



# Overlooked Links in the Results Chain



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# Abbreviations

AAA	Analytical and advisory activities
CAS	Country Assistance Strategy
CPIA	Country Policy and Institutional Assessment
DBI	Doing Business Indicator
HDI	Human Development Indicator
HNP	Health, nutrition, and population
IDA	International Development Association
IEG	Independent Evaluation Group
IFC	International Finance Corporation
MIGA	Multilateral Investment Guarantee Agency
PSR	Public sector reform





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# Executive Summary

Evaluation often confirms existing knowledge, but sometimes it also brings out factors that otherwise get short shrift in discussions and actions. Some of these factors can be crucial links in the chain connecting actions and results in development. This paper focuses on such overlooked, but vital, dimensions, drawing from the Independent Evaluation Group's (IEG) work and other development evaluations. The lessons follow a logical path from *what* results should be the focus of attention, to *how* those results should be measured, to the *use* of information about those results in improving development effectiveness.

## Focusing on the Right Results

### ***Focusing exclusively on short-term objectives can impair long-term results:***

Responses to natural disasters often target reconstruction rather than mitigation or prevention. But disasters should be treated as risks to development, not interruptions in development. IEG found that among countries that had received World Bank support in the past to deal with disasters, fewer than half of their Country Assistance Strategies even discussed their disaster response.

### ***Country-level results are different from project-level results:***

Country objectives tend to be broader than those at the project level; country-level results are also affected by other World Bank interventions, such as analytical and advisory activities. In addition, they are likely to be influenced by factors well beyond the scope of any project, or even the portfolio as a whole. For example, the Chad-Cameroon oil pipeline project was technically well implemented and a financial success; but the main country-level objectives—capacity building in the sector,

improved governance, and reduced poverty—were not met.

### ***Ignored or missed cross-sectoral linkages may lead to shortfalls in outcomes and impacts:***

Outcomes in a sector are often linked to results in other sectors, and it pays to take them into account. For example, reconstruction after natural disasters is not merely rebuilding physical infrastructure; it is also a way to preserve social relationships and provide survivors with employment and cash transfers.

## Measuring Results the Right Way

Focusing on the right results is of limited value if we are not measuring those results properly. Poor monitoring and evaluation can risk the achievement of desired outcomes and weaken development effectiveness by misallocating scarce resources from higher-value activities. Several problems may result from suboptimal measurement.

### ***Composite indicators may mislead:***

Composite measures are appealing for their apparent simplicity, but they can send wrong signals when what is being measured does not match the claim. For example, the Doing Business Indicators claim to measure the overall state of business regulation in a country, if not the state of country reform, but it places a value on only the lower cost to business from lighter regulation and lower taxes, and not on any benefit to society from a degree of regulation. Thus the prescriptions drawn for regulatory reform could be misleading.

### ***Achieving intermediate outcomes does not ensure desired results:***

Individual operations often are designed to achieve intermediate

outcomes—like increasing access to safe water or raising school enrollments. But these achievements may not be sufficient to ensure better health or learning outcomes. For example, Tanzania won a United Nations award for its progress in attaining universal education ahead of the 2015 goals, but a survey led by nongovernmental organizations found that many children who had completed seven years of schooling could not read at a second-grade level or solve simple multiplication problems.

***Averages can mask outcomes for crucial target groups:*** A project or program may be successful, on average, but fail to address the right constraint or reach targeted beneficiary groups. For example, the Bank’s community-based and community-driven development projects aimed to reach the poor, but an evaluation found that benefits tended to be greater for the better off than for the poorest, and in some cases the poor were worse off.

### **Using Evaluation to Improve Development Effectiveness**

Even when the right results have been measured adequately, the information has to be used properly if it is to lead to sound results. But this may not happen for a number of reasons.

***The future may not resemble the past:*** Context matters. Changing environments and emerging challenges sometimes limit the direct application of findings from past work to future efforts. For example, the Bank’s work in water has improved steadily, but the past lessons on water availability do not provide much guidance for new challenges such as coastal zone management, pollution reduction, and groundwater conservation.

