3-4

# The Policy Process of Increasing Micronutrient Programming in India

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## Executive Summary

Deficiencies of micronutrients—particularly iron, iodine, vitamin A, zinc, and folic acid—wreak havoc on survival, health, and productivity around the world. Micronutrient deficiencies are often called "hidden hunger" because they do not manifest themselves in immediate physical signs but are insidious in causing disease. They are particularly problematic in India because of the sheer numbers of people affected: 35 percent of the world's malnourished children live in India, and 42 percent of children in India are stunted. The Indian government has not met its current goals related to reducing micronutrient deficiencies.

In order to increase the profile of programs aimed at eliminating micronutrient deficiencies on the policy agenda, the Micronutrient Initiative (an international nongovernmental organization, or NGO), created an India Micronutrient National Investment Plan (IMNIP), which laid out the rationale and costs for addressing the problems. This plan has been well received and appears to have significantly influenced likely funding allocations to micronutrient programs. Several features of the process by which the IMNIP was conceptualized, written, shared, and used were essential to influencing the national policy process; these features include relevancy, timing, stakeholder involvement, information, publicity, leadership, and saliency. The IMNIP has clearly addressed questions of why and when micronutrient programs should be increased, and it has made plausible suggestions concerning what programs best tackle the problems and how they should be carried out. It is debatable who should be responsible for planning, funding, carrying out, and monitoring micronutrient programs; possible parties include the national government, state governments, NGOs, and the private sector. A take-home message is that policy decisions are often ambiguous and that debate about the best way to administer policy continues even after policies or budgets are passed.

As a staff member of an NGO that provides nutrition programming consulting, your assignment is to recommend to the Government of India how to address remaining questions about implementation, funding, monitoring, and enforcement of the micronutrient programs and to try to make sure the government takes note of your recommendations.

## Background

Unlike protein and energy malnutrition, deficiencies in vitamins and minerals ("hidden hunger") do not manifest themselves in immediately obvious physical signs. Instead, they result in a host of insidious consequences, such as infant and child mortality, birth defects, attenuated child growth and development, and poor productivity and mental capacity. The major micronutrient deficiencies, based on prevalence and severity of consequences, involve vitamin A, iodine, iron, zinc, and folic acid.

India is one of the countries most affected by hidden hunger. Fully 35 percent of the developing world's malnourished children live in India.[1] Forty-two percent of children in India are stunted (International Institute for Population Sciences 1998–1999), with zinc deficiency as a major contributing factor. India has the largest number of vitamin A–deficient children in the world, and this deficiency precipitates an excess 330,000 child deaths every year in India (Mason 2003). An astonishing 79 percent of children under age three and 56 percent of women have anemia (International Institute for Population Sciences 2006), most of which is due to iron deficiency. Each year in India 22,000 people, mainly pregnant women, die from the most severe form of anemia (MI 2005). The impacts of inadequate folic acid during pregnancy have resulted in the birth of 200,000 babies with neural tube defects annually in India—a rate of neural tube defects 16 times the global average (Cherian et al. 2005). Iodine deficiency is the reason 66 million Indian children are born mentally impaired each year and why intellectual capacity is reduced by an estimated 15 percent nationally (MI/UNICEF 2004).

Vitamin A, iron, and zinc deficiencies, when combined, constitute the second-largest risk factor in the global burden of disease (Ezzati et al. 2002). Given the tremendous impact of micronutrient deficiencies on survival, health, and productivity, reducing micronutrient malnutrition is an important dimension of six of the Millennium Development Goals: those pertaining to poverty alleviation, universal primary education, gender equality, reduced child mortality, improved maternal health, and the combating of HIV/AIDS, malaria, and

[1] This figure is based on child malnutrition statistics found in WHO (2005).

other diseases. The Copenhagen Consensus, a set of international priorities developed by an expert panel of international economists in 2004, identified the reduction of micronutrient malnutrition as its second-highest priority based on a cost-benefit analysis (the first priority was combating HIV/AIDS).

