relying on economic growth alone to ensure dietary adequacy among the poor would take an unreasonable amount of time. With a focus on poverty alleviation came an explicit commitment within the Bank to address basic human needs, including health.

Another development in the 1970s and 1980s was the significant advance in the ability to collect household-level data through sur-

veys. More powerful computers and better analytic techniques made possible the widespread use of household surveys to analyze the determinants of nutrition problems and the outcomes of nutrition-related policies and programs. Advances in computing technology and in data collection and analytic techniques have continued to the present, leading to more sophisticated understanding of nutrition problems and their solutions. Major survey efforts such as the DHSs and the living standards measurement surveys (LSMS) have provided researchers with the opportunity to track health and economic indicators at the household level. With advances in survey technology, it has become possible to monitor more closely the nutritional impacts of programs and policies. Such techniques have been particularly useful in analyzing household behavior and intrahousehold dynamics.

The importance of intrahousehold dynamics as a determinant of nutritional outcomes was given prominence in a 1975 Conference on Women in Development sponsored by USAID. The conference reflected and promoted a growing interest in intrahousehold dynamics, interest that has resulted in a continued stream of research through the 1980s and 1990s, up to the present, elucidating mechanisms by which specific interventions may result in improved nutrition. Much of this research was funded by or performed within the World Bank, and conferences on the topic held in 1983 and 1990 included both academics and practitioners from the Bank and other development agencies. At present, the body of research is sufficiently large and consistent that intrahousehold dynamics are indeed taken into account in designing nutrition and other development interventions.

In the early 1980s, several publications advanced the hypothesis that nutritional stunting was not a health or a productivity problem, but rather a healthy adaptation to a food-poor environment—the small-but-healthy hypothesis (Seckler 1982; Sukhatme and Margen 1982). While these studies were widely cited, they did not significantly influence policy; rather, they gave rise to a body of research that countered the doubts they raised and confirmed the links between nutrition and health and productivity.

The 1980s were the era of structural adjustment. Many developing economies were thrown into crisis because of excessive debt and unsustainable economic policies; the World Bank promoted structural adjustment through the provision of loans made conditional on fiscal austerity and measures to reduce the public provision of consumption goods. Such measures were widely seen as damaging to the welfare of the poor. The book *Adjustment with a Human Face* (1987), by Jolly, Cornia, and Stewart of UNICEF, forcefully criticized structural adjustment for its damaging effects on welfare. Although the analysis in the book is subject to question, it created a powerful narrative that caused tremendous pressure on the World Bank to rethink its policies and incorporate a specific concern for the social dimensions of adjustment. Subsequent Bank lending for structural adjustment explicitly incorporated safety-net programs for the poor.

Events of the 1990s included the 1992 ICN and the awarding of two Nobel Prizes to economists whose work has focused on nutrition. In 1994, the prize was awarded to Robert Fogel, an economist who has suggested that malnutrition was a binding constraint on economic development in Europe dating back to the 16th century. The 1999 prize was awarded to Amartya Sen, an economist whose work has emphasized poverty alleviation and measured success in terms of positive nutritional outcomes. An influential article by Pelletier (1994) synthesized data to demonstrate larger than expected impacts of malnutrition on mortality. Within the Bank, the publication of the Comprehensive Development Framework in 1999 represents a commitment on the part of the Bank to human development, a concept that incorporates health, education, and other interventions that improve human capabilities. Despite the importance of nutrition for both health and development, nutrition itself is not explicitly mentioned in the Comprehensive Development Framework. Yet the framework could provide an opportunity for advocates to make the case for investment in nutritional improvement.

Analysis: How Does Policy Change?

The basic understanding of nutrition as a critical input for human health and development, and the importance of these for productivity, has not fundamentally changed over time. The two parts of the argument, one focusing on health and the other on economic productivity, are not competing but rather complementary narratives. As a result, advocates within development agencies may choose one or the other, as best fits the organization's philosophy. UNICEF, with a mandate to address the health and nutrition of children, naturally emphasizes the health effects of nutrition, while the World Bank, with a mandate to promote economic growth and reduce poverty, emphasizes the links to productivity and income.

If the general understanding of the field has not changed, then how has policy been moved forward? Some of the events briefly noted above provide examples of the differing ways in which policy can be changed.

A clear example of the power of synthesizing available information is Berg's 1973 book, *The Nutrition Factor*. Berg argued that nutrition was a binding constraint on economic development, because malnutrition impairs productivity. This was not simply a presentation of scientific data; policymakers were invited to participate in preparation of individual chapters, and they were invited to seminars presenting the results. As a nutrition adviser, the author was well placed to have an influence within the Bank, and a newly appointed president of the Bank was receptive to new ideas. Furthermore, the Bank had begun to invest in other aspects of human resource development at the time, so the actions promoted by the book were consistent with the direction that Bank investment was taking. By demonstrating that nutrition programs could be viewed as investment rather than simply consumption, the book provided justification for a politically attractive course of action. Furthermore, the book suggested specific actions that could be implemented, so that once policymakers were persuaded, the next steps were clear. Many within the Bank credit this book (and the strategic process of its development) with causing the

increase in explicit nutrition investments beginning in 1975–76. It is a tribute to the soundness of this reasoning that development practitioners as well as academics have focused little attention in the past decades on the question of nutrition as an investment in productivity; within the Bank, this relationship is accepted as a given.

The success of this process in influencing Bank policy neatly fits the framework of policy change suggested by Sutton (1999). While Berg's book presented no new, groundbreaking data, it did provide a scientific analysis of a development problem. Networking was effectively used by an advocate with close links to the dominant community. The person most in authority was persuaded to be interested in the issue, and a focus on nutrition converged with other policy directions of the Bank at the time. The book presented a clear, simple, understandable narrative of cause and effect and spelled out specific actions that would support the goal. Moreover, the organization had the flexibility, the staff, and the resources to implement the actions that were recommended.

A second example of policy change is the implementation of interventions focused on the alleviation of micronutrient deficiency starting in the 1980s. Sommer and his colleagues' work on the role of vitamin A in immune function in the 1980s (Sommer and others 1986; Sommer, Katz, and Tarwotjo 1984) showed that provision of vitamin A had benefits beyond prevention of known deficiency diseases; it also affected mortality from other causes. This research altered the cost-benefit calculation for vitamin A intervention. This is clearly a case of new data advancing the policy agenda. The work also focused new attention on existing data concerning other micronutrients. In addition, Sommer's work may have been influential because supplementation and fortification of the food supply was a course of action easier to implement politically than actions to address PEM, with its links to poverty and entitlement. There was disillusionment with the prospects for multisectoral nutrition planning (Field 1987); a focus on micronutrients suggested actions that could be undertaken within the nutrition sector, without attempts at multisectoral coordination. Furthermore, this information came at a time when development agencies were

strongly focused on measurable results, and provision of micronutrients was seen as an intervention that could demonstrate results more quickly than interventions addressing poverty-based food shortage. Many public nutrition professionals point to Sommer's work as a key factor in the shift in focus of development agencies away from PEM and toward specific micronutrient deficiencies.

Pelletier's analysis (1994) of available data on malnutrition and mortality similarly altered the cost-benefit equation for investing in nutritional improvement by showing that the effect of even mild and moderate PEM on mortality was much greater than previously known; this work has received much attention within development agencies and provides an important advocacy tool for those wishing to promote nutrition within their own agencies. Clear policy change has not yet resulted, perhaps because other key factors—political attractiveness, clear actions to be taken, convergence with other agency goals and activities, well-placed advocates, receptive senior policymakers—have not been in place. Nevertheless, the potential clearly exists.

A more gradual and less dramatic policy change has been the incorporation of a concern for intrahousehold dynamics into the design of nutrition interventions. Rather than a single, groundbreaking piece of research, there has been a gradual buildup of data supporting the importance of analyzing nutrition (and other) projects in terms of the roles of household members. Attention focuses on time use, decisionmaking power, and access to consumption goods and productive resources. Good networking among researchers and practitioners—and selected key events that synthesized information—have created awareness among those in a position to implement the actions suggested by the research, an example of research gradually changing the dominant discourse.

As seems clear from the above examples, policy change has taken place as the result of a convergence of factors. A simple narrative alone is not enough. The following are some of the key factors:

- A relatively simple and plausible understanding of a cause-and-effect relationship (the "narrative");

- A reasonably strong and consistent body of supporting evidence;
- Individuals in key positions motivated to advocate for a policy change;
- Clear recommendations for specific actions;
- Actions implied by the narrative that are politically attractive, or at least acceptable;
- Convergence with other institutional goals;
- Receptivity on the part of decisionmakers; and
- The promise of measurable impact.

Lessons Learned

New information can be important in changing policy (as was the case with Sommer's research showing the effect of vitamin A supplementation on mortality), but documents synthesizing existing information can be equally effective if used strategically (as in the case of Berg's *The Nutrition Factor*).

As new techniques of data collection and data analysis become available, it becomes easier to collect information on the nature and causes of the nutrition problem and the effectiveness of interventions. For example, improved household survey methods, increased ability to analyze large survey data sets, and improved analytic techniques have made it possible to look at nutrition at the household and individual levels rather than relying on nationally aggregated indicators. Such data can be important in advocating for policy change.

Challenges to an existing narrative should not be viewed as a threat. Such challenges can advance knowledge by provoking new research; new information can clarify and strengthen the narrative, if it is sound.

The strategic use of information involves advocacy; information alone is not enough. Advocacy needs to be planned with specific attention to the appropriate target audience. For example, arguments based on economic consequences of malnutrition are more

persuasive in the World Bank, with its mandate to promote economic growth. In UNICEF, with its mandate to improve health and nutrition for their own sakes, evidence of nutrition-health links would be more persuasive.

For advocacy, it is important to have a group of influential individuals both inside the organization (for influence) and in the academic and research communities (to add credibility), all providing a common message. For advocacy to be effective, there needs to be an advocate in an influential position within the agency, with access to key decisionmakers. The importance of personality must also be recognized: effective advocates should be policy entrepreneurs with a good sense of when and how to advance a point of view. Advocacy is also more effective if the advocate has a clear set of actions to recommend.

How Nutrition Improves—and What That Implies for Policy Decisions*

Introduction and Overview

Nutritionists generally believe that we have moved toward a better understanding of how to improve nutrition in poor countries over the past several decades. This understanding is based on country experiences with nutrition programs that often included external assistance. The uncertainty about our models of how nutrition improves is due to the serious lack of evaluation data. Thus the conclusions here and elsewhere are constructed from scattered clues.

The key factor in improving young child nutrition is to ensure that parents and children have contact with people who can help with focused interventions, many aimed at behavioral change. Community-based programs—owned and run by communities, with help from outside—are the essential organizational feature for achieving

* John Mason is the author of this section.

such contact. The core interventions include antenatal care, safe delivery, breastfeeding support, growth monitoring and promotion, complementary feeding, micronutrient supplementation, immunization, deworming, and referral to primary health services. Since communities tend to set a broad range of development objectives, nutrition must find a way to fit with a multifaceted local approach. The support needs—ratios of staff to supervisors, and of participating children to staff, and resources spent per child—derived from existing programs can guide new program development. At the same time, micronutrient supplementation and fortification strategies require national and regional as well as local action.

The design and implementation of interventions depends on context—factors such as women's status and education, social exclusion, and political commitment. Programs can be assessed in terms of coverage, intensity (resources per head), targeting, and content. As seems likely, a minimum level of intensity must be reached before significant impact takes place (the response is not necessarily linear), so spreading resources too thinly can simply be a waste. Similarly, programs should be targeted to those who can best respond, not just to those in need. Finally, insufficient implementation capacity commonly explains lack of impact. To accelerate improved nutrition, we need to improve—and then act upon—a better understanding of implementation capacity.

How this thinking developed is discussed in the next section. Then, country and agency experience and context are briefly described. Finally, some lessons are suggested.

Chronology

Threads at different depths are entwined in the evolution of policies for improving nutrition. Changes in thinking and related milestones—globally and within countries—can map progress. This can be seen first at the global level.

Nutrition as a discipline has always been linked to issues of identity and scope. As expressed in the 1960s, factors affecting nutrition range "from ribosome to combine harvester." In the 1970s, nutri-

tion planning embraced a vast scope of central and local actions—in fact, subsuming most national government international agency activities to the objective of nutrition. The FAO, among others, promoted this approach. Others, including USAID and the World Bank, supported the use of systems analysis to describe complex causal pathways, leading eventually to more limited (but feasible) interventions. A number of conferences and country projects explored these methods, leading for example to the TINP in India (described in chapter 5) and national planning efforts in Sri Lanka. Responding in part to food crises, nutritional surveillance introduced epidemiological methods for tracing nutritional outcomes. These were linked to food availability and health status as basic factors contributing to poverty. A high-level expert committee representing the FAO, UNICEF, and the World Health Organization (WHO) in 1975, and a follow-up through WHO in 1984 consolidated these ideas and led to the United Nations, through the ACC/SCN beginning to report on world nutrition trends in 1987.

The scientific understanding of child malnutrition evolved from its early medical focus, looking at syndromes such as kwashiorkor and clinical micronutrient deficiencies, to a central concern for protein sufficiency. Although the protein gap was discredited in the late 1970s, the perception that protein remains the central problem persists in some circles. But the swing from protein went to the other extreme; calories were viewed as the only concern, with effective demand for food (any food, really) as the key factor. Thus nutrition as an objective of economic planning became a central feature of the development approach promoted by many international agencies.