***Identifying missed opportunities can help craft better strategies:*** The role of evaluation in identifying missed opportunities often is overlooked. For example, evaluative evidence shows that reducing energy subsidies, which often go disproportionately to the better off, leads to efficiency gains, creating a win-win situation in which conservation can be linked to better targeting of subsidies to the poor.

***Timing of monitoring and evaluation are crucial:*** Evaluative information is particularly effective if it is delivered when it can affect key decisions. Thus, early evaluations of Mexico’s conditional cash transfer program showed positive results on schooling, health, labor supply, and consumption just as a new administration was coming into office, convincing it to retain the program.

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# Introduction

Countries and agencies are increasingly finding that evaluation, especially when done independently, can make a difference to the effectiveness of programs. Mexico has passed legislation to require impact evaluations of social development programs. South Africa and India have taken steps to establish an independent evaluation function, reporting to the country's leadership. The United Kingdom has recently appointed the first Chief Commissioner for its Independent Commission for Aid Impact. Germany is reviewing its evaluation function for global and domestic programs.

Where monitoring and evaluation can add real value is in assessing whether the interventions lead to desired outcomes, in what context, and through what channels. Good monitoring and evaluation has been found to be associated with good project outcomes (Thomas and Tominaga 2010). Evaluation can provide vital information about the effects of government policies and programs. It can be an objective basis for assessing what works and what does not, as well as help foster accountability in program delivery and facilitate learning from experience.

But evaluations, particularly experimental impact evaluations, can also be costly. The key question then is whether, and in what circumstances, the benefits of revealing the effectiveness of programs outweigh the costs. In this connection, it is worth asking when evaluation can be uniquely helpful and how the resources spent on carrying out the evaluation and applying the lessons learned can have the most impact.

Many evaluation findings confirm existing knowledge. The value they add mainly lies in summarizing lessons learned and perhaps in suggesting improvements in future interventions. Some subsets of evaluations, however, generate unexpected or surprising results that

point to problems that can break the connections from actions to outcomes, including the critical assumptions and context required for the theory of change to work. Often these important elements are neglected or simply taken for granted. By pointing out these crucial but neglected areas and providing timely information to change development thinking and guide policy decisions, evaluations have the potential to push policy interventions out of what is generally accepted but perhaps a harmful state of inertia, onto a more effective course.

This paper focuses on evaluations with findings that challenge important assumptions of the development field. Its objective is to pinpoint the areas to watch for in operations or policies that are decisive for results. By drawing the attention of development practitioners, policy makers, and evaluators to these seemingly obvious but often neglected areas, it aims to improve development effectiveness by better connecting interventions to desired results. The lessons follow a logical path from which results should be the focus of attention, to how those results are measured, to how to use evaluation for better results. The examples are mainly drawn from the work of the Independent Evaluation Group (IEG) of the World Bank Group.



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# I. Aiming for the Right Results

**F**ocusing on the right results seems straightforward in principle. However, it is often challenging or neglected in practice. In fact, interventions can translate into results at different levels, which are interdependent but not perfect substitutes. Properly focusing results inter-temporally, across sectors, and between the project portfolio and country program requires a right balance of multiple perspectives. Assuming a simple translation or aggregation of results from one level to another can risk not setting out or pursuing the true desired results.

We might think of a three-dimensional space, within which development practitioners need to identify results to be met. In this multi-dimensional space, one axis focuses on time, the second on the sector, and the third on the project and country program. The interactions and trade-offs within and across each of these three dimensions lead to the complex challenges of getting the right focus for results with any given intervention.

## **Short-Term Objectives Can Impair Long-Term Results**

Short-term objectives are not always aligned with long-term results. Focusing only on short-term, immediate needs can sometimes compromise results in the long run.

A quick response to urgent needs is often required in the midst of an emergency. But steps that are taken immediately, although essential in a crisis, also feed into longer-term solutions—just as the responses provided and the protocols followed in the emergency room are essential to a patient's long-term care. In other words, development is path dependent. If the initial steps do not contribute to better outcomes in the long run, they could do more harm than good.