The Planning Commission is a group of Indian government officials, headed by the prime minister, who define India's Five-Year Plan, the most important document guiding India's public expenditures. It is a five-year budget, and many important policy decisions are made in the process of planning it. The Planning Commission's 10th Five-Year Plan (2001–2006) set the following targets with respect to micronutrient malnutrition:

- Eliminate vitamin A deficiency as a public health problem.
- Reduce the prevalence of moderate anemia by 25 percent and moderate and severe anemia by 50 percent in children, pregnant and lactating women, and adolescents.
- Achieve universal access to iodized salt.
- Generate district-wide data on iodized salt consumption.
- Reduce the prevalence of iodine deficiency disorder (IDD) in the country to less than 10 percent by 2010.

India has made headway toward these targets, but they are far from being met. Vitamin A deficiency is still a public health problem affecting a large portion of the population, but only 43 percent of children (6–59 months) receive the recommended two doses of vitamin A per year. Anemia rates in children, pregnant and lactating women, and adolescents have not significantly decreased—in fact, they have increased in recent years (International Institute for Population Sciences 1998–1999, 2006). The prevalence of IDD has also likely not been reduced. In much of India, iodine fortification is essential because iodine is not available in the diet. Yet only 50 percent of Indian households are using adequately iodized salt, in part because in 2000 the law on obligatory salt iodization was relaxed (International Institute for Population Sciences 1998–1999). Mandatory salt iodization has since been reinstated, but the few years of relaxation was a setback for the goal of universal salt iodization, and enforcement of salt iodization in manufacturing remains a challenge.

India's 11th Five-Year Plan spans 2007–2011 and presents a window of opportunity for influencing India's micronutrient policy. Because recent progress toward micronutrient deficiencies has fallen short of goals, the rationale for increased micronutrient programming is strong.

## Enter the Micronutrient Initiative

The Micronutrient Initiative (MI) is an international NGO based in Ottawa that works in 75 countries around the world. It was founded in 1992, after a pledge was made at the World Summit for Children in 1990 to protect the world's children from micronutrient malnutrition. The mission of the organization is to eliminate vitamin and mineral deficiencies.

The MI's Asia regional office is in New Delhi, India, where it was well positioned to act in the Indian policy process. The MI sought to inform, and in some sense create, debate about micronutrient programs at a key time in national decision making, with participation of key stakeholders. The vehicle for doing so was the planning, writing, and discussing of the India Micronutrient National Investment Plan (IMNIP), put together in order to influence the policies and allocations of India's 11th Five-Year Plan.

The process of creating the IMNIP is an example of a successful approach to influencing the policy process at a national level. Writing the IMNIP and gathering stakeholder input and commitment took place in 2005–2006—exactly when government officials were actively forming their priorities and coalitions for the next five-year plan. The MI built its arguments and policy recommendations on the government's existing goals and actions against micronutrient deficiencies.

Additionally, the government, at the level of the prime minister, encouraged the development of this investment plan as an opportunity to examine the financial and programmatic needs for addressing the micronutrient malnutrition problem adequately. Stakeholders and key decision makers from central and state governments, nonprofits, and the private sector were included in outlining and revising the IMNIP.

The document itself lays out suggested policies in specific, concrete terms, along with bottom-line costs. It was formulated so that it could be implemented as national or state policy, complete with intervention options, target coverage over five years, and additional costs per beneficiary. It presents the financial gap between existing allocations and the allocations that would be necessary to achieve the levels of service provision required to reach the goals laid out in the 10th Plan, plus a few new goals.

As of this writing, government officials have accepted the plan, and a few of them have made the plan one of their primary agendas in the Planning Commission. Based on the broad support in the Planning Commission, the actions of key leaders, and the general publicity concerning the need for policies to combat hidden hunger, it appears that much of the IMNIP will be incorporated into 11th Five-Year Plan.