The issue of scope has not been fully resolved in this policy debate among the international agencies; however, the focus has now swung back toward direct programs and diet quality, often with the emphasis on micronutrients, rather than protein. WHO support for primary health care (PHC), which gained momentum in the 1980s, involved many of the concepts for local action now considered important in community-level nutrition programs. Starting in the early 1990s with "Investing in Health," these PHC programs were

eventually eclipsed by newer health initiatives emphasizing minimum essential clinical services, integrated management of childhood illness, and so forth.

In practice, many nutrition programs were established during the 1970s and 1980s, based on local initiative. These are the ones that are most frequently used as examples of success, as in chapter 5. Available evidence suggests that programs with decisionmaking genuinely at the local level have had sustainable positive effects (Mason 2002). Though varying from country to country, an initiating feature in most cases was a decision to change radically from past efforts judged to have failed. Evaluation revealed that service delivery programs driven by external concepts and top-down planning methods simply had not worked very well. This was explicitly seen in Thailand and Indonesia in the 1980s, in Costa Rica earlier, and perhaps less starkly in the other countries reviewed for this paper (see Mason 2002). However, the timing is important: improvement accelerated in most cases with explicit decisions to foster community programs through local structures, deliberately rejecting previous organizational methods (rather than the program content, which changes less).

The World Bank was a major external supporter of nutrition programs, committing relatively high levels of resources to a few countries. UNICEF supported lower-profile programs in many more countries, and in a WHO program jointly supported with Italy, the influential Iringa project in Tanzania in the early 1980s. Through the United Nations, the ACC/SCN brought together experiences in managing successful nutrition programs at the International Union of Nutrition Sciences (IUNS) congress in 1989. This was followed up in 1993 with a synthesis of national policies and programs, contributing to the prevailing paradigm on how nutrition improves.

UNICEF's important formulation in the early 1990s of a coherent nutrition strategy of carefully judged scope was widely promoted and accepted. This provided a common language and focus in which players from different disciplines could see their own place. The U.N. World Summit for Children, organized by UNICEF in 1990,

was a milestone in setting nutritional goals, aiming for ambitious reductions in malnutrition using the UNICEF strategy. An international meeting, Ending Hidden Hunger, in 1991 strengthened the micronutrient programming dimension. Then, the ICN convened by the FAO and WHO in 1992, explicitly incorporated Food, Health, and Care; and both agencies endorsed the World Summit goals for malnutrition reduction. For the first time in such a context, priority was focused on micronutrient deficiency control programs. While mentioned, these themes were less evident at the FAO World Food Summit in 1996.

Together with UNICEF country programs, the 1992 ICN provided impetus for many countries to develop nutrition action plans during the mid- to late 1990s. These are the programs that we still see today. Another development can be mentioned: the idea that nutrition in society, at the population level, should be seen as a topic in its own right, in which many disciplines contribute and which is the responsibility of society as a whole and of the state. Thus public nutrition (having analogies with public health) as a concept was moved ahead in the late 1990s, through an IUNS workshop in 1997. At the same time during the 1990s, micronutrient control programs achieved a certain success: iodized salt was being used in more than 60 percent of developing country households by the end of the decade. About 30 percent of the children were receiving vitamin A capsules twice a year. For lack of data, the impact of these programs is not yet known, so this is an achievement yet to be fully appreciated.

Analysis

The general understanding of how nutrition improves, as laid out in the concept material that launched this assessment, is that equitable economic policy, proactive governmental investment in health, education, and welfare, allied with a judicious mix of direct nutrition-relevant programs at the community level, provide the optimal mix for nutritional improvement. The background paper (Mason 2002), which this summary draws upon, examined experiences in several

countries with this in mind. It considers when, where, and why nutrition has significantly improved; it then explains these observations, including the role of international agencies. Particular attention is paid to community-based programs. This section summarizes the observations and suggested explanations that are elaborated in greater depth in the background paper (Mason 2002).

Thailand, Indonesia, Costa Rica, and Tanzania are examples of countries where malnutrition was reduced faster than would be explained by the effects of economic development alone. These countries all relied on community-based programs of wide coverage —national, in some cases—with little targeting beyond the effects of progressive geographic spread. These programs all emphasized child growth monitoring and high ratios of village workers per family. They built on indigenous structures; the momentum they achieved was largely from the inside.

Large-scale nutrition programs are essentially similar in operation to the community-based programs discussed above, though with greater influence by external agencies. Examples are the Integrated Child Development Services in India, the World Bank–supported TINP, the Bangladesh Integrated Nutrition program, the Nutrition Improvement Pilot Project in Indonesia, and the Iringa program in Tanzania. These tend to have a core set of activities—viewed as a "menu" in Thailand—that includes antenatal care, safe delivery, support for breastfeeding, growth monitoring, complementary feeding, micronutrient supplementation, immunization, and referral. Some include home gardens, water and sanitation, and income-generating activities. Though their scope is generally well defined, these programs are often part of broader community activities. The overall programs are multifaceted; nutrition represents a part and an objective but is not usually the sole driving force.

In other cases, often postconflict situations, nutrition has been energetically addressed through mass mobilizations. Grassroots organizations are typically already providing health care, so they turn readily to community-based activities of the type described above. The energy and connectedness of societies are crucial con-

textual factors at certain points in time—especially after revolutionary upheavals, but also when more mundane factors come together: education, communication, improved governance.

Analysis of these experiences suggests a number of policy issues. The program context must be carefully considered. Some contexts can be made more favorable, such as improving the status of women, but these take time. Others cannot be changed at all, such as location or natural resource potential. If contextual factors *can* be improved, then priorities naturally suggest themselves. If not, program design and targeting may need to work around fixed constraints. Programs should be targeted to those who can respond, not just to those in need. By definition, sustainability happens over time. Malnutrition will be solved over decades, not years. This reality must be planned for, especially through investment in capacity building.

Programs can be assessed by their coverage, targeting, intensity (resources per head), and content. In many cases, countries strive for national coverage, but when resources are scarce, project quality suffers, because the intensity (resources invested per child) is too low for impact. As noted, the *content* of nutrition program is becoming clearer and well-established in a core of broadly accepted activities. It is the *means* of supporting these activities that represents the cutting edge of today's knowledge.

The pattern for improvement is generally consistent: rapid initial improvement, especially visible in the reduction of severe malnutrition, is followed by a slower but sustained reduction in prevalence of one to two percentage points per year in mild-moderate malnutrition (see Mason 2002). In projects, the temptation to set ambitious but unrealistic planning goals (for example, to reduce malnutrition by half in a few years), coupled with infrequent evaluations that compare objectives to achievement) ironically undervalues less dramatic but solid success of some projects (e.g. ICDS in some states in India).

External agencies have met with mixed success in supporting these efforts. In general, their influence has been positive when the programs were sustained for long enough to learn effective methods.

Investing in institutions and professional development, at the right time and appropriate levels, also paid off. Continuing to support ineffective programs, whether for political or other reasons, is not helpful. More rigorous evaluations will provide crucial information for decisionmaking on continued support for programs.

Lessons

The key to improving nutrition is involvement of those concerned, especially parents and children at risk. "Thinking up" from the individual is important for planning. In sustainable programs, a consistent pattern of change is seen; steady reduction in malnutrition continues after a rapid initial decline. This implies that the initial response, which liberates people's energies, needs consistent long-term support, including from outside sources.

Where programs have not spread nationally (for example, TINP), political rather than technical causes may be the explanation. Similarly, changes in government structures exert overarching influence—for example, the devolution of authority from central to municipal governments in the Philippines. Contextual factors such as these can be either synergistic or detrimental; but one way or another, they must be taken into account.

Community-based programs are usually not initiated for nutrition activities alone; communities normally have a broader range of priorities. This means that nutrition programs must be multifaceted and embedded in other health and community development activities. In many programs, community child weighing provides a practical focus. While the program design parameters—coverage, targeting, intensity, and content—are not adequately specified, this review suggests that in situations where malnutrition levels are high, aiming for national coverage, later becoming more targeted, is usually the preferred option. Intensity of investment should be roughly US$5 per child per year. For personnel, the ratios should be approximately 1 village volunteer for 20 families, or up to 100 families per full-time worker, and 1 supervisor to 20 workers. With these ratios,

reductions of one or two percentage points per year in the prevalence of underweight in preschool children can be expected (Mason 2002)

Given the technical complexity of such matters, a broader lesson is that nutritionists need to decide and agree upon certain factors. What conceptual framework do we follow? What level of finance is required, and what is available? What are the appropriate approaches to programming and policy dialogue? And how should these guidelines be adapted based on experience?

More of the same will not eliminate malnutrition. But more of some of the same will help: better implementation and sustained support for effective actions, solid and systematic evaluation, revamping ineffective programs, and above all for the external agencies, continuous support and building of local capacity.

Ending Hidden Hunger: The History of Micronutrient Deficiency Control*

Introduction

During the past 10 to 15 years, agencies, governments, scientists, and private industry have expended substantial effort and resources for control of micronutrient deficiencies. The approaches to address the three nutrient deficiencies that have attracted most attention—iodine, vitamin A, and iron—are quite different and have met with varying degrees of success. The similarities and differences among approaches have been examined to reveal factors that influence programmatic decisions and program success. Information for this analysis was obtained from interviews, reports and articles, and personal experience.

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Chronology

From the early 1930s until the mid 1960s, the international nutrition community was interested mainly in the metabolic consequences and treatment of severe protein deficiency. Factors supporting this focus included the description of kwashiorkor in rural Africa (where complementary foods were especially low in protein), the frequent cases of severe malnutrition seen during World War II, and the results of the many studies in which animals were fed diets very low in protein. Interest in protein deficiency was further stimulated and reinforced in 1955 with the formation of the U.N. Protein Advisory Group, which focused attention on the perceived protein gap. Gradually, the nutrition community came to realize that the near-exclusive focus on protein deficiency was unjustified, and that it was more appropriate to focus on both protein and energy deficiency, referred to as PEM. This shift was influenced by the gradual reduction of recommended levels of protein intake based on food intake analyses showing that regional and global protein intakes usually met these requirements. Meanwhile, the U.N. advisory group evolved into the ACC/SCN in 1977, which concentrated on the improvement of breastfeeding, maternal and child nutrition, and complementary feeding.

In 1977, a report from the U.S. National Academy of Sciences concluded that protein energy deficiency was not the major cause of undernutrition, and that a general lack of food with a subsequently low intake of energy (usually accompanied by low intakes of other nutrients) was the main global nutrition problem. The three-country Nutrition Collaborative Research Support Program subsequently examined the associations between usual energy intake and human functions. The results revealed strong associations among numerous measures of human function and dietary quality (Allen 1993). The latter was expressed in terms such as percentage of energy intake from animal products, and reflected intake of vitamins and absorbable minerals. In contrast, energy intakes appeared to meet requirements even in growth-stunted children; these were not generally associated with deficits in function. The 1977 Alma Ata primary health care confer-

ence was also a factor in reducing the emphasis on PEM. In this interagency collaboration to reduce child mortality, concern was expressed about the slow progress in reducing the prevalence of PEM (which primarily meant growth stunting), the limited impact of supplementary feeding programs, and a heightened recognition of the complex etiology of malnutrition.

Meanwhile, it had been recognized for decades that developing country populations suffered from a high prevalence of iron, iodine, and vitamin A deficiencies, based on the prevalence of anemia and clinical symptoms. UNICEF had promoted salt iodization since the 1960s in countries with endemic iodine deficiency such as Peru, but this had little impact. The breakthrough development was the new concept of iodine deficiency disorders (IDD), where even mild degrees of iodine deficiency caused functional deficits, especially in intelligence. This meant that iodine deficiency affected many more people than had been estimated from clinical symptoms. In 1986, the International Coordinating Committee on Iodine Deficiency Disorders (ICCIDD) was formed as an interdisciplinary, interagency group. The ICCIDD was very effective at bringing the iodine deficiency problem to the attention of relevant parties, developing support for wide-scale salt iodization, and promoting laws to enforce the participation of salt manufacturers. In 1990, UNICEF adopted the virtual elimination of IDDs as a goal for the year 2000, a goal announced at the World Summit for Children. As more evidence for the effectiveness of salt iodization emerged, many agencies and donors—and very importantly, the salt industry—quickly took on the challenge of IDD elimination. It is estimated that more than half the world's population now has access to iodized salt.

In 1985, the U.N. Subcommittee on Nutrition developed a 10-year plan for the control of vitamin A deficiency (VAD). A key event was the efficacy trial in Indonesia showing that high-dose supplementation of children significantly reduced mortality. This study was repeated in other locations. A 1992 meta-analysis of studies confirmed that vitamin supplementation reduced mortality, especially from measles, by an average of 23 percent (Sommer 1992). This evi-

dence led to the rapid involvement of many agencies and NGOs, most of which have focused on providing and distributing high-dose vitamin A capsules to children and to women in the early postpartum period. Capsule delivery is often called a short-term solution to vitamin A deficiency control, with the hope and expectation that vitamin A fortification will eventually become widespread and that effective food-based programs will be developed.

By the early 1970s, it was established that anemia adversely affected productivity and cognitive function, though awareness of these consequences produced relatively little action. In 1990, the World Summit for Children set the goal of reducing anemia by one-third by the end of the decade. However, the mid-decade reevaluation of these goals concluded that this could not realistically be achieved, so the goal was dropped. Reasons cited in explaining the lack of progress against iron deficiency anemia included problems in the delivery of supplements and their poor acceptance by intended recipients. Also, the benefits of iron supplementation are less obvious than those of iodine or vitamin A, and iron fortification of foods can be difficult. Food-based strategies to control iron deficiency are even harder to implement than those to improve vitamin A status, because the individuals generally need to increase their intake of animal products.