Achieving short-term and long-term objectives should not be a problem of “either-or.” Evaluative findings suggest that addressing the root causes with an eye on the future can solve the dilemma of the seeming trade-offs between quickly dealing with symptoms and building toward long-term results.

## ***Responses to Natural Disasters Should Not Be One-Offs***

Evaluation of the effects of responses to natural disasters clearly shows the trade-offs between passively focusing on responding to short-term needs and actively pursuing long-term objectives. Even in the midst of an emergency, actions should be taken with an eye on the future.

Disasters can wipe out development gains and eclipse years of development investment. For example, the Kashmir earthquake in October 2005 caused an estimated \$5 billion in damage in Pakistan, roughly equivalent to the total official development assistance for the preceding 3 years and equivalent to the amount the World Bank had lent to the country over the preceding 10 years (IEG 2006b). Poor countries typically suffer the greatest loss of life from disasters—nearly 1 million people have died from Africa's droughts

alone. With the acceleration of urbanization and an increase in the frequency and severity of disasters, the need for disaster prevention is increasing.

Distributing supplies by helicopters and building temporary homes are often headline news in postdisaster situations. Useful as they are in addressing urgent needs, however, their contribution to improving long-term results is limited. Being reactive without improving preparedness in noncrisis time can only leave people and property at risk and limit the scope to maneuver when disasters hit. While meeting immediate needs, countries prone to disasters could find themselves in a near-permanent state of recovery if they lose sight of the long-term priorities related to reducing their vulnerability to disasters.

Disasters should be treated as a risk to development rather than an interruption in development. The tendency to treat disasters as one-time, random events is now being rethought (World Bank 2010b); a more proactive and strategic approach will have longer-term benefits. Measures are to be taken to strengthen prevention and mitigation in noncrisis times to minimize the negative impact of natural disasters and alleviate the intertemporal trade-offs of reacting to immediate needs after a disaster.

The reality, however, is that immediately after a disaster, efforts often target reconstruction, but mitigating or even preventing future disasters

usually are not among the reconstruction objectives. Project objectives mainly provide for short-term fixes and rarely address root causes. Although the Bank has demonstrated considerable agility in its approach to natural disasters, and natural disaster projects financed by the Bank have had higher ratings for outcomes and sustainability than the Bank's portfolio, disaster assistance has tended to be reactive.

Among those countries that received Bank support for natural disasters during 1984–2005, 44 percent of the Country Assistance Strategies (CASs) did not mention the disasters. Even in the 40 countries that had four or more disaster projects, one-third of the strategies did not mention disasters; and for those that had more than eight such projects, almost a third did not mention disasters (table 1).

The lessons identified by IEG feature in a new strategy for natural disasters at the Bank. A new Operational Policy implemented in 2007 recognized the importance of integrating risk reduction and crisis prevention into the development strategies of countries at high risk for disasters or rising conflict. Prevention and mitigation measures are now expected to be included as part of CASs, Interim Strategy Notes, and Poverty Reduction Strategy Papers for such countries.

Whenever massive reconstruction is needed following a disaster, the pressure for haste is high. But haste can result in incomplete reconstruc-

**Table 1: Many CASs That Should Discuss Natural Disasters Do Not**

Number of disaster projects in a country	Number of countries with this count	Number of their CASs with no discussion of disasters	Percentage of countries with no discussion of disasters in CASs
More than 8	16	5	31
4–7	24	8	33
2–3	33	15	45
1	24	15	62
Total	97	43	44

Source: IEG 2006b.



tion, which accounts for much of the longer-term gross domestic product cost of disaster (Linnerooth-Bayer and Mechler 2004). Lack of maintenance, also a consequence of a short-term view, has often been a major constraint on the sustainability of structures rebuilt by natural disaster projects. Lack of community consultation can also create problems, as occurred in the Bank's Bangladesh Coastal Embankment Project, during which public opposition to the alignment of embankments led to significant implementation delays (IEG 2006b).