The following are a summary of actions that illustrate the principles of successful influence over the policy process:

1. ***Relevancy:*** Building upon an existing foundation makes policy objectives relevant. IMNIP suggests activities that build on the government's own previously stated goals. The plan proposes to use existing infrastructure for nutrition programs where possible.
2. ***Timing:*** Efforts to influence national or state policy are most likely to be effective if they are concurrent with planned budget and programming revisions or renewals. The MI led the process of creating the IMNIP in the period just before the next five-year plan.
3. ***Stakeholder involvement:*** Integrating the interests and input of key stakeholders early in the process was essential to creating ownership of the goals laid out. The MI recruited a team of stakeholders to begin the planning and buy-in for IMNIP at the very beginning of the process. Once a draft of the document was created, it was circulated among stakeholders for comment. The draft was left intentionally incomplete, with questions raised throughout, so that stakeholders reviewing it could be included fundamentally in the process. All comments were incorporated into a final document.
4. ***Information:*** Providing credible bottom-line estimates for a variety of policy options allows well-informed decisions. The draft IMNIP included the cost of all interventions and realistic target coverage figures, based on the percentage of the population currently reached by each specific intervention and the expected ease or difficulty of scaling up. This kind of information is critical if the proposed programs are to be taken seriously.
5. ***Publicity:*** The more public an issue is, the harder it is to ignore. The MI held a public conference with government officials as key speakers. The conference was reported in the media, increasing public interest in the issue.
6. ***Leadership:*** Finding a champion for the cause in a key position of power greatly helps to move agendas forward. MI staff met with particularly interested government officials, who became further convinced to increase the profile of micronutrient malnutrition on the policy agenda.
7. ***Saliency:*** Framing the issue so that it is central to the most prized goals of the government helps to make it salient. Both the IMNIP and government officials frame the issue in relation to economic development and human capital, in addition to humanitarian motives.

## Policy Issues

The following policy issues were considered in the conceptualization and writing of the IMNIP: Why should micronutrient programs happen—is the case strong enough to justify public expense? When should micronutrient programs happen? What should the micronutrient programs be? How should the programs be carried out? Who should be responsible for planning, funding, and administering the programs? The IMNIP addressed some of these issues thoroughly and left others open for debate.

### Why and When

The IMNIP clearly demonstrated the magnitude and urgency of the problem by collecting relevant statistics on the prevalence and effects of hidden hunger. The cost of leaving micronutrient deficiencies unattended was calculated to be roughly

US$6.3 billion, 2 percent of India's gross domestic product (GDP), whereas the cost of the recommended programs was only US$130 million per year: 50 times less than the cost of *not* addressing the problem. The cost per high-risk beneficiary (22.8 million pregnant women, 28.4 million adolescent girls, 39.12 million below-poverty-line cardholders, and 115.4 million children aged 6–59 months) was about US$0.56 per year. This presentation provided a clear rationale, showing that the costs of inaction are far greater than the costs of action and that the costs of the plan were, in the big picture of a national budget, incredibly small (less than 0.1 percent of the government's total expenditure budget). India continues to aim for fast economic growth, and government officials were swayed by the reasoning that malnutrition dampens GDP.

Furthermore, the IMNIP demonstrated that immediate solutions were possible, given the infrastructure (public health clinics, transportation, monitoring offices) and technologies (supplements and fortification processes) already in use in India. Recommended programs were structured around the existing resources, with a time frame that coincided with government planning for the next budgetary cycle.

Thus, both why and when action should occur were answered quite persuasively. The recommended programs are cheap and cost-effective and can be implemented with existing infrastructure. Because the bottom line was laid out up front, the government was easily able to use this information in its planning processes.

## What

The activities included in the IMNIP were almost exclusively existing or planned government interventions. The recommended interventions include

- twice yearly vitamin A syrup for children 9–59 months old;
- home-based fortification premix (such as Anuka or Sprinkles™ ) for children 6–24 months old;
- "Nutri-candies" containing iron, folic acid, vitamin A, and vitamin C for children 24–72 months old;
- fortified *khichdi* (a rice and lentil meal) for children 24–72 months old and children in the midday meals program;
- iodized/double-fortified salt and iron and folic acid–fortified wheat distributed through the Public Distribution System (PDS);
- iron–folic acid tablets for pregnant women and adolescent girls;
- fortified wheat flour with iron and folic acid for the general population;
- fortified milk with vitamin A for the general population;
- zinc as adjunct therapy for diarrhea;
- addition of zinc to fortified foods; and
- research on how to best increase dietary diversity.