The Impact of Micronutrient Programs and Their Implications

Although the global reduction of iodine deficiency has been remarkably successful, and vitamin A capsule delivery has undoubtedly saved many children's lives, other problems have defied solution. Progress has been slow in reducing the global prevalence of anemia. Vitamin A and iron supplements are usually provided only to women and young children. In addition, single micronutrient deficiencies are relatively rare, so increasing the intake of only one or two micronutrients hardly provides a complete answer to preventing and treating undernutrition. This has led to recent interest in multiple micronutrient supplements, since the cost of additional micronutri-

ents is low relative to the cost of supplement delivery. Ongoing research efforts are comparing the efficacy, effectiveness, and cost-benefit ratio of multiple micronutrients to iron-folate supplements (Beaton and McCabe 1999). Skeptics of multiple micronutrient strategy predict that this effort will inevitably encounter the same problems that limited the impact of providing iron supplements. A substantial investment in operations research is needed to identify ways to improve the delivery and consumption of iron and multiple micronutrient supplements. Attention must also be paid to how to ensure safe levels of micronutrient intake from the increasing number of sources of micronutrients, especially for young children. More mapping of the prevalence of micronutrient deficiencies and a better understanding of the consequences of iron deficiency anemia are also needed.

There is a more serious concern: the focus on reducing iodine, vitamin A, and iron deficiencies—through relatively quick-fix, top-down fortification and supplementation programs—has diverted attention from more difficult problems. These include the need to prevent low birthweight, stunting, hunger, and impaired child development. The prevalence of these problems has improved relatively little over the past few decades. Meeting human energy and micronutrient needs requires successful dietary approaches, but relatively little has or is being done in this area. Integrated programs are needed that can reduce micronutrient deficiencies as well as other food-related problems. There is a need to define which complementary mix of strategies can meet the nutrient needs of various population groups, most critically women and children, and the responsibilities of all parties, including the private sector. Other challenges include generating consumer demand for high-quality food and micronutrients, and improving dietary choice and child feeding practices, through behavior change strategies.

The focus on micronutrients has produced powerful examples of what can be accomplished when partners combine their efforts and expertise. These partners need to continue and expand this collaboration to include other approaches to reducing malnutrition.

Lessons Learned

Interventions should be preceded by research on efficacy. It is important to conduct well-designed evaluations of the efficacy of potential interventions at an early stage of project conceptualization. The scientific premises must be correct. For example, the Guatemalan longitudinal study was important in finally recognizing that energy supplements improved pregnancy outcome and growth and that protein was probably not the limiting nutrient for growth. Evidence of the efficacy of micronutrient intervention trials obtained in the 1980s had a strong influence on the eventual decision of many agencies, governments, industries, and scientists to become involved in micronutrient deficiency control. The most influential research demonstrated links between nutrient deficiencies and human function. Examples include the demonstration that even mild iodine deficiency resulted in loss of cognitive function and that vitamin A supplementation of young children reduced mortality. As more trials were completed showing varying degrees of impact of vitamin A on mortality, a meta-analysis of the results was needed to confirm the validity of a global agenda to reduce vitamin A deficiency.

Interventions must be feasible and practical. An important reality in the shift of focus from protein-energy deficiencies to micronutrient programs was the perception that micronutrient programs were more feasible. Several years of focused effort advanced the technology for salt iodization and rapid testing of its iodine content. This made the recommendation of universal salt iodization realistic. In the case of vitamin A, a single high-dose capsule improves vitamin A status and function for several months. Once the potential clinical issues concerning the delivery of vitamin A with immunizations were resolved, vitamin A supplements could be delivered through the WHO Expanded Program on Immunization. In contrast, iron supplements need to be taken at least every few days. Fortification of cereals with iron can be problematic, so much less progress has been made toward the elimination of iron deficiency. The development of salt double-fortified with iodine and iron has received spo-

radic attention over the years, but this product is not yet widely available.

Program investments are more likely in areas where a large proportion of people can be expected to benefit. When it became apparent that micronutrient deficiencies have negative effects on learning, productivity, and well-being, even before there are clinical signs (e.g. goiter), interest in control of the deficiencies increased considerably. Because these affected a much larger number of people, the cost-benefit ratio of interventions improved dramatically.

Goals, terminologies, and strategies should be simple. The decade goals for reducing micronutrient deficiencies were expressed in simple, unambiguous language. This facilitated agreement and enabled partners to concentrate on achieving and monitoring progress toward goals. The mid-decade reevaluation of the original goals included a clear statement that salt iodization should be universal; however, the target for reducing anemia was eliminated because attainment did not appear realistic. There has been a cost to setting and then revising these goals: little subsequent attention has been paid to other nutrition problems, such as prevention of low birthweight and growth faltering in children.

Simplification of strategies is also helpful, as in the case of choosing universal salt iodization as the main strategy for the elimination of iodine deficiencies and vitamin A capsule distribution to reduce vitamin A deficiency in children and women. Multiple strategies may in fact be necessary, especially to control anemia, but this tends to dilute the message and leads to uncertainty among players on the relative importance and effectiveness of respective strategies. In Indonesia, the simple but carefully evaluated term "smart salt" turned out to be more effective in promoting iodization than "healthy salt." Obviously, strategies such as fortification that do not require much behavior change are more likely to be successful than taking iron supplements, adopting a food-based strategy, or improving a child's diet once poor growth has been demonstrated. Simple methods to monitor the quality

control of programs, such as the rapid tests for salt iodine content, are also important. Finally, it is desirable to have simple indicators and tools to demonstrate program impact, such as change in thyroid size or urinary iodine, pupillary reaction time to assess vitamin A status, and portable hemoglobin monitors. There are many potential tests, but most need to be improved and made more widely accessible.

Understanding of the nature and goals of the program should be widely promoted. Mass media can be effective for communicating the importance of a program, its goals, and its content. Examples include the successful film, "The Stealthy Scourge," in India showing the importance of salt iodization, and mass media campaigns in Thailand to cultivate the ivy gourd for improving vitamin A status. Communication strategies are especially important when individuals are asked not only to support a program but to change their behavior.

Networking and building partnerships are essential. The nutrition community can define problems and potential solutions, but it cannot solve these problems working alone. Successful interventions identify parties with common interest in outcomes. Links must be developed among agencies, ministries, the academic community, industry, communicators, NGOs, and donors. Uncovering the latent interest of salt manufacturers was essential to the success of the universal salt iodization strategy. The ICCIDD exemplified an organization that knew how to network effectively with others interested in a shared goal.

Committed leaders must be recruited to support programs. An important factor in the success of programs is the commitment of "visionary opportunists," charismatic individuals with single-minded vision. Such individuals were extremely influential in the movement to control iodine and vitamin A deficiencies. Key leaders need to be identified and recruited early on within organizations and countries to facilitate the widespread adoption of programs. The commitment

from the head of state in China to eliminate iodine deficiency and the participation of national leaders at the World Summit for Children illustrate the power of this strategy. Securing upfront financial support can also contribute to success, such as Kiwanis International support committed before the conference, Ending Hidden Hunger, in Montreal.

Institutionalization of Nutrition*

International Nutrition in Search of an Institutional Home

During the past half-century or so of sustained attention to international nutrition, the sentiment often has been voiced that nutrition lacks a home, a solid well-supported institutional foundation. Unlike other human development undertakings such as health and education, nutrition activities are seldom situated securely in ministries or departments with clear mandates, boundaries, and divisions. Unlike sectors in which inputs and outputs are largely internal, nutrition impact is often heavily dependent on non-nutrition inputs. Additionally, unlike health and education, effective demand for nutrition action is usually minimal at the community level, and frequently at governmental levels as well. In-country, this often translates into negligible pressure for rational, efficient institutionalization of nutrition. While this "homelessness" often sparks innovation and creativity, it also contributes to a lack of recognition as a legitimate field of development and reduces financial support. This "homelessness" has moved through at least two distinct stages, and it may be entering a third. These stages are summarized below.

Context 1: The Era of multisectoral nutrition planning. Although there were earlier international efforts at coordination and information sharing by, for example, U.N. technical agencies and the U.N. Pro-

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tein Advisory Group, the issue of nutrition institutionalization first became a matter of public debate during the 1970s, with introduction of the concept of multisectoral nutrition planning. The period marked a reaction to the largely supply-oriented interventions of earlier periods, namely, home economics–oriented extension efforts, school feeding, nutrition rehabilitation, the development of special "protein-rich foods," and the externally designed, FAO-assisted "Applied Nutrition Programs." Critics of these early programs noted their low impact, their narrow health orientation, and that by and large they addressed nutrition as a somewhat weak form of welfare. They did not address the context and causality of malnutrition. What most concerned critics was the absence of the systematic (much less scientific) program planning that was being promoted broadly in other development sectors at the time.

The critique was aimed in part at the institutionalization coming into prominence at that time, namely the nutrition institute. During the 1960s and 1970s, nutrition institutes, often coupling training and field studies with laboratory and sometimes clinical studies, were established in Chile, Guatemala, Indonesia, Mexico, the Philippines, Tanzania, Zambia, and elsewhere. (Some, as in India, were established much earlier.) These institutes, frequently headed by influential nutritionists, were perceived, within and outside the nutrition community, not simply as research and training support systems for nutrition programs, but indeed as the locus of nutrition power and decisionmaking nationally. In several countries that lacked ministerial nutrition units, the nutrition institute actually assumed that role.

Advocates of multisectoral planning generally viewed these institutes as obstacles. They were seen as bastions of traditional, medically oriented thinking, largely oblivious to the larger development context in which they functioned. For these critics, the challenge was not to launch more and better nutrition interventions, but rather to broadly change the orientation, policies, and programs across sectors with positive effects on food consumption and nutrition. The institutional result of this thinking was the nutrition-plan-

ning cell, located not in a ministry of health but more centrally in the planning commission, the office of a president, or with the prime minister. As originally conceived, the planning cell identified nutrition policy and programmatic interventions across sectors and then coordinated these efforts within the government.

With the assistance of the USAID and FAO, some 26 nutrition planning entities were established during the 1970s. Notwithstanding their important legacies, referred to below, in and of themselves these efforts had little success. With some important exceptions such as Colombia and Sri Lanka, their activities were far more circumscribed than originally envisaged, they lacked necessary authority, and ultimately they succumbed to political expediency (the Philippines was a notable exception). In the final analysis, decisionmakers in other sectors and national planners with different mandates and objectives had too little to gain or were simply unwilling to make marginal changes that were necessary to achieve nutrition goals.

Nutrition scientists who were interested in solving nutrition problems often gave lip service to multisectoral nutrition planning, perceiving it as a means to increase visibility and resources, but their support was uneven. If coordination of nutrition-related ministry programs was difficult in general, it was even more difficult in cases of ministries of health and of nutrition institutes that viewed the multisectoral units as trespassers. In Sri Lanka, the ministry of health launched a bitter attack on the newly established Food and Nutrition Policy Planning Division (FNPPD) of the Ministry of Plan Implementation, in part because the unit head was an agronomist rather than a nutritionist or physician. Lacking cooperation from the ministry, the FNPPD tried to develop its own health-related interventions, further widening the schism and leading indirectly to its demise.

Context 2: Nutrition isolationism. Not surprisingly, the nutritionists felt marginalized by multisectoral planning processes in which their roles were subsidiary at best. By the 1980s, most nutrition planning cells had ceased to function or were abandoned. So these nutritionists sought to move attention back to interventions per se, most

commonly through ministries of health. To their credit, these nutritionists had identified two compelling sets of interventions that could be implemented with little involvement from other sectors: micronutrient supplementation and breastfeeding. Looking back at the multisectoral experiment, the nutrition community at large seemed to be saying, "If the other sectors, development economists, and planners won't cooperate, we'll simply do it ourselves."

This era, sometimes characterized as "nutrition isolationism," witnessed continued struggles over the issue of institutionalization. In this new context, the struggles have taken on different forms and the actors different roles.

Orientation and organization: Food, health, or an independent identity? Even with implicit agreement that nutrition was to be left to the nutrition community, there was a singular lack of agreement on where within that community responsibility should now be lodged. Community-based services focusing on the growth of young children, pregnancy, micronutrients, and breastfeeding (an approach championed by UNICEF)? Or was the focus to be on household food availability, food safety, an activated food industry, and food-based approaches to address micronutrient deficiencies (an approach advocated by FAO)? Institutionally, did nutrition belong in ministries of health, social welfare, departments of women and children (the logical loci of UNICEF-assisted programs); or did it belong in ministries of food, agriculture, or even industrial development (the prime counterparts of FAO-assisted programs)?

UNICEF was significantly influenced by its successful efforts at community organization in the Iringa project in Tanzania. A deep-seated commitment emerged to the processes of participation—active community involvement at each stage of nutrition improvement reflected by the Triple A approach—and to the human rights of individuals and vulnerable groups. Those allied with the UNICEF position were at least suspicious of the top-down and private sector orientation of the FAO approach. By contrast, those allied with FAO programs viewed UNICEF as overly health-oriented, noting that UNICEF-assisted nutrition activities often are

only peripherally involved with nutrients; they questioned community-based decisionmaking and often derided what they perceived as UNICEF's anti-private-sector bias. Simultaneously, there was active debate whether nutrition ought to maintain its identity and its own institutionalization, rather than being incorporated into larger programs, divisions, and departments for health and population, food and agriculture, or poverty alleviation. As articulated by Field (1999), the choice involved balancing "the benefits of issue specificity, visibility, autonomy and clout with the benefits of incorporation, integration, reinforcement and possible protection from adversaries."

Advocates for a separate identity argued, first, that nutrition is simply too broad to permit such incorporation and, second, that an independent identity is necessary to ensure that nutrition issues are taken seriously. Arguments for incorporation most often came from the health community, which for decades had viewed nutrition as growth monitoring, dietary counseling, and the provision of supplements through clinics, and by implication a component of public health.