### ***Prevention and Mitigation Help***

Prevention and mitigation can lower the damage caused by a future disaster. Building anticipatory readiness over time can facilitate an effective immediate response that will make a vital difference to recovery. Reconstructing housing with disaster-resistant techniques, and according to the needs of occupants, can reduce vulnerability to future disasters and minimize potential costs, especially in poorer countries where the quality of construction, land registration, and other regulatory mechanisms are weak. Enforcing building standards and improving information management, such as geographic data on hazards and vulnerability, could lower the potential costs. These measures can be difficult to implement, but with appropriate design their benefits can outweigh the cost.

The effects of a disaster are conditioned by the extent of a community's vulnerability to a given hazard (or conversely, its ability or capacity to cope with it). Improving preparedness can reduce vulnerability. Too often urgent care could not be provided because critical-care facilities were no longer functioning, or there was no way to access services. But there has also been clear neglect—of 59 completed World Bank emergency projects in disaster-prone settings, only 10 have had follow-on projects. Maintenance, follow-up, and preventive investments need greater attention.

Prevention pays, but the costs are justified. A benefit-cost ratio of over 1.0 is evidence that prevention is cost effective. At the household level, in four

cases—Jakarta, St. Lucia, Istanbul, and Rohini Basin (India)—the estimated benefit-cost ratios range from 1.5 to 5.7 (World Bank 2010b).

The comparison between the scenarios after earthquakes in Haiti and Chile shows how greater prosperity and preparedness helped prevent massive casualties and economic paralysis in Chile, whereas this did not happen in Haiti. The experiences in Colombia and Turkey also show that earthquake-resistant building codes, enforcement of construction standards, and oversight of materials procurement practices pay off.

### ***Ways to Enhance Preparedness***

Understanding the reasons why a prevention system is not in place helps address the root issues for results. If the key constraint is that people do not know about the importance of prevention or the ways of doing it, sharing knowledge and disseminating information are necessary. If the key constraint is people choosing not to follow the building codes because of an excessively high preference for present value, pursuing a proper discount rate and building up rational expectations are necessary. If the key constraint is that people would like to take prevention measures but are financially forced to use substandard building materials, developing the financial system and providing access to resources to help overcome the liquidity constraint are necessary.

Better spending, not necessarily more spending, is crucial for achieving the desired results. Measures could include providing greater access to information, better sharing of data across borders, and reallocating existing public spending toward better maintenance of roads and bridges. Many countries are not taking advantage of the technological improvements in weather and related forecasting. Even modest increases in spending—if supplemented by international data sharing—can have enormous benefits, especially to warn people of impending hazards. Several countries, some very poor, have made large and quick gains from such spending. Preparing a strategy or action plan for natural disaster assistance that spells out the real

long-term objectives of disaster prevention and mitigation, and includes an assessment of each country's level of disaster risk, can improve the effectiveness of the Bank's interventions.

### Country-Level Results Are Different from Project-Level Results

Project outcome measures are often quite different from aggregative measures at the country program level. There are several reasons why the results framework at the project level does not directly translate into that at the country level. Project outcomes may be narrow or specific (such as access to schooling), whereas results beyond the project concern broader objectives (such as competitiveness). Country-level results are more often conditioned by interventions besides projects, such as analytical and advisory activities (AAA) and donor coordination. Project outcomes will only translate into positive country outcomes if they are relevant and bring about change.

#### Project and Country Program Ratings

Project ratings do not add up as country program ratings, because each of them is evaluated against its respective objectives. Even when project ratings are high, outcomes at the country level may not be satisfactory, or vice versa. In reviewing all project and country evaluations since 1993, IEG found that project outcome ratings are often higher than country program outcome ratings (IEG 2009a).