## How

In many cases, how the interventions were to be carried out was not clearly specified. This lack of specificity can be regarded as a weakness of the document because it does not provide a complete plan for carrying out the suggested interventions. The decision to omit operational details was intentional, however, because it allows stakeholders in the government, as well as in NGOs and the private sector, to fit the suggested programs into their existing mode of operation, as they best know how to do.

## Who

The MI recommended that in large part responsibility for funding and administration be taken on by the central government. Costs were presented in such a way that state government officials using the document could also calculate the costs per beneficiary of each intervention for their state, should they choose to include it in their state policy. The IMNIP left the debate over whether central or state government should pay for and institute the plan up to the legislators themselves. The IMNIP also recommended that private industry be involved in fortifying foods, in some cases voluntarily (wheat, milk, oil), and in some cases by mandate (salt).

## Stakeholders

### NGOs

NGOs can function as innovators of effective micronutrient interventions, as agenda setters and advocates (by encouraging the government to take action against the problem), and as informants to policy decision makers (by providing useful information). They may have a stake if micronutrient programs align with their mission and if they can provide products, services, or consultation to micronutrient programs.

The MI, in particular, has a stake because this project could make considerable headway toward its mission of eliminating vitamin and mineral deficiencies. The MI has also created micronutrient innovations for interventions that may be used nationwide (such as "Nutri-candies"), bringing in funds both directly and indirectly through publicity.

Other NGOs have a stake because they may be asked to provide a micronutrient product or service involved in the micronutrient programs. For example, Population Services International (PSI) wanted to be involved in the process of writing IMNIP because its experience with social marketing techniques may be needed if the interventions are scaled up to reach a larger portion of the population. CARE is an example of another large international NGO with an agenda related to micronutrient programs. Multilateral organizations such as the United Nations Children's Fund (UNICEF) also have a stake in being involved in any programs that target children's health.

### The Central Government

The central government of India has a large stake in the issue of micronutrient programming because of the outlays required and the outcomes that the micronutrient programs are slated to produce. The government functions as the main funder, because it is responsible for making the final decision on allocations for nutrition programs. It also has a role as a planner in the process of choosing interventions that are feasible and as a coordinator, given that carrying out much of the plan would fall under the activities of existing government staff and infrastructure. Finally, the government can function as an enforcer of any policies that are passed and as an evaluator of the programs it mandates.

### State Governments

State governments each have a stake in micronutrient programming because the policy options chosen will directly affect their budgets, operations, and constituents. Micronutrient deficiencies are more prevalent and severe in some states than in others, and political commitment varies by state (although it is not necessarily correlated with the extent of the deficiencies). State governments have similar roles as the central government—as planners, coordinators, enforcers, evaluators, and funders—but over a smaller jurisdiction.

### The Private Sector

The private sector's role in micronutrient policy is primarily as producers. Industry has a stake in micronutrient policy because it may be required to change its product to meet new standards. For example, a wheat miller may be required to add iron and folic acid to wheat flour and certify fortified wheat with a nationally used logo. Alternatively, industry may have the option of choosing to change its products. For example, a local vitamin company may formulate a micronutrient premix in order to participate in or compete with the government program to provide a home fortification micronutrient premix.

Although the private sector is often thought of simply as industry, private survey research and data analysis groups could also participate as evaluators of programs, and media groups have a stake as reporters and possibly advocates (by increasing the saliency of an issue). The private sector is also a beneficiary of micronutrient programs: if workers are better nourished, they will be more productive and have fewer lost workdays.

### Researchers

Researchers in the government, nonprofit sector, and private sector have a stake in micronutrient programs, because they often influence technical debates that can affect implementation.

### Beneficiaries

Beneficiaries clearly have a large stake in micronutrient policy, because the type and extent of

programs chosen may affect their ability to consume sufficient micronutrients to remain healthy. They will certainly have viewpoints on which micronutrient interventions work best and who should administer them based on their experience with current or past micronutrient programs. Ideally, planners would consult beneficiaries in the process of increasing micronutrient programs to learn which interventions work and how to implement them effectively. In this case, target beneficiaries were not directly included in the process because of logistical and political constraints. Their interests were indirectly represented through the input and arguments of other NGOs and their elected government leaders. Consulting beneficiaries will be an important part of evaluating the effectiveness and appropriateness of micronutrient interventions.