Science or practice? Less overtly, a second struggle related to institutionalization took place during this isolationist era. The issue was whether nutrition should be organized and institutionalized according to the science or the practice of combating malnutrition. Should units in governments or programs in agencies be organized according to types of malnutrition (PEM, IDD, VAD, and the like), or should they be organized by type of interventions (supplementation, fortification, food-based income transfers)? Should research priorities be established by nutrition institutes—or by program task managers?

Practitioners and social science activists had argued for years that nutrition had in fact been institutionalized, even in its international development context, as a science rather than as a development practice. Its primary focus was on research and its secondary focus, at best, on the process of change. The field, they argued, was overly dominated by the science of nutrition. They then pointed to academic departments of nutrition, professional nutrition organiza-

tions, and nutrition congresses. Even the Advisory Group on Nutrition (AGN) of the SCN, they suggested, was dominated by academic scientists rather than by practitioners or public nutrition professionals.

In response, academic nutritionists have expressed serious misgivings about the practice of nutrition, which in their view falls short in conceptual rigor, data collection, and systematic analysis. As one academic nutritionist noted, he is pressed from one side to broaden his outlook by examining the means of combating multiple nutritional deficiencies through common interventions rather than focusing his attention solely on one nutrient; but from the other side, he is pressed with at least equal force that his work is already far too broad and that he has strayed beyond the boundaries of rigorous science.

Context 3: Goal-oriented nutrition. If context 1, multisectoral nutrition planning, produced temporary institutionalization (that is, ineffective nutrition-planning cells not taken seriously by the larger development community) and if context 2, nutrition isolationism, was so removed from the development mainstream as to appear inconsequential, an opportunity may yet be at hand to find a role and ultimately a home for nutrition.

The opportunity is provided by the relatively recent consensus that success with intrasectoral strategies and projects has been limited, and that a shift in thinking is necessary to accomplish agreed-upon goals of the development community as a whole. Such an approach is inherent in the World Bank's Comprehensive Development Framework, the UNDP's Multiple Dimensions of Human Development, and in the new U.N. Development Assistance Framework (UNDAF). In retrospect, these may represent the first new (if unintentional) "nutrition-friendly" action by development economists and planners since the safety-net concept was introduced in the 1980s.

In this new setting, the prime role of the nutrition community—which in turn would define its institutionalization—would be as stewards and monitors of the new nutrition goals. Unquestionably,

nutrition interventions and research will be part of this new paradigm, but the prime responsibility might well shift toward assessing the effects of these better-focused and refined development policies on consumption and nutrition.

If the broad multisectoral efforts of the 1970s were conceptually more attractive and potentially more effective than the isolationist approaches of the 1980s and 1990s, the emerging goal-oriented approach may offer another chance for nutrition to integrate into the development process. Nutrition interventions should belong to a larger arsenal, addressing nutrition objectives at the behest not of nutrition advocates only, but also of governments and development agencies.

Capacity building and demand creation. Issues of management capacity and demand creation are key determinants of project success. These are discussed below and then in the context of examples from India.

Management capacity. Successful programs depend importantly on the organization's emphasis on key processes and its ability to implement them effectively. Food-based income transfers, food fortification projects, and other activities have their own processes, but in community-based nutrition projects, the most important key processes are the following:

- The Triple A interactive process—assessment, analysis, and action;
- Operations research;
- Beneficiary targeting;
- Training and supervision;
- Community involvement;
- Project monitoring;
- Project evaluation.

Project experience in a growing number of countries indicates that even when funding is adequate and nutrition reasonably well situated in government structures, inadequate focus on these processes and inadequate effectiveness in addressing them results in poorly performing projects.

In contrast, where attention is adequately directed to these processes and where reasonable implementation capacity exists, the results are not only efficient project operations but synergies among operations. A properly conducted Triple A by definition means that targeted communities are involved and participate in the process of nutritional improvement. Well-designed operations research can fine-tune targeting systems and supervision ratios. Well-functioning monitoring inevitably contributes to project evaluation by providing consistent information about project implementation.

Such well-designed systems are sadly rare in nutrition projects. The Triple A process, carried out masterfully in the Iringa project, is often verbalized but less often implemented. Poorly designed operations research rarely provides needed information on the cost-effectiveness of alternative approaches specific to particular facets of project delivery—for example, whether to use factory-produced food supplements versus mobilizing a local women's group to do it. Beneficiary targeting, a sine qua non in principle, is frequently missing or poorly implemented in nutrition projects. Training is commonly a part of nutrition projects, but it is often carried out by personnel from nutrition institutes or by central management staff who are inadequately attuned to community-based service delivery. Community participation rarely extends beyond lip service. Well-functioning monitoring and evaluation systems are in place in very few nutrition projects in Africa, Asia, and Latin America.

Putting efficient systems in place for these processes requires time, commitment, planning and careful training. It also requires a "management by exception" system to addresses problems as they occur. The preparatory planning and operations research preceding the TINP (India) and the Bangladesh Integrated Nutrition Project (BINP) were multiyear processes. By contrast, the slow start-up of

most projects does not reflect intentional planning but bureaucratic delays.

Demand creation. The development of adequate management capacity inevitably requires awareness, commitment, and understanding about nutrition and, in turn, nutrition-related services. This holds true at the national level and among key stakeholders. At the same time, community mobilization and the creation of articulated demand is an important process requiring explicit attention in management capacity building.

The generation of awareness, commitment, and understanding at the central level is often a lengthy process requiring serious advocacy efforts, a compelling case for the importance of nutrition, and the good fortune of having receptive individuals in key decisionmaking positions. In Bangladesh, the minister of finance finally approved the BINP project after several years of inaction in response to a PROFILES exercise, which used national nutrition data to specify the likely losses to national productivity that would result from nutritional stunting. In Zimbabwe, programmatic activity emanating from postwar relief needs preceded policy development and national expressions of demand for nutrition; explicit efforts were made to solidify policy support by building a coalition within and across ministries.

Demand at the community level is likely to be less complex, but it nonetheless requires an intentional, participatory process. Experience with social action funds and other participatory efforts makes clear that nutrition is rarely high on the list of community priorities, and it is often not on the list at all. In some cases, nutrition is perceived simply as eating. In other cases, nutrition is understood to be part of health. Whatever the case, it usually is possible to persuade communities that community-based programs—with emphasis on *community*—would be in their interest. Information comparing the mortality risks of well-nourished with moderately malnourished young children has been used effectively in mobilization efforts. Communities are also likely to recognize that a community-based worker, although called a "nutrition worker," can provide health-

related services on site that would otherwise require travel to a primary care facility.

Evidence from India suggests that management capacity and expressed demand are more likely to limit project success and replication than, say, the locus of responsibility for the project or for nutrition as a whole being within the government. Neither the location of the TINP within the state's social welfare department nor the location of the ICDS within the ministry of women and children appears to have been crucial in determining the project's effectiveness or survival. Rather, the Indian examples suggest that attention needs to be paid to strengthened management capacity and to increased commitment and ownership through participatory design, not simply participatory implementation.

CHAPTER 5

Country Perspectives

India*

Introduction

In India, the focus was on a large program that both the World Bank and UNICEF have heavily supported—the Integrated Child Development Services (ICDS), with some additional reference to the Tamil Nadu Integrated Nutrition Project (TINP). We examine narratives related to the following issues: community involvement, targeting, reaching the unreached, and World Bank–UNICEF cooperation.

Chronology. India, with 20 percent of the world's children, is home to 36 percent of the world's malnourished children. Maternal malnutrition is equally widespread. The government of India has taken the problem seriously since independence, initiating numerous publicly funded measures in the 1960s to deal with what was thought to be the cause, namely food shortage and protein deficiency. The largest program was the public distribution system that today makes subsidized foods available to some 60 percent of the population at a cost to the government of 0.5 percent of GDP. Gradually the goal has shifted from providing "food for all in poor areas" to "food for the

* David F. Pyle and Ted Greiner are the authors of this section.

poor in all areas." Employment schemes have been similarly large-scale in vision.

In the 1960s, the government's Applied Nutrition Program focused on increasing food production on a micro scale through kitchen gardens and nutrition education. The Green Revolution allowed India to become self-sufficient in food production, but when it became clear that little impact on malnutrition would come about without greater attention to effective demand, the focus shifted to supplemental feeding of those identified as needy. By the 1970s, this allowed India to prevent famine and even to assist Bangladesh's refugees on a large scale. In addition, a national mid-day meal program was launched for schoolchildren and other vulnerable groups.

In 1975, the ICDS was started on a pilot scale in 33 development blocks (subdistricts with population of 100,000–150,000). The program was a multisectoral approach including nutrition and health education, supplementary feeding, growth promotion, maternal and child health services, and preschool education. This has evolved as the country's longest-running nutrition and early child development program; and at this point, it also is the world's largest program—serving 23 million children and 5 million women in 4,343 out of the country's 5,700 development blocks (1997 data). Only 2.5 percent of the costs are covered by donor agencies, mainly food donated through CARE and the Word Food Program (WFP).

UNICEF has increasingly supported activities to promote early child development and prevent malnutrition in India. This support has included expansion of the ICDS to unreached groups; providing funds for equipment, service quality improvement, and community-based demonstration projects; and innovative training and communication initiatives. UNICEF is presently collaborating with the government and the World Bank in the development and implementation of the Women and Child Development project (WCD, also referred to as ICDS III), in particular the innovative national training component. World Bank support to nutrition in India began with the TINP in 1980, followed by TINP II, 1990–97; ICDS I, 1990–97 (in Andhra Pradesh and Orrisa); ICDS II,

1993–2001 (in Madhya Pradesh and Bihar); and WCD, 1998–2003 (in Kerala, Maharashtra, Rajasthan, Tamil Nadu, and Uttar Pradesh, plus a national training component).

India adopted a series of national nutrition goals in 1990, a national nutrition policy in 1993, and a national plan of action in 1995. A national nutrition council was formed that year to oversee plan implementation. Similar state-level councils were also set up, although this network of councils rarely meets and has been relatively ineffective. Significant aspects of the policy have not been pursued, and none of its goals were reached by the dawn of the new century. In other words, shortcomings in implementation have undercut otherwise exemplary policy and plans. The amount of resources devoted to nutrition-related programs is impressive in absolute terms; but on a per capita basis the resources fall far short of what is required, and more important, they tend to be poorly targeted and implemented. In addition, governance issues continue to limit program effectiveness in meeting the needs of the malnourished poor. Accountability from above needs to be bolstered by accountability from below.

Community involvement. Community involvement has been a part of the nutrition policy dialogue in India for several decades. It has been seen as an essential element of any program attempting to reach the target population at the village level. NGO-managed pilot and demonstration projects (for example, Jamkhed, Pachod, and others) have demonstrated the vital role of community involvement in reducing the prevalence of malnutrition and improving indicators of child health. This experience in the early 1970s influenced the design of the original ICDS program, in which the community was to be an active partner. For its part, the World Bank invested significant amounts in support of community involvement in its nutrition projects—for example, TINP II, US$3.5 million; ICDS I, US$11 million; ICDS II, US$7.9 million.

Despite the commitment in principle, the ICDS became a community-based activity in which the villagers were generally passive

recipients with little ownership of program activities. A number of observers took note of this lack of community involvement. Both the National Institute of Public Cooperation and Child Development (NIPCCD) evaluation (1992) and the Administrative Staff College of India (ASCI) report (1997) comment on the ineffectiveness of community involvement. The NIPCCD says that the scheme is opposite from what it should be, being implemented and managed in a largely hierarchical manner. The result of this shortcoming was poor selection of community workers and the inability to reach the poorest (hence neediest) families. The field staff were not trained in community mobilization techniques.

In the last several years, awareness has grown that meaningful community involvement needs to be included in the ICDS if significant results are to be sustained. The structure is being modified, which helps. Decentralization efforts are growing and the *panchayati raj* institutions (that is, the local governing bodies) have been helped by several constitutional amendments. The ninth five-year plan (1997–2002) identifies community involvement as a priority since the lack of community ownership and participation is well accepted as a reason for the lack of effectiveness of the ICDS. The multilateral donor community, especially UNICEF, began to pay more attention to the issue, the latter with its Convergent Community Action strategy that builds local capacity, using the Triple A approach of assessment, analysis, and action. Moreover, UNICEF collaborated with the World Bank in the Reproductive and Child Health Project, which relied more heavily on developing and working with active, involved communities.

Several examples from a number of states can be used to illustrate community involvement, including a few blocks of Madhya Pradesh. However, the most impressive case recounted by local personnel was in Andhra Pradesh, where approximately 50,000 mother's committees have been formed, each with five members. These committees manage activities in their respective areas, including hiring and firing the community workers and disbursing monthly salaries. It is expected that the increased local control and accountability will result in

greater local involvement and interest, hence greater impact. It is reported that 10 percent of the ICDS blocks are managed by NGOs. Nonetheless, the relative effectiveness of this approach in terms of community involvement has not yet been systematically studied.

In the new WCD program, the major training component, *udisha*, includes for the first time community involvement methodologies and techniques such as participatory local appraisal (PLA), participatory rural appraisal, and Triple A. With the ICDS field and supervisory staff trained in community involvement, the stage is now set for significant future improvements.

Since the preparation of this assessment, a government working group on child development made inputs to India's 10th development plan. Many concerns raised by the assessment team have been addressed. Recommendations include focus on younger children, adolescent girls, and pregnant and nursing mothers across the life cycle; improved targeting to the poorest and most disadvantaged groups; greater community involvement; and a clear policy shift to reach out more to the urban poor. An international conference on early child development in October 2000 is a more recent example of World Bank–UNICEF collaboration that generated numerous recommendations for India's 10th development plan.