This difference concurred with the findings from comparing the country program ratings with the project ratings in the same countries. Out of a total of 88 CAS Completion Report Reviews completed

by April 2009, 24 (27 percent) have satisfactory aggregate project outcomes, whereas the country assistance programs were rated unsuccessful (table 2)—noting that the project ratings refer to those completed during the period, whereas the country ratings may reflect a broader set of projects as well as AAA.<sup>1</sup> The percentages of country programs and projects with satisfactory outcomes are higher after the implementation of the results-based CAS. For CASs started after 2005, some 70 percent have both satisfactory aggregate project outcomes and country program outcomes, which is 10 percentage points higher than CASs that started before 2005.

Achieving satisfactory project outcomes is in a number of ways not the same as achieving satisfactory country outcomes. There is substantial room for improvement in development effectiveness through more coherent, well-tailored country programs as well as through project improvements. Among the issues are the relevance of country strategy and how the different kinds of Bank interventions come together; policy dialogue; complementarities among sectors and with AAA, policy, lending, and global initiatives; and exogenous factors such as global shocks (IEG 2010f).

#### Objectives at Project and Country Levels

Project ratings and country program ratings are set to measure different objectives. There is no fixed relationship between the results frameworks at the project level and at the country level. Outcome objectives at the country level, which take a broader perspective, are not a direct translation of those at the project level.

A country evaluation must assess overall Bank strategy, including the size, composition, and type of lending, as well as the other types of Bank interventions, such as AAA. It yields a more complete picture

**Table 2: Country and Project Outcome Ratings**

IEG ICR Reviews	IEG CASCR Reviews	
	Satisfactory (%)	Unsatisfactory (%)
Satisfactory	64	27
Unsatisfactory	3	6

Source: World Bank database.

Note: CASCR = Country Assistance Strategy Completion Report; ICR = Implementation Completion Report.

1. ICR Reviews include only investment lending and development policy lending. The outcomes of some recently completed projects are not included because of the time lags between project completion and review.

of the outcome of the Bank's assistance programs at the country level in as much as it has comprehensive coverage of the Bank's activities in a country during a given period. The country program outcome may be unsatisfactory if there are critical omissions in the Bank's assistance strategy, even if the project outcomes are rated satisfactory.

Country evaluations take into account the relevance of the objectives of the program, the achievement of those objectives against standards set in the Bank's CAS, the quality of interaction with the government, and the quality and relevance of analytic work. Project evaluations assess whether the (narrowly) set objectives of the project are met. Whether the objectives in the CAS are achieved often depends on the whole set of interventions that the Bank brings to bear in support of the country's chosen objectives and program. In addition, country outcomes often also depend on the country's own initiatives, such as policy changes, other development partners, or exogenous developments, such as natural disasters or financial crises—and not solely on the success or failure of the projects supported by the Bank.

The Chad-Cameroon oil pipeline project is an example of the disconnect between project and country program outcomes, because they are measured against different objectives. The project itself was technically well implemented and a financial success. But the main objectives at the country level—capacity building to manage the petroleum sector and helping Chad reduce poverty and improve governance—were not met.

To the contrary, the oil revenue windfall was associated with a resurgence of civil conflict and a worsening of governance. The principal reason was the lack of government ownership of the objectives, with repeated violations of the basic agreements (IEG 2009b). No alternative program design or closer supervision would have achieved the program's objectives without government commitment.

### **Knowledge Services**

Analytical and advisory activities, like lending, can also drive country program outcomes. Such activity

accounts for a third of the World Bank's outlays in country services, exceeding outlays in lending or supervision. Economic sector work, technical assistance, and country dialogue profoundly contribute to country knowledge and performance directly and indirectly through different channels. Project interventions are more successful when they are based on in-depth analytic work (IEG 2008b).

One example of impactful technical assistance is the assistance the Bank provided to Sri Lanka to institute standardized small power purchase agreements that facilitated access to the power grid. Another example is the well-timed, good-quality knowledge products that assisted Egypt in policy formulation, poverty reduction, and development of human resources in the early 2000s, despite the Bank's small contribution in financial terms at that time.