## Policy Options

The MI led the process of bringing micronutrient policy options up for debate. As discussed, instead of lobbying the government or writing a plan independently, the MI produced a workable plan with the inclusion of stakeholders from central and state governments and the private sector. This tactic was successful in creating a sense of ownership of the IMNIP among government, NGO, and industry representatives.

Because of this participatory approach to the formulation of policy options, as well as the other strategies mentioned, the IMNIP has already influenced the policy process for micronutrient programs in India. The process is far from over, however. Policies and programs on the books do not necessarily answer all policy issues; there is often considerable ambiguity left at the "end" of the process. Continued decision making about how programs should be administered and who is responsible for them are essential to successful implementation of the programs and policies.

So, at this stage of the policy process concerning micronutrient programming in India, what is left to decide?

There is general agreement on when programs should happen (now) and why the programs should happen (children are dying; programs are inexpensive compared with the costs of inaction). These questions were resolved persuasively in the IMNIP, with the participation of government officials.

There is ongoing discussion about exactly what the interventions to address micronutrient deficiencies should be and how they are best carried out. These debates, which will continue even after the Five-Year Plan is passed, involve technical issues about micronutrient interventions that are beyond the scope of the policy options in this case study.

The debatable issue left for this case study, then, is who should be responsible for planning, funding, and carrying out micronutrient programs? Who should be responsible for monitoring and enforcing them?

### Who Should Be Responsible for Funding and Carrying Out Micronutrient Programs?

The IMNIP was primarily directed to the central government, with options presented for state governments and opportunities sketched out for NGOs and private industry. As the budget for the 11th Five-Year Plan is hashed out, any or all of these stakeholders could end up with responsibility for funding and carrying out the programs. A few pros and cons pertaining to each stakeholder are offered here.

- *The central government*
  *Pro:* Programs carried out by the government can make use of a vast network of available programs and infrastructure. This capacity makes building on existing central government programs far more efficient than any other option.

  *Con:* Levels of government program funding can shift based on who is in charge, and if key leaders leave (as often happens), funds or administration may not be delivered successfully. Corruption is a drain on available resources and thwarts progress in public health programs.

- *State governments alone*
  *Pro:* States differ greatly in India (almost as if they are separate countries) and have different prevalences of micronutrient deficiencies and different needs. State officials are the most qualified and motivated to assess the best ways of addressing micronutrient deficiencies in

their state and should not be required to conform to national micronutrient policies and programs. They should have the autonomy to decide on the extent of their own nutrition programming.

*Con:* Individual state plans, as opposed to a one central plan, makes unified delivery and planning, as well as state comparisons, more difficult. Furthermore, micronutrient deficiencies are an issue of distributive justice that may be poorly addressed by individual states. In a centrally coordinated plan the worst-off states would receive the most funding for micronutrient programs from the central government, but if planning were left to the states, those states with very large burdens of micronutrient deficiency may not necessarily invest in micronutrient programs; this failure would leave their citizens at a disadvantage.

- *NGOs alone*
  *Pro:* Compared with governments, NGOs have relatively more flexibility to expand their budgets through increased fundraising and to focus their efforts on a particular issue such as micronutrient deficiencies. An NGO may be able to move fastest to get programs started. NGOs also have a strong motivation to make an impact, which will help them achieve their mission and raise more funds.

  *Con:* Although NGOs can act quickly, their scope is limited. Government funds and infrastructure are much deeper than any one NGO's own resources, meaning that an NGO alone would not be able to carry out interventions at the scale that a government could.

- *The private sector*
  *Pro:* Private industry can play a key role in moving micronutrient interventions forward. For example, voluntary wheat flour fortification in India started in 1998 with two companies, Kapoor Brothers Roller Mills and Vinod Mills. Today, the Roller Flour Millers Federation of India is actively involved in discussion moving toward expanding voluntary fortification across the industry.[2] For some interventions, the private sector has an incentive to participate voluntarily because doing so will increase sales (for example, wheat flour fortification, marked with a logo). The private sector may also use social marketing to sell products. Social marketing of micronutrient products (for example, Sprinkles™/Anuka) by private companies is an economically and socially efficient way of getting these interventions to the public on a wide scale and encourages the Indian economy.