Targeting. Targeting is normally used to improve program efficiency and cost-effectiveness. Where resources are limited, targeting can also improve replicability and sustainability. Targeting toward the poor was inherent in the ICDS from the outset, since blocks with higher levels of scheduled castes and tribes were sanctioned first, and in each block, poorer groups had to be chosen to participate.

As progress is made toward universal coverage (75 percent of rural blocks are now included) and as program costs rise, targeting will assume greater importance. Two types of targeting not originally included are supplementary food to the malnourished (or growth-faltering children) and targeting to younger children.

While additional food has always been targeted to the severely malnourished in the ICDS, either in the form of special therapeutic

food or double rations, the ICDS does not target its food distribution on the basis of individual criteria. It distributes a meal 300 days a year to a gradually rotating group of 84 out of every 1,000 people in large communities in each sanctioned rural and urban block and 700 people in tribal blocks (8 pregnant women, 8 lactating women with infants under 6 months of age, and 68 children 6–72 months old).

In contrast, the TINP, which was started in parts of Tamil Nadu in 1980 with support from the World Bank, introduced and tested the concept of targeting supplementary food to the malnourished or growth-faltering child, and only for relatively short periods. This approach required additional communication to ensure community understanding and acceptance, as well as additional costs for community workers and additional training for the complex targeting system to work. Overall, these measures lowered project costs for food, and conveyed the message to parents that supplemental food may be needed for therapy, but that family resources, if wisely used, will suffice to prevent malnutrition in young children. It appeared to have had a greater impact on malnutrition rates at community level than did the ICDS.

However, policy advocates failed to convince state and national governments of the value of this approach. We suggest that a communication breakdown may have been at the heart of this failure. In addition, setting up a model project that differed in approach from the ICDS—a large, growing, and innovative intersectoral government program—did not find favor; working more slowly within the system might well have been more effective. Today, TINP is integrated into the ICDS, though it retains—at least in World Bank-supported areas—significant features of the original TINP design.

Despite criticism from those who thought the Bank should not finance nutrition projects in India unless India adopted the TINP approach, the Bank remains the largest external funder of the ICDS. Discussions about alternative targeting models, such as the approach used in TINP, continue and may be even more relevant now, given that some states find it increasingly difficult to meet the high costs for the food as the ICDS reaches universal coverage.

Growth retardation is most commonplace during in the first year of life in India. For this reason, malnutrition interventions need to focus on efforts, first, to reduce low birthweight (affecting about 30 percent of newborns); second, to support and enable women to exclusively breastfeed from birth until six months (even excluding supplementary fluids such as water); and third, to provide nutritious and hygienically prepared complementary foods during the second six months of life (only about 30 percent of infants six to nine months old receive both complementary foods and breast milk).

The ICDS guidelines call for reaching 30 percent of children under two and 50 percent of older preschool children. A further bias is that preschool activities are provided for the older group but little more than food is provided for the younger group. Thus, to effectively address growth retardation, the ICDS needs to give additional attention to the under-twos (or even under-ones). However, the only way to increase the involvement of infants (0–12 months of age) and the understanding of their needs is to focus more on mothers and increasing the involvement of both parents.

Discussion about nutrition interventions in the ICDS, including attention to exclusive breastfeeding, is just beginning. The mother's nutrition (to reduce low birthweight) also deserves increased attention. However, policy work has generally focused on reaching the under-twos with better food and services. One important adjustment worth considering is the possibility of a second community worker, or alternatively freeing up the worker's time for the mother and younger child by bringing in a preschool teacher (to be paid through the education budget) to attend to the older group. Providing the older group with a simple but nutritious snack that does not require cooking, rather than the current prepared meal, might free up resources for doing so.

UNICEF has worked closely with the government in a series of conferences, workshops, and publications that have gradually shifted the emphasis toward younger children. This may be related to increasing awareness of the UNICEF Conceptual Framework or a result of attention drawn to findings of the national family health survey. In either case, it appears that UNICEF efforts have successfully widened

the range of policy options considered by the government. Joint meetings involving the government, UNICEF, and the World Bank have been ongoing since the end of 1998. These have also contributed to the gradual policy shift. When asked how this change has occurred, Indian policymakers generally refer to efforts of Indian scientists. A lesson might well be that policy entrepreneurs must be satisfied with never really knowing whether they were responsible (or credited) for a change that occurred. But if not, there is solace knowing that at least the change is likely to be genuine and sustainable

Reaching the unreached. The ICDS will need to reach a significant proportion of needy pregnant women and under-twos before it can claim that it has achieved its objectives. Finding out how many are reached or left out is difficult because the quality of local surveys has rarely been evaluated, and population-based surveys have rarely looked at this question in sufficient depth. While there is evidence that poor people are more likely than better-off groups to utilize ICDS services, the very poorest may be left out. The main reason is that the lowest caste groups tend to live in hamlets too small for a community center. In theory, the government has taken a step toward reaching them by agreeing to sanction mini-centers in settlements of fewer than 500 inhabitants (300 in tribal areas)—but these must be within one kilometer of the main community center, which is uncommon. In addition, government guidelines encourage locating the center near schools (to achieve the stated goal of greater collaboration among social services) rather than at the outskirts of villages. At the time of writing, only three states have started with mini-centers.

The World Bank and UNICEF have recognized this issue in their publications (see, for example, Measham and Chatterjee 1999). TINP II has taken significant steps to reach the unreached, but much remains to be done. One way to improve progress toward reaching the poorest and the unreached is to increase community involvement in decisionmaking, as is being done through women's groups in Andhra Pradesh. In general, more effort is needed to mobilize hamlet dwellers and reach urban slum dwellers.

UNICEF–World Bank collaboration. In addition to reviewing UNICEF and the World Bank's contribution to nutrition policy development and programming in India, it is also important to consider how the two agencies have worked together and how they might do so more effectively in the future.

As described in the above chronology, UNICEF focused its efforts in India primarily on capacity building, especially strengthening staff training in the ICDS. They have been primarily responsible for assisting the government to develop the national training effort, *udisha*, which accounts for a third of the World Bank–supported WCD project budget.

In preparing the WCD project in 1998, the UNICEF and World Bank teams in India worked more closely together than before. UNICEF supported the drafting of the individual state strategies and programs that were to be implemented under the new project. This positive move toward decentralization responded to the oft-repeated need to adapt the ICDS program to individual state needs and to their strengths, with task forces for training now in place in most states.

Since the end of 1998, UNICEF and the World Bank have met regularly with the government to discuss ICDS programming and other concerns. This represents significant progress: not so long ago, the government saw UNICEF and Bank collaboration as a threat. One can imagine fears that the two agencies would present a monolithic perspective, since on their own the two have quite different roles with respect to the government of India.

While UNICEF and the World Bank have collaborated and reinforced each other on national planning and policy issues, experience is mixed on program implementation at the state level. The agencies have different project management approaches, which can be mutually reinforcing. The Bank can use its performance tracking and disbursement procedures to press for adherence to agreed standards in projects, but is not directly involved in the day-to-day management of projects at the state level. In contrast, UNICEF works directly with national, state and local implementers through a network of national and state offices (covering 13 states, with a Delhi-based unit covering

the remaining states and territories.). These state-level offices serve as listening and learning posts. Their job is to know what is going on and who is doing what where. They are well positioned to influence implementation and strengthen local programming.

Based upon review of the two agencies' operations, strengths, and weaknesses, we offer two recommendations:

First, the Bank and UNICEF could pilot test a collaboration strategy in which UNICEF would provide management oversight in one state in a mutually agreed framework. The process should be followed closely and documented thoroughly. If successful, the collaboration should be expanded to other states. Eventually, the arrangement would be formalized with a memorandum of understanding between the two agencies. The parties should jointly seek government endorsement of the approach.

Second, a coordinating mechanism should be set up to allow the multiple agencies supporting the ICDS (national, bilateral, and multilateral) to meet regularly to discuss shared programming concerns. Such a group would resemble the Interagency Coordination Committee (ICC) formed by many national partners to manage the immunization effort. If given a chance, there is no reason why such a mechanism could not be as effective for nutrition in India as it has been for immunization in many countries.

Madagascar*

In Madagascar, 1991 is largely remembered as the year in which civil unrest brought about a far-reaching overhaul of the political system. That year took Madagascar out of a long period of one-party government, economic mismanagement, and isolation. The country entered an era of pluralistic democracy, economic reforms, and international inclusion.

* Menno Mulder-Sibanda and Françoise Crélerot are the authors of this section.

The political transformation created opportunities for change in areas other than the economy. In nutrition, actions up to that time consisted of a limited number of isolated, relatively ineffective interventions. This started to change in 1992 with the introduction of new, impact-oriented initiatives that had implications for policy development and implementation.

This case study aims to assess if and how nutrition action has become an integral part of the national development effort in Madagascar. It identifies the driving forces behind the evolution of nutrition-relevant policy, organizational arrangements and programs in the past 10–15 years, and describes the role of the World Bank and UNICEF in this process.

The World Bank and UNICEF

The World Bank has given attention to nutrition since the mid-1970s, but lending for nutrition activities increased particularly in the 1980s and early 1990s. This growing awareness of the importance of nutrition came about as the perception of malnutrition changed. Malnutrition is no longer seen as solely a pitiful consequence of ignorance and poverty. It is also seen as a cause of human capital destruction and thus an impediment to economic development. In addition, much attention has been focused on empowerment—increasing poor people's capacity to influence directions of development—which provides the basis for the World Bank's interest in community-based nutrition programming.

UNICEF introduced a new nutrition strategy in 1990, creating impetus for country offices to favor community-based nutrition programming. The World Summit for Children, in the same year, produced measurable indicators for monitoring progress toward achieving universal goals on the well-being of children and women. These were to be reached by the end of the decade. Eight goals concerned nutrition directly; and largely, these stipulated the way UNICEF supported country programs in the 1990s.

An Overview of Nutrition Action

In Madagascar, the new era of nutrition action was launched with the national IDDs control program in 1992, following an advocacy and policy workshop. Survey results on the iodine problem enhanced the creation of awareness and helped to mobilize political support. A coordinating committee developed a national strategy with representatives from all involved sectors, chaired by a national coordinator who reported to the minister of health. The program started with iodized capsule distribution, which prepared the ground for salt iodization. Legislation regarding universal salt iodization went into effect in January 1996. Through the Food Security and Nutrition Project, the World Bank provided most of the financial resources; UNICEF played a crucial role by lobbying among policy- and decisionmakers and providing technical assistance. The enthusiasm for iodine deficiency control was maintained not least because of the rapid progress of the program. Success could be demonstrated through an effective new monitoring system, which indeed has shown that iodine deficiency has now been eliminated as a public health problem.

The World Bank contributed to the enthusiasm for nutrition by conceiving a first large-scale, community-based nutrition project in 1993. The project, which has its own management and implementation structure, falls under the supervision of the prime minister's office. Over a five-year period, it has set up 535 community nutrition sites working through 50 NGOs. The project has benefited from its strong national director, who effectively lobbied among politicians for the continuation of a community-based nutrition project, known as SE(E)CALINE (Sécurité Alimentaire et Nutrition Élargie), in 1998. This second project is expected to cover all six regions and set up more than 4,000 community nutrition sites, providing services such as growth monitoring; targeted food and vitamin A supplementation; information, education, and communication (IEC); and vaccination to 50 percent of the target population. In addition, the project includes a nationwide school nutrition com-

ponent for school-age children and their family members in more than 6,500 primary schools.

In 1994, UNICEF started supporting a separate community-based nutrition project, NAC (Nutrition à Assise Communautaire), through the ministries of health and agriculture. This project has grown to include 366 community nutrition sites in 13 of the country's 111 health districts. In addition to growth monitoring and health and nutrition education, the project emphasizes small-scale agricultural development for food security. Beneficiaries are systematically linked to the health system for primary health care services. The minister of health has verbally stated his intention to expand the project nationally.

In 1995, BASICS, a USAID-sponsored project, started experimenting with community-based health and nutrition sites with a focus on IEC. In 1996, Catholic Relief Services (CRS) revised their feeding program into a community-based nutrition project in four different regions. In addition, the Adventest Development and Relief Agency (ADRA) started a community-based health and nutrition project in 1999 in one region.

UNICEF introduced the Baby-Friendly Hospital Initiative in 1995, which the ministry of health adopted as a national strategy. The program concentrated on maternity hospitals with a minimum number of deliveries per year. The initiative has tried to emulate the national iodine program by setting up a national coordinating committee, chaired by a national coordinator within the ministry of health. The first two years saw considerable progress, with 47 hospitals becoming baby-friendly, and the national parliament passing a code on the marketing of breast milk substitutes. However, in 1998, UNICEF reduced its lobbying efforts, and project implementation lost some momentum.

The Integrated Management of Childhood Illnesses (IMCI) started in 1995 at the initiative of BASICS with considerable emphasis on nutrition, community-based activities, and IEC. Capacity constraints have limited the scale of project implementation. Despite these constraints, the minister of health has declared the IMCI a

national priority, and the World Bank has reserved funds for health workers' training through the second community nutrition project.

With the increase in activities, coordination mechanisms have been put in place with remarkable success. In addition to ad hoc consultation meetings and memoranda of understanding between main actors, two interagency coordination forums have been set up. The most important for the nutrition sector is the informal Interagency Action Group for Nutrition (GAIN), which was established in 1997 at the initiative of Linkages, a USAID-supported nutrition project. This initiative has grown into a well-established coordination forum. Specific policy-relevant activities have been organized such as training on PROFILES, a nutrition advocacy tool using national data, and protocol development for nutritional rehabilitation and micronutrient supplementation. The chair has moved to the ministry of health, though the secretariat is still with Linkages. Similarly, in 1997, BASICS set up a very successful IEC task force to standardize health and nutrition messages.