Yet another example is how analytic work, capacity building, and demonstration have contributed to Chinese and Mexican adoption of favorable renewable-energy payment schemes, which have stimulated more than 20 gigawatts of installed wind capacity in China and hundreds of megawatts under construction in Mexico.

### **External Factors**

External factors often play a large role in achieving country impact. An IEG evaluation of public sector reform (PSR) showed a large differential between countries that borrowed for PSR from the Bank and those that did not (table 3). Overall, there was a 73 percent improvement rate for borrowers and a 48 percent rate for nonborrowers. Across regions, the incidence of lending and the correlation of PSR lending with changes in governance scores varied.

The differential is high across all Regions except Europe and Central Asia, where the improvement for countries getting PSR lending is the highest—90 percent—but the rate of improvement for nonborrowers is almost as high. The explanation seems to be in requirements for accession to the European Union. Almost all the countries in Europe and Central Asia that did not

borrow for PSR in 1999–2006 were among the first from the East to join the European Union and had completed reforms before 1999.

### Cross-Sectoral Linkages Are Crucial for Outcomes

To achieve sectoral outcomes, putting all efforts into a given sector may not be optimal or adequate. Often outcomes in a sector cannot be attributed solely to projects in that sector but instead result from outcomes of other sectors through multisectoral linkages. This means that programs in one sector may change the outcomes in other sectors through spillover effects, and the relationship may be reciprocal. Cross-sector linkages that are ignored or missed can lead to shortfalls in performance.

Development solutions need to recognize complex interactions among multiple factors. The general impact of economic growth and rising incomes on a range of social indicators illustrates the broad perspective of cross-sectoral linkages. Interventions in infrastructure and human development show that an approach that accommodates such relationships within and among proliferating public and private development partners is needed to optimize sectoral outcomes.

#### Infrastructure

An infrastructure program may not only enhance road accessibility but also contribute to increased

school enrollment rates and better health outcomes. Rural electrification improves the quality of life in many dimensions: lighting alone brings benefits, such as increased study time and improved study environments for school children, extended hours for small businesses, and greater security. Television—the second most common use of electricity—brings both entertainment and information.

A review of the performance of the fisheries portfolio of the African Development Bank (2008) indicates that a sectorwide approach to fisheries development must not ignore the links between fisheries and other areas, such as oil and gas, forestry, agriculture, industry, tourism, and the environment. For example, both inland and marine fisheries have important implications for the environment, including biodiversity and the health of coral reefs and other fragile marine environments. The evaluation concludes that an environmental and social management plan should be developed during project design, and environmental costs should be included in the analysis.

The impact of an infrastructure project also depends on the performance of other sectors. For example, postdisaster reconstruction is affected by cross-sectoral linkages. In the case of the recent Haiti earthquake, the breakdown of social order and a fragile security situation, the near-complete loss of governance structures,

**Table 3: Percentage of Countries with Improved Governance CPIA Scores, 1999–2006**

Region	With Bank PSR lending		Without Bank PSR lending	
	Percent	Number	Percent	Number
Sub-Saharan Africa	70	30	47	15
East Asia and Pacific	70	10	56	9
Europe and Central Asia	90	20	86	7
Latin America and the Caribbean	75	20	25	8
Middle East and North Africa	57	7	0	2
South Asia	50	6	0	1
Total	73	93	48	42

Source: IEG 2008c.

Note: CPIA = Country Policy and Institutional Assessment; PSR = public sector reform.

and the failure to impose even minimum quality standards on the construction industry added to the task of recovery (IEG 2010l).

The rebuilding of homes and communities requires the safe transportation and storage of building materials and, often, the formation of community groups that work together to rebuild houses and infrastructure. Reconstruction is not merely rebuilding physical infrastructure, it is also a way to preserve social relationships and provide survivors with employment and cash transfers.

The recent Pakistan floods offer similar lessons (IEG 2010e). Restoring rural livelihoods requires not only restarting cropping and livestock activities but also addressing land rights issues (as the topography in some areas has changed and, in some cases, land-rights documents have been lost by both households and the administration). Flood response programs should not focus only on rebuilding infrastructure but also on better adaptation and preparedness for the future in complementary investments, such as water and flood management, cropping pattern adjustment, rural finance, enhancing capacities of water users groups, and early warning systems.