  *Con:* The private sector's bottom line is profit, so there is a motivation to cheat. It may be that the only appropriate place for the private sector is in pure production facilities, monitored and enforced by the government. Another argument is that selling micronutrient intervention products, rather than providing them free of charge, will make them unavailable to those who most need them. Micronutrient deficiencies are basically the result of market failure, so public policy is warranted, and the solution should not lie solely with the private sector.

- *Central government, state governments, NGOs, and private industry together*
  *Pro:* These different stakeholder groups bring together considerable strengths that can create the best program funding and implementation. NGOs may take the lead on one kind of program (such as social marketing of fortified porridge), and state governments on another (such as distributing fortified porridge in schools), while the central government can take charge of other programs where economy of scale or enforcement power is crucial (such as salt iodization). The private sector can augment national policy through efforts such as wheat fortification.

  *Con:* Coordination may be difficult. Each partner has less control over the final decisions and gets less credit for the programs.

## Who Should Be Responsible for Monitoring and Enforcing Micronutrient Programs?

In the IMNIP, enforcement of suggested programs is left ambiguous. Possible actors for monitoring and enforcing micronutrient programs, along with a few pros and cons, include the following:

[2] The MI published a handbook on vitamin and mineral fortification of wheat flour and maize meal that is useful in the process (Wesley and Ranum 2004).

- *The government*
  *Pro:* The government is the most likely enforcer. Current government staff could enforce agency and industry compliance with micronutrient programs. The government also has infrastructure and staff all over the country that could be used to monitor micronutrient program outputs (such as supplies delivered, meetings held, and children receiving supplements).

  *Con:* Currently government enforcement mechanisms have weak capacity and are subject to corruption. Officials are often not properly trained or motivated, and they are poorly paid. Bribery is seen as a normal way to increase salaries. This problem is particularly evident in the case of salt iodization, where enforcers oversee individual industries. Industries have little to lose by paying off officials, and officials are unlikely to be caught. Government enforcement of micronutrient programs could begin with enforcement of its own codes of behavior, perhaps higher salaries, and continued training of officials. These extra, "behind the scenes" expenses are not taken into account by typical estimates of monitoring and enforcement costs.

- *Private industry*
  *Pro:* Industries may self-enforce appropriate fortification of foods and accurate dosing in supplement production.[3] This approach would be efficient because materials would be analyzed on site; it would cost taxpayers less than requiring a government official to visit, collect samples, and have them analyzed in a government laboratory.

  *Con:* Conflict of interest is the basic problem in industry self-enforcement. The profit motive offers an incentive to ignore bad data, skip the tests altogether, or fabricate data.

- *Private non–industry*
  *Pro:* Press and survey agencies can monitor provision of inputs and enforce the quality of those inputs through the use of positive or negative publicity. For example, a consumer group in India regularly collects salt from various producers, tests it for adequate iodization, and publishes the results in newspapers.

  *Con:* Monitoring and enforcement by individual survey agencies and the media would likely be a diffuse and inconsistent effort. Enforcement based on negative publicity depends on the readership's commitment to high-quality micronutrient products, not to mention literacy.

- *NGOs*
  *Pro:* Some NGOs have extensive monitoring and evaluation expertise that could be used for incisive monitoring of micronutrient programs. They also can create positive or negative publicity about industries based on independent monitoring.

  *Con:* The kinds of publicity NGOs can produce (issue briefs, newsletters, billboards) are more limited in scope than private-owned newspapers and magazines. Also, a high level of commitment to results in a certain direction could limit the credibility of NGO-collected monitoring and enforcement data.

## Assignment

As a staff member of an NGO that provides nutrition programming consulting, your assignment is to recommend to the Government of India how to address remaining questions about implementation, funding, monitoring, and enforcement of the micronutrient programs and to try to make sure the government takes note of your recommendations.

## Additional Readings

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[3] The U.S. supplement industry is self-enforcing.

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