Apart from iodine, micronutrient deficiency control received little attention until 1998, when UNICEF successfully promoted the integration of vitamin A supplementation with the National Vaccination Days for Polio Eradication. Routine supplementation remains weak. Similarly, apart from the availability of iron-folate tablets for distribution during prenatal care, practically no programmatic efforts are under way to control iron deficiency anemia. The exception is SE(E)CALINE, which has included iron-folate distribution in its primary school nutrition component.

A Thematic Assessment of Nutrition Action

This case study focused on six themes relevant to policy development and implementation:

- Political consensus on problem recognition and its solution;
- Nutrition policies, referring to actions to which the country has committed itself;

- Organization of specific action against malnutrition;
- Coordination, referring to a harmonious arrangement of working modalities among those who are directly or indirectly involved in nutrition action;
- Capacity to implement strategies for a durable reduction in national malnutrition rates within an acceptable time frame; and
- Ownership of project objectives and achievements by stakeholders, particularly at the beneficiary level.

Political consensus. The speed with which community-based nutrition has taken hold with policymakers and planners is quite remarkable. The number and scale of community-based projects currently being implemented are proof of a growing commitment among policy- and decisionmakers to combat Madagascar's pervasive malnutrition through the community-based approach. However, disagreement on how community-based nutrition is supposed to make a difference in the nutritional woes of the population has divided political support along project lines. In this regard, community-based nutrition differs from other nutrition-relevant initiatives for which political support has been consolidated, such as baby-friendly hospitals, the IMCI, IEC, and the national iodine deficiencies program. Some of these initiatives, particularly the IMCI and the iodine program, have strategies as complex and multisectoral as those of community-based nutrition.

Nutrition policies. Madagascar does not have a unified national nutrition policy. Instead, individual policies have been developed for specific nutrition-relevant issues, such as iodine deficiency and breastfeeding. In addition, various policy-relevant principles have surfaced in the efforts to integrate nutrition action. These principles are establishing multisectoral partnership, involving the community in project design and implementation, and working on the premise that there are more causes of malnutrition than lack of food alone.

Ownership. Different groups claim ownership of different community nutrition efforts. In response to the increasing need for collaboration and shared ownership, the World Bank and SECALINE managers invited representatives of several institutions, including the ministries of health and agriculture and UNICEF, to participate in the design of the new project, SE(E)CALINE. Although these institutions have approved the project, thus far they have demonstrated little allegiance to its objectives and strategies.

Institutional organization. Unlike other nutrition initiatives, community-based nutrition has no institutional home to oversee the implementation of activities. The largest initiative, SE(E)CALINE, is under the prime minister's office and is supported by the World Bank. NAC is under the ministries of health and agriculture and supported by UNICEF, and various NGOs pursue their own strategies. As a result, there are as many different approaches as there are projects. This current lack of oversight causes duplication and loss of efficiency.

Coordination. Despite the successful establishment of GAIN, there has been relatively little progress in bringing the various community-based nutrition projects into cooperative action. A major hurdle is the fact that two government institutions are promoting separate initiatives to become the national program. Another hurdle is the wide divergence in strategic choices (and opinions) on how to make community-based nutrition sustainable. A strictly technical approach may fail to solve the coordination problem, since the underlying problem is largely a political one

Capacity. Community-based nutrition faces a capacity dilemma. On one side are initiatives such as NAC that work on sustainable approaches but fail to go to scale. On the other is SE(E)CALINE, which has been able to go to scale quickly but is uncertain on how to sustain its achievements. How to develop the capacity to make a lasting dent in malnutrition rates in the shortest possible time? The

answer may lie somewhere in the middle between these two approaches.

Driving Forces behind Policy Change

The political changes in Madagascar coincided with renewed emphasis on nutrition in both the World Bank and UNICEF in the early 1990s. Therefore, the timing of the political transformation seems to have been just right in the sense that it provided new opportunities for the two agencies to put recently developed policy paradigms into practice. Indeed, the assessment of the evolution of nutrition policy and action in Madagascar suggests that the lead for the recent policy changes came from donor and international support agencies, notably UNICEF; the World Bank, and the USAID-sponsored projects, Basics, John Snow Inc. (JSI), and Linkages. National policy- and decisionmakers have participated but not taken control of policy development related to the elimination of iodine deficiencies, the 10 conditions for successful breastfeeding, the IMCI, community-based nutrition, and the promotion of improved food, health, and care practices.

The two success stories—the national iodine deficiencies control program and SECALINE—have laid the groundwork for a positive approach to nutrition action in Madagascar and ensured the success of various coordination mechanisms, most notably GAIN. Madagascar possesses a remarkable database on nutrition, and data have played an important role by putting nutritional concerns on the agenda and, to some extent, in shaping new policies. New data have preceded nearly every recent change in policy direction. Data have been successfully used to mobilize broad support for the nutritional cause, iodine deficiency control, the IMCI, and community-based projects. However, data alone did not trigger policy- and decisionmakers to act. The way the international community, which was behind the collection of data, used new data for advocacy played a key role.

International agencies have established close links with policymakers, which provided them with opportunities to put issues on the agenda

and direct the process of policymaking. UNICEF has close links with the ministry of health, which significantly helped in getting iodine deficiency control, baby-friendly hospitals, and community based nutrition on the policy agenda. Similarly, JSI, with USAID support, had close links with the ministry of health as well as UNICEF, and it succeeded in convincing the ministry to adopt the IMCI as a national strategy. The World Bank has established good working relations with the prime minister's office, under which the large-scale nutrition and social development projects are now housed.

The alignment of international agencies with different governmental institutions highlights the lack of an institutional home for nutrition action. Previously, the absence of a single nutrition policymaking authority was not a problem, because initiatives were the responsible to one policymaking body. Now the situation is different. Community-based projects are housed in separate government institutions, both of which intend to make the project a national program. The perceived political implications have stalled progress toward further coordination among community-based projects. However, project managers for NAC, SE(E)CALINE, and NGO-supported projects are keen to see progress regarding community-based nutrition, but they perceive the current lack of support from policymakers as a constraint to doing the necessary groundwork.

The dominant role of the international community in setting and shaping the policy agenda suggests little national commitment to improving nutritional conditions. This was and still is the case. However, the evolving role of GAIN has strengthened the national leadership capacity for setting the policy agenda, as exemplified by the recent development of protocols on micronutrient supplementation and nutritional rehabilitation. It is imperative that the coordination stalemate in the area of community-based nutrition be resolved. A first move by UNICEF and the World Bank could well end the impasse, further strengthening national capacity for and ownership of nutrition-relevant policy development.

The Philippines*

The Evolution of Policies and Programs Relevant to Nutrition

The prevalence of malnutrition in children in the Philippines is almost identical to what it was 25 years ago, with about a third of preschool-age children malnourished. This contrasts with other countries in the region, where significant reductions have been achieved, and with other indicators for the Philippines, such as poverty and infant mortality rates, which have improved despite economic and political difficulties. It also contrasts with the general popular perception that the problem is minor and going away.

Many studies have shown that micronutrient deficiencies are widespread; their serious consequences for health, survival, and intellectual development are now well known. Deficiency of vitamin A, while decreasing in clinical form, affects some 30 percent of children subclinically, with relatively little decline in recent years. Iodine deficiency, as goiter, is seen in at least 10 percent of the population and may even be increasing, a serious concern since even mild deficiency can adversely affect cognitive development. Anemia, for which iron deficiency is a major cause, affects more than 30 percent of the population and may also be increasing

Government Policies and Programs

Nearly 30 years ago, a national nutrition effort was instigated by presidential decree (Number 491, Nutrition Act of the Philippines, June 1974). A major reason for the stagnation in progress is that there has been nothing approaching a national program to reduce general child malnutrition. Today, as in past decades, policies, resources, and institutions are not in place. Programs have low coverage (typically 2 percent of children); intensity is low; and designs vary broadly from poverty reduction to hospital-based rehabilitation of the malnourished. Targeting is used for the plethora of pilot

* Richard Heaver and John Mason are the authors of this section.

and demonstration projects because resources are too limited to take them to scale. Salt iodization, for which an advocacy push is now in progress, has also been stalled at 25 percent coverage, one of the lowest in Southeast Asia. The exception is for vitamin A. National coverage has been achieved with twice-yearly. high-dose supplementation to children, which started in 1993. However, this achievement, too, is now threatened by budgetary constraints. Considerable experience has accumulated, though very little evaluation data exist. To set the stage for more effective interventions, a first priority would be to systematically analyze existing information (many surveys have been done) and, as soon as possible, evaluate selected programs. A quick analysis undertaken for this study suggested evidence of impact from some small-scale projects at about the degree expected—reduction of underweight by 1–2 percent per year, at a cost of roughly US$2 per child per year. However, no credible evidence is available on the impact of interventions aimed at large populations.

The activities planned under the Philippine Food and Nutrition Plans (PFNPs) and the Philippine Plan of Action for Nutrition (PPAN) remained relatively consistent over time. Micronutrients increased in priority, and food assistance fell when food aid was cut in 1996. In the overall government budget for nutrition, about half the funds were for rehabilitation in hospitals (nutriwards) and village facilities (nutrihuts). This was cut to zero in 1992—a major shift, probably for political reasons. The level of funding requested in the PFNP/PPAN budgets was reasonable for producing impact, but only a fraction was actually available as new or reallocated funds. In fact, the nutrition allocation referred mainly to existing sectoral activities, such as agricultural extension. The problem is twofold: the funds are somewhat illusory, and the activities they may support do not usually address the actual causes of malnutrition. *If* they had been available as new (or at least fungible) resources, and *if* they could have been used for community-based nutrition programs, they would likely by now have had a significant impact—and the trend in child malnutrition would be downward.

The Roles of UNICEF and the World Bank

UNICEF's assistance for nutrition spans five five-year country programs for children (CPCs), beginning in 1978. Over the last three CPCs, UNICEF has supported four main interventions: breastfeeding and promotion of the infant formula code, growth monitoring and promotion, micronutrient supplementation and fortification, and nutrition surveillance for communities to assess, analyze, and act to solve nutrition problems.

UNICEF increased its direct assistance to local government units after the national devolution of health and nutrition services to municipalities in 1991. Financial constraints have led UNICEF to concentrate its support in two major ways. First, most UNICEF funding is targeted to 20 priority provinces where children are in greatest need. Second, most UNICEF funds no longer finance inputs and supplies but are directed instead to advocacy and capacity-building activities for the interventions; the aim is to mobilize government and community resources for nutrition. UNICEF's most recent country program, beginning in 1999, saw two other major changes. First, the entire country strategy is now presented in the context of child rights, aiming to foster a "child-friendly" national movement in which attention to nutrition plays a major part. Second, UNICEF is also supporting the expansion of a village health and nutrition post program in the 20 priority provinces.

Among UNICEF's significant achievements at the national level have been its leadership in getting the importance of micronutrient supplementation and fortification onto the government's policy agenda and, in particular, UNICEF's policy dialogue on micronutrient fortification, which contributed largely to the passing of the Salt Iodization Bill in 1995. At the local government level, UNICEF's capacity-building assistance has led to the formulation of local plans of operation for children, with clear strategies and increased investment in nutrition by the local governments in each of the 20 priority provinces. Two features of UNICEF's assistance are especially appreciated by the Philippines government: the flexibility and speed

of its grant financing and the technical assistance provided by its local office, where four staff work full time on health and nutrition, and a dozen others on communications and local government capacity building more generally.

Two main issues need to be addressed here. The first is that there is clear evidence that several of the main national strategies in nutrition (for example in breastfeeding, growth promotion, and iron supplementation) are facing implementation difficulties. Although UNICEF has financed these in successive country programs, there has been insufficient evaluation of what aspects of its assistance work and what do not. Second, country programs are grossly underfunded. UNICEF's resources are spread too thinly even in the 20 priority provinces; more worrying still, child nutritional status is nearly as bad in the other 58 provinces, which receive little or no UNICEF assistance. UNICEF recognizes the need to leverage its resources with those of the World Bank and Asian Development Bank, but while cooperation has increased, neither a true partnership nor cofinanced operations have yet emerged.

Only three of the World Bank's more than 75 projects in the Philippines have included significant direct assistance for nutrition, and the first of these was appraised as recently as 1993. The three projects provide assistance for women's health, for health and nutrition in urban slums, and early childhood development. All three contain substantial funding for micronutrient supplementation, and the last two contain substantial funding for growth monitoring and promotion.

Unfortunately, the Bank's move into nutrition came at the same time as devolution and also coincided with a turbulent period in the department of health, which has had five secretaries in the past five years. Implementation difficulties have been so severe that the Bank has decided to limit its new lending to budget support to maintain key existing activities, conditional on reforms in health sector management, financing, and procurement. Until such reforms are carried out, there is no prospect of substantial new Bank support for

nutrition that would break the financial bottlenecks constraining the effectiveness of the CPCs.

Bank-financed nutrition activities have performed much worse than those supported by UNICEF, for two main reasons. First, Bank funds have to be disbursed through government channels and according to Bank procurement procedures. These have led to delays not suffered by UNICEF, which can channel grant money directly to local governments. Second, the Bank's local office has only one staff member working part time on health and nutrition. The Bank has not been able to provide material support for the advocacy and capacity building that are essential to devolution—that is, persuading local governments to invest in nutrition and helping them plan and manage their programs effectively. Although the local Bank office has been able to provide substantial day-to-day support in procurement (a major bottleneck), the Bank's primary reliance on brief visits from Washington-based teams works better when there are no major implementation problems.

Narratives

The policies and programs of the government, UNICEF, the World Bank, and other donors interact with each other, and they respond to outside trends in thinking and policy. We examine three aspects of changing policies and programs in the Philippines.

First, the rationale for improving nutrition has evolved from its initial medical orientation to nutrition as a right. This has been central to UNICEF's advocacy. The Bank has moved to recognize health and nutrition as objectives, as part of human development. While this rationale is stated explicitly in government programs under the National Nutrition Council, it appears less influential in overall government decisionmaking at the central or local levels. Budget allocations to health and nutrition are being cut centrally and seem to be made on high-profile political grounds in the municipalities.

Second, programs overall have shifted emphasis to become more preventive, less complex, and more narrowly focused on caring

practices and micronutrients in particular. The UNICEF nutrition strategy and framework has contributed by providing a common point of reference and language. Whether to focus on underlying or basic causes—especially on whether to address poverty, either through nutrition programs or head on—needs more discussion and agreement.

Third, government and donors face significant implementation problems. Key actors do not yet agree that programs need to go to national scale for a number of years (or decades) to make a real difference in the problem of malnutrition. Few decisionmakers recognize the limitations of current resources. This underscores the need to develop a common view of the problem and possible solutions.

Priorities for Investment

Because poverty and food insecurity are important causes of malnutrition in the Philippines, the government has invested substantially in food production and poverty alleviation programs. The results have been disappointing. A World Bank analysis concluded, for example, that the great majority of the government's livelihood creation programs have poor cost-benefit ratios (Subbarao, Ahmen, and Teklu 1996). The priority should be to cut down, rationalize the number of schemes, and improve their performance, rather than additional investment.

The largest gap in the government's nutrition investment program is in the area of health care and caring practices for young children. Despite national plans since 1978, there is still no effective national growth promotion program for children. Underfinancing of such programs is exacerbated by two incorrect perceptions: first, because local rather than international reference standards were used until recently, PEM was not considered to be a serious problem and, second, in spite of evidence to the contrary (Alderman and others 2000), poverty alleviation continues to be seen as the quickest and best way to improve PEM. Evidence from the small-scale projects suggests that investment in going to scale nationally with community-based programs emphasizing caring

practices and growth promotion, in the context of general economic development efforts in the country, offers the best hope for the Philippines to sustain reductions in PEM—in line with current UNICEF thinking.

In addition, in spite of government awareness of its economic and social costs, not enough is being done to combat micronutrient malnutrition. The main constraint in the area of food fortification is the lack of political will to implement the salt iodization law passed five years ago, although new UNICEF initiatives may change this. There are also worrying signs that recent budget cuts in the department of health may lead to underfunding of the micronutrient supplementation programs, whose high coverage has been one of the most significant nutrition achievements of the last decade.

Nutrition Programs

Five types of nutrition programs were reviewed: those coordinated by the National Nutrition Council (NNC); the Bidani program (run in collaboration with state universities and colleges); UNICEF-assisted programs; NGO-supported programs, of which Helen Keller International (HKI, supported by USAID) is well documented; and World Bank projects (Early Childhood Development, Urban Health and Nutrition). Impact is generally low because those with higher resource intensity cover only a small proportion of the population, and the national programs are investing too little per child to have much impact.

The important next steps in planning and implementation, we suggest, are first, to broker agreement on the causality of malnutrition and its extent (this would include sorting out the confusion on child growth standards and cutoffs, hence the extent of problems and their trends) and then agreement on the characteristics of effective community-based programs. This should help create a shared program vision.

The priority of micronutrient deficiency control needs to be renewed as a part of the common program vision. Vitamin A capsule distribution needs to be sustained with high coverage (including

review of impact results from surveys), and fortification programs should be implemented. It is crucial that supplementation be maintained until effective fortification is universal. The legislation on iodized salt needs to be fully implemented, so that all the salt, whether imported or domestic, is adequately iodized—the present level of 25 percent could rapidly go to nearly 100 percent with sustained action, as it has in many other countries. Iron supplementation remains problematic, so more investment in research on fortification is urgent. Multiple micronutrient supplementation during pregnancy should also be explored.

Nutrition in the Context of Devolution

Devolution, which has shifted political authority from central to municipal governments in the Philippines, has radically altered the context of nutrition service delivery. By 1993, the departments of health and social welfare had lost and local government units (LGUs) had gained more than 67,000 field staff. The central government's role was redefined—primarily, policymaking and regulation and, secondarily, advocacy, capacity building and cofinancing (rather than management of) health and nutrition programs. With more than 1,500 LGUs free to invest in their own priorities, it has become critical to advocate and finance a single national approach to malnutrition reduction, provide improved capacity-building services, and provide external finance to encourage local governments to invest in nutrition themselves.

While UNICEF and the Bank are converging on a package of health and nutrition interventions, their approaches to capacity building and financing are quite different. UNICEF uses its local staff to directly strengthen provincial governments and in turn their capacity to support municipal governments. The Bank, with no hands-on experience or staff to help with local government capacity building, has had to rely on project management units at central and regional levels, assisted by local consultants. The eventual success of this approach is unclear, especially in the absence of tested methodologies for capacity building.

Matching grant financing is a potentially important incentive to encourage local governments to invest in nutrition. UNICEF does this by negotiating a counterpart contribution from each province to the agency's local plan of operations for children. However, these negotiations are ad hoc, and the local counterpart contribution varies from 20 to 90 percent of the UNICEF financing—meaning that the local governments receive financing on different terms and, in terms of sustainability, with different likely outcomes. The Bank has started work on a common framework to finance local governments. The idea is to promote equity and sustainability through a transparent set of rules applying to all local governments in a given wealth category. A new health sector reform agenda is under discussion, and it is unclear which approach will be taken on local government financing.

Donor Cooperation

Productive working relations have steadily increased between UNICEF and the Bank in the Philippines. For example, the Bank drew upon UNICEF's experience and staff assistance in the design of the Urban Health and Nutrition project and the Early Childhood Development project, and UNICEF has tried to help resolve procurement bottlenecks delaying implementation of the Bank's projects using its Copenhagen procurement service. However, the relationship has fallen short of full partnership of the sort illustrated by the current World Bank and Asian Development Bank–financed child development project. Greater cooperation can be based on comparative advantage. UNICEF needs to leverage the development banks' resources to increase the coverage and impact of community nutrition programs. Future Bank projects could benefit from UNICEF's experience in advocacy and capacity building with local governments, while UNICEF could benefit from the Bank's greater rigor in evaluation. The government, UNICEF, and the Bank could over the next three or four years articulate a common vision for a national nutrition program. This program could then be cofinanced either as a national nutrition or child development program for the five-year plan that begins in 2005.

A full co-financing partnership would require significant adjustment for both organizations. The Bank would need to realign the timing of its projects to fit the government and UNICEF's five-year planning cycle. It would also need to move from financing separate projects for women's and children's health and nutrition to supporting integrated operations, which are more suited to the integrated way in which local governments plan and operate. UNICEF should continue to shift its capacity building to strengthen the regional rather than the provincial levels of government, so that its limited staff can cope with the scale of a national program. UNICEF would also need to work with the government and the Bank to develop a common approach and common terms for local government matching of grant financing.

Cofinancing a common vision will only work if the other grant donors and the Asian Development Bank also participate. Currently, both central and local governments are poorly served by an excess of donor-financed projects, each with its own project unit; competing priorities; and claims to scarce budget resources. Financing to the LGUs is provided on differing and often inequitable terms. Much would be gained if UNICEF and the Bank could work with the government and other donors to cofinance a common program in nutrition, beginning in 2005. If a medium-term vision could be agreed on in principle, in the interim stakeholders could work toward consensus on a common strategy for service delivery, local government capacity building, donor financing, and a well-designed evaluation mechanism so that parties would know which interventions and service delivery strategies are most effective. This would include defining which agency should finance what, how costs would be shared with the LGUs, and through which channels resources would flow.

Conclusions

Conclusions are put forward first for the Philippines itself, then for the World Bank and UNICEF global approaches. These consider strategic aims, processes, and issues to be resolved. At both country

and global levels, the first suggestion is to prioritize evaluation, compiling existing information and launching new evaluations.

We propose the following strategic aims for the Philippines:

- Programs should go to a national scale, with community-based programs conducting a limited set of activities centered around village weighing posts. This set of activities, already quite widely agreed to, encompasses antenatal care, safe delivery, breastfeeding, immunization, complementary feeding, growth monitoring and promotion, micronutrient supplementation, and health referral. The means of remuneration for the village workers who will run these programs needs to be resolved, based on lessons from current programs. Vitamin A capsule distribution *must* be sustained; fortification should be pursued over the long term, to be phased in overlapping with vitamin A campaigns.
- The legislation for salt iodization should be implemented without delay.
- A 10 to 15 year effort to implement well-tested activities must be undertaken to build and underpin capacity at the local government level.

The following processes are needed:

- **Consensus-building on the extent and nature of the problems, the solutions to be pursued, and the means of implementation.** A process is needed to form a common program vision among the government agencies and donors. This process may take some time (possibly the planning phase of the next UNICEF programming cycle), but it is sufficiently important to warrant the effort.
- **Collaboration among parties toward implementing this common strategy.** Mechanisms for UNICEF (and NGOs) must be put in place to provide for local capacity building and for financial institutions (such as the Bank) to channel funds through central government.

For global approaches of the World Bank and UNICEF, these aims and features are suggested:

- Complementarities, based on comparative advantages, should be recognized. Specifically in the Philippines, these complementarities could include user-friendliness, rigor of program design and evaluation, flexibility, influence in different sectors at different levels, and resident presence instead of team visits.
- The common vision, already shared by the two institutions, could usefully be made more explicit. For implementation processes, the Triple A concept provides a relevant guide.
- Capacity building as a central feature to any successful strategy needs to be thought through, and the operational approaches need to be laid out.
- Recognition that collaborative mechanisms vary by country is important because the Philippines has a fully and perhaps uniquely decentralized system. Bangladesh has a different approach, with funds in a common pool. Probably most countries will fall within the range between the two.

Processes for collaboration in countries would take off from these ideas, with these features:

- No preconceived set of procedures should be sought. Rather, a flexible learning process should be initiated, both globally and in-country.
- Experimentation in collaboration and confidence building should be central features, exploring complementarities and synergy.
- Going to scale with national or large-area, population-level programs should be the goal, avoiding the temptation of a proliferation of pilot schemes and demonstration projects.
- Capacity building should be undertaken with a long-term horizon and with realistic goals for malnutrition reduction. In the Philip-

pines, a one to two percentage points per year reduction over 10 years would reduce malnutrition from the present 30 percent to 0–15 percent.

Tanzania*

"We Will Never Go Back" (UNICEF 1993) tells the story of nutrition and, more generally, community-based program development in the Iringa region of Tanzania during the 1980s; it tells how this effective programmatic approach expanded to other areas of the country, as the Child Survival and Development Programme (CSDP). Despite the achievements of the program and the buoyancy suggested by the title, the monograph proved to be overly optimistic. During the 1990s in Tanzania, the CSDP and nutrition programs more generally were battered by economic decline, government and health sector reform, decentralization of authority to ill-equipped and poorly financed district authorities, and a high proportion of distressed communities that were no longer able to support village workers. Not surprisingly, the result has been a serious decline in the quantity and quality of nutrition-related services, stagnation or reversal of the earlier decrease in malnutrition, and the virtual disappearance of nutrition from the country's policy agenda.

This case study examines the derailing of nutrition during the 1990s. It briefly reviews the history of nutrition in Tanzania, nutritional trends, and the role of the World Bank and UNICEF in this history. It then presents the following three policy narratives: health sector reform and sector-wide approaches, the peripheralization and marginalization of the Tanzania Food and Nutrition Centre, and new beginnings. The idea is both to explore the precipitous decline of nutrition and to find signs of hope for the future.

* Carmel Dolan and James F. Levinson are the authors of this section.

Background

The major actors in the history of nutrition in Tanzania are the Tanzania Food and Nutrition Centre (TFNC), the Swedish International Development Authority (SIDA), and UNICEF. The story roughly parallels developments and understandings of nutrition that were under way internationally. During the 1960s and early 1970s, malnutrition was associated primarily with the food cycle, tracing shortfalls in production through to its consumption consequences. By the 1980s, this conceptualization was largely swept aside as the country experienced a massive expansion of nutrition programming supported by a new framework for thinking about nutrition.

SIDA, the TFNC, and UNICEF formed an important partnership that pioneered what became UNICEF's conceptual framework and its Triple A approach to community-based problem solving. These understandings led in turn to the Joint Nutrition Support Programme in the Iringa region, a landmark project placing emphasis on social mobilization, local problem assessments and action plans, and tailor-made combinations of nutrition and food security at the community level. The dramatic success of the Iringa program in reducing the prevalence of severe malnutrition led to rapid expansion through the 1980s and early 90s to other areas of the country.

The CSDP and the nutrition and community consciousness that it engendered were surely partially responsible for the decline in childhood malnutrition. The prevalence of underweight declined from an estimated 50 percent in the 1970s and early 1980s (based, unfortunately, on a paucity of representative data) to roughly 30 percent by the early 1990s. In the 1990s, however, these levels reached a plateau, while infant and child mortality appeared to be increasing (along with declining use of maternal and child health services). Vitamin A, iron, and iodine deficiencies remain high despite considerable efforts.

SIDA and UNICEF were the primary donors supporting nutrition-related activity in the country during the 1980s and 1990s.

UNICEF support for the CSDP as well as for micronutrient activities went through a relative lull during the mid-1990s; however, UNICEF has now reemerged as the major supporter of nutrition and community-based services in the country.

The World Bank's initial intention was to support the expansion of the CSDP as part of a new health and nutrition project initiated in 1990. This intention was subsumed under a broader effort to support district health plans in consonance with the health sector reforms at the time. Responsibility for nutrition in these plans and for technical assistance to the districts was delegated to the TFNC, which received financing under the Bank project. Nutrition activities constituted 3 percent of the total project budget. Most nutrition activities were directed toward micronutrient control activities. A new health sector development program (discussed in narrative 1) included little mention of nutrition, as does the Bank-assisted Tanzania Social Action Fund.

Narrative 1: The Health Sector Development Program

The World Bank and partner organizations promoted health sector reform in many countries during the 1990s. In general, these reforms encouraged more rational (often decentralized) planning modes, implementation capacity , and facilities-based health service delivery. In Tanzania, health sector reform was formally initiated in 1997, but it had been an increasingly important phenomenon since the beginning of the decade, given that analysis revealed serious inefficiencies in the country's health service delivery. Although the national budget allocation to health is high compared with other countries at similar levels of economic development (World Bank 1999), its impact on life expectancy, infant mortality, and total fertility have consistently been lower than that of neighboring countries. Accordingly, health sector reform has been aimed toward improving resource management, upgrading service quality through capacity development, and shifting the planning and operations emphasis from inputs to outputs and impacts. While the problems addressed by health sector reform were indeed significant, they were not the

only matters of concern. However, the reform process dominated the health discourse at the national and district levels so completely, that other issues, including nutrition and community-based services, were virtually ignored. By the late 1990s, they had largely disappeared from both health sector and development agendas.

Although briefly mentioned in health sector reform documents at the time, virtually no reference is made to nutrition or community-based services among performance indicators or activities. Health plans under development at the district level are similarly silent on these issues. Finally, while the Bank's health sector development program, which totaled US$619.5 million under the first three-year adaptable program loan, mentions nutrition and community services, it failed to include a nutrition indicator as one of its end-of-program outcome measures.

Can malnutrition be addressed in Tanzania solely through more or more effective district planning and facility-based delivery and without explicit attention to community-based services? International as well as Tanzania's own national experience suggests that reliable and efficient facility-based services are indeed necessary to sustain reductions in child and maternal malnutrition; however, other than in fairly well-off countries (for example, Chile), facility-based services alone are insufficient for reducing malnutrition. Sector reform that seeks to improve nutrition must be sufficiently broad-based to include community-based social mobilization and interventions.

Many voices could have been, but were not, raised in support of community-based services and nutrition in the health sector—the National Planning Commission (central to decisionmaking on the CSDP but stripped of its responsibility during the anti-central-planning reformist era), the TFNC (a pale, anachronistic shadow of its former self by the mid-1990s, see narrative 2), and the World Bank and its Danish bilateral health sector reform partners.

Because of senior personnel transfers in the early 1990s, UNICEF could not maintain its strong nutrition advocacy role during the critical transition period. At the time the case study was con-

ducted, UNICEF attempted to reinstate nutrition and community-based services. The resuscitation initiative, however, may have been hampered by an apparent "disconnect" between these efforts and those of the central actors in health sector reform (that is, the Bank, the bilateral Danish programs, and the ministry of health). Their focus was on the health system—and UNICEF and its priorities were on the outside.

In addition to disappearing from the national agenda, nutrition efforts in the country could be further harmed by cost sharing and user fees coming out of the health sector reform (primary education, water use charges, and health costs were estimated to represent around 35 percent of monthly total expenditures in low-income rural households). Information collected by the case study team suggested that these expenditures (generally made in poorly supplied facilities) were limiting the use of antenatal care, iron-folate tablet use, and facility-based deliveries with implications for maternal mortality. Revealingly, recent mortality data indicate that 80 percent of total death occurred at home; 60 percent of those who died made no effort to use the government health system at all (Ministry of Health, Tanzania 1997).

Community- and institution-based health services are complementary. Taking the long view of nutrition services in health sector reform, it makes little sense to marginalize the former while the latter is becoming increasingly expensive.

Narrative 2: The TFNC

During the 1970s and through the mid-1980s, the TFNC was a dominant presence. By the end of the 1990s, it was an anachronism, barely recognizable as an institution. At best, it played a minor role in reform debates; its operating budget covered only a small fraction of its needs, and the top-heavy staff spent nearly all of their time in the capital city.

Looking back at critical decision points in the mid- and late 1980s, senior staff lament their inability to continue at the core

(much less the cutting edge) of the country's nutritional and national development. In hindsight, the lost opportunities were significant. The national nutrition policy documents in review at the time potentially offered a blueprint for the kinds of essential services that the center might have provided. There was a rich array of program-driven training, operations research, and monitoring and evaluation needs. Much could have been contributed to the CSDP.

It is not clear that the center would, in fact, have chosen to carry out these support functions at the time. Could a top-heavy, research-oriented institution reorient itself to perform these functions effectively? It is clear that the choice was theirs only to a limited degree. With operating budgets financed entirely by donors, their programmatic direction was driven largely by the nutrition agendas of the donors.

In the mid-1980s and increasingly in the 1990s, the donors' nutrition agendas were dominated by a disproportionate emphasis on micronutrient nutrition. Accordingly, the bulk of assistance to the center during this period was related to micronutrients. By the early 1990s, the major operating departments were heavily involved in vitamin A, iodine, and iron deficiency activities.

While the micronutrient accomplishments should not be minimized, there were major costs to this reorientation. The most important may have been the perception that the center was a specialized organization whose narrow mandate was peripheral to the primary concerns of development.

Given the broad array of accompanying problems and the diminished relevance of top-down nutrition activity, it is uncertain whether a more holistic, program-driven orientation would have entirely prevented the institutional problems that the center now faces. However, had its activities been at the core of nutrition and development—as they were in the 1970s and early 1980s—its chances for survival would most certainly have been improved. As it happens, the TFNC may have yet one more chance to assume such a role. That opportunity is described in narrative 3.

Narrative 3: The Way Forward

With the problems described above still unresolved, how does Tanzania move ahead on nutrition? Rather than seek to resuscitate the CSDP as originally designed, UNICEF and its partners have given a fresh start to community-based nutrition activity. Entitled Early Childhood Care for Survival Growth and Development, the new program seeks to combine child survival and development approaches and a basic extended program of immunization, growth monitoring, health, nutrition counseling and HIV/AIDS attention with new approaches. The latter include activities addressing low birthweight prevention, psychosocial development, deworming and hygiene promotion, multi-micronutrient supplementation, and safe motherhood initiatives.

While challenges to this second-generation program are considerable—in fact, possibly insurmountable without a radical shift in the country's development dialogue—UNICEF to its credit has embraced two critically important underlying principles: reliability of information and capacity building. In an effort to avoid monitoring and management problems that have adversely affected child survival and development activities in recent years, the new program makes particular efforts to ensure information reliability through the intensified training of workers and supervisors and employment of independent quality checks on use of data. Similarly, in an environment in which capacity building has come to mean little more than cycles of workshops with per diem support, the new program will instead focus on workable systems for responsible, accountable service delivery. They will create necessary skills to make such systems function, as well as district-level capacity to employ "management by exception" processes in using and acting upon data from community activities.

The Bank-assisted Tanzania Social Action Fund, a vehicle to fund priorities identified by communities themselves, may offer the opportunity for the Bank to support the new UNICEF initiative by involving itself directly in grassroots initiatives. While nutrition is only

peripherally mentioned in the documentation, it could become an important vehicle for financing the extended CSDP. A slightly reoriented Tanzania Social Action Fund indeed presents an ideal opportunity for the Bank and UNICEF to work together in addressing the needs of vulnerable and poor households during this important period of national transition.

The success of the new endeavor will depend on an array of factors, many beyond the capacity of UNICEF and its partners. A World Bank team genuinely attuned to the value of these initiatives and the consequences of abandoning community services would greatly strengthen these efforts. Nonetheless, as evidenced by the enthusiasms of the 1980s, success is contagious. Perhaps the best hope is that sustained, systematic, and well-managed efforts—in a discrete number of high-priority activities—will lead to services and impacts and, at the same time, provide a new model and impetus for the future.

Notes

1. This report uses the term *malnutrition* to refer to nutritional deficiencies and conditions of undernutrition. While obesity and other noncommunicable, nutrition-related conditions are on the increase in developing countries, the focus of this study was on the response to undernutrition.

2. The term *nutrition community* is used in this report to refer to a potentially wide range of individuals and organizations from many sectors and disciplines that participate in discussions, policies, and programs related to nutrition. Many of these participants may not have nutrition as the primary focus of their work, although some do, and there may be quite divergent views on the nature of nutrition problems and the most appropriate ways to address them.

3. For a review of the evidence of the consequences of malnutrition, see Behrman (1992), Horton (2002), Pelletier and Frongillo (2003), and Schroeder (2001).

4. The many attempts to initiate and implement community-based nutrition programs have been documented in syntheses and reviews, particularly in the 1990s. These include three comprehensive reviews by the U.N. Administrative Committee on Coordination/ Subcommittee on Nutrition (ACC/SCN) that attempted to unravel the

dynamics that underpin success in nutrition at the national level or in a specific program (Gillespie and Mason 1991; Jennings and others 1991; Gillespie, Mason, and Martorell 1996), a study of 22 community-based nutrition programs in South Asia (Jonsson 1997), a review of eight effective programs in Africa (ACC/SCN 1997b), a review of another four African programs by the World Bank (Abosede and McGuire 1991), a questionnaire survey of 66 programs in Africa also by the World Bank (Kennedy 1991), a review of community-based programs undertaken before the formulation of the UNICEF Nutrition Strategy (UNICEF 1990), and a recent review of successful programs in Asia (Allen and Gillespie 2001). Much of the evidence in the original studies on which these reviews were based related to the processes adopted. The quality of impact evaluations varies.

5. Data on nutrition-related spending by country are not easily available, and there are major problems of definition, disaggregation, and scope. While there are clearly delineated direct nutrition activities such as growth monitoring and promotion, many nutrition-related activities are subsumed within broader health programs, and the data cannot easily be disaggregated. The flip side of the need for better integration is that nutrition-specific data may become harder to disaggregate and track. The scope also needs definition, as there are many programs in health, education, social protection, and rural development and agriculture that may have a significant impact on nutrition even though they have no explicit nutrition objectives.

6. The framework described here is very similar to one known as the "policy sciences framework," originally developed at mid-century by Harold Lasswell (1971). The broad scope and utility of Lasswell's meta-framework were eclipsed by subsequent specialized (but partial) theories and approaches developed in political science, public policy schools, and other social sciences, as described by Sutton (1999); however, none has approached its comprehensive character. Because of their essential similarity and the desire to connect read-

ers to this more detailed description, the framework described in this section will be called "the policy sciences framework," with full credit given to its original inventor, Harold Lasswell.

7. The term *fragmented knowledge*, as used here, refers to the degree to which technical knowledge (that is, understanding of cause-effect relationships, interventions, and methods for their analysis) is shared among individuals, groups, and organizations. It does not refer to incomplete or imperfect knowledge about these relationships, which is assumed to exist in all cases.

8. According to the policy sciences framework, all values can be grouped into one or more of the following eight categories: power, wealth, enlightenment, skill, well-being, affection, respect, and rectitude. These are viewed in three ways: first, as goals that people may try to enhance through the policy process; second, as things that are affected by a policy process, whether intended or not; and third, as assets or resources that participants use in the policy process to get what they want.

9. Although economics is commonly understood to be highly technical, it has some key concepts and core assumptions (for example, opportunity costs, allocative efficiency) that make it distinctive as a form of policy analysis from other scientific and technical fields.

10. Among the forms of rationality (that is, competing logics) that are present in policy analysis and policy processes are technical, economic, social, normative/ethical, political, administrative, and legal. Many policy struggles arise from the use of competing logics, each of which can produce its own preferred solution, each of which can produce its own policy failures if the insights provided by the other logics are neglected (see table 3.1).

11. These criteria, used in chapter 4 for the analysis of the UNICEF Conceptual Framework, are awareness of the visual image and its

meaning, degree of understanding of the nuances and full implications of the framework, incorporation into one's own written and verbal narratives, and translation into organizational agendas or forms of practice.

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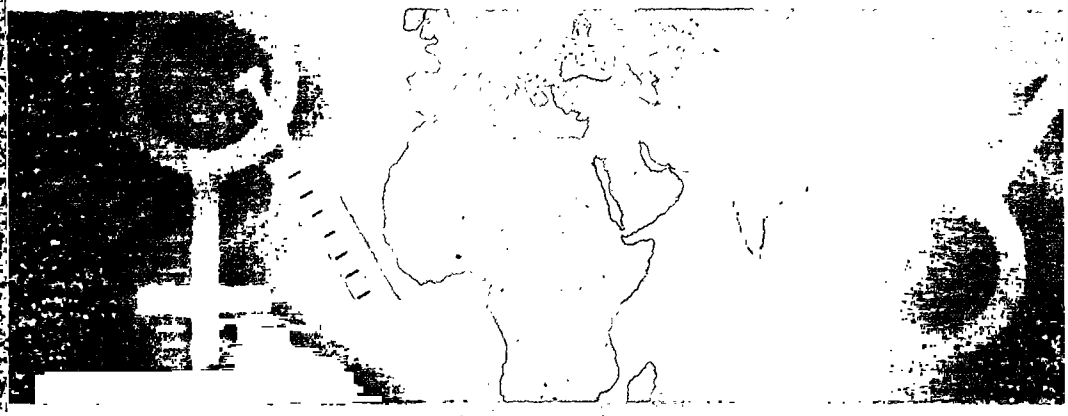

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