Greater use of multisector approaches can be effective in achieving the gender equality and other human development Millennium Development Goals—as in Peru, where increased availability of transportation was associated with increasing numbers of pregnant women seeking medical help (IEG 2010c).

### **Human Development**

Contribution from one sector can be a necessary condition for achieving outcomes in another sector. Ignoring the cross-sectoral linkages can risk damaging sectoral outcomes. Education, for example, may be important to improving public awareness in a way that ensures the outcomes of other sectors. Only when people learn to wash their hands and to use clean water to prepare food can improved access to water result in better health outcomes. Only when safety measures are

in place can the improvement of road access to hospitals ensure better health outcomes.

A mother's education affects her children's health in myriad ways.<sup>2</sup> A systematic analysis in 175 countries between 1970 and 2009 found that a significant share of the reduction in child mortality over the past 40 years can be attributed to the better education of women (Murray and others 2010). For every one-year increase in the average education of reproductive-age women, countries experienced a 9.5 percent decrease in child mortality.

The study found several conditions that link education to health, including: better-educated women are more likely to understand and use disease-prevention measures, such as vaccines and mosquito nets; they are more likely to take a sick child to a clinic early and to follow treatment instructions; and they are more likely to understand germ theory and to make clean water and sanitation household priorities.

Poor sanitation and hygiene behaviors have been found to wipe out any potential benefits from health-related development projects. According to the World Health Organization (2004), poor sanitation, lack of access to clean water, and inadequate hygiene account for approximately 90 percent of childhood diarrhea. A meta-evaluation of 10 rigorous studies found that the impact of improved hygiene is associated with a median reduction of 33 percent in diarrheal morbidity, though the impact ranged from 11 percent to 89 percent (Huttly and others 1997).

An IEG evaluation of the health, nutrition, and population (HNP) sector found that cross-sectoral synergies have yet to be tapped. From 1997 to 2006, the Bank invested about \$5 billion in HNP components in 350 projects managed by other sectors, such as social protection, education, public sector management, water supply, and transport. During 1997–2001, half of approved water supply and sanitation projects cited

2. [http://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(10\)61257-3/fulltext#article\\_upsell](http://www.thelancet.com/journals/lancet/article/PIIS0140-6736(10)61257-3/fulltext#article_upsell).

potential health benefits, and close to 90 percent financed infrastructure that would contribute to improved health (Overby 2008).

But water supply and sanitation and transport projects with health components rarely involved collaboration with a health ministry or the Bank's HNP sector. Projects approved later (fiscal years 2002–06) were less likely to have been justified by health benefits, to have explicit health objectives, or to plan to collect health indicators. They were also less likely to target behavior change, which is critical in transforming infrastructure improvements into sustainable health improvements. Among the 26 completed projects, only 4 had documented changes in the incidence of disease. Fewer than half of closed projects included behavior change objectives or activities.

### ***The Public and Private Sectors***

Multisector approaches are not limited to collaborations between public sectors, they are also relevant to the linkages between the public and private sectors. More than half of Millennium Development Goal–related mother and child health services in Sub-Saharan Africa and South Asia are privately provided. Public-private partnerships offer new approaches to service delivery, although evaluative evidence on institutional and financial sustainability is still limited (IEG 2010c).

The involvement of multiple sectors in the complex crop production chain indicates that weakness at any point within and between the

public and private sectors can hinder agriculture and agribusiness productivity (ECG 2011). Given the private-good nature of agricultural activities and public-good nature of agricultural services, particularly agricultural research and services, the extent to which interventions have used linkages among government and private producers makes a difference in performance. The impact of interventions by the governments and international institutions will only be as good as the links made with private producers.

On safeguard policy issues, across the World Bank Group, drawing lessons from the public and private arms can help harmonize thematic coverage and guidance. Adopting strong features from each approach can improve implementation, results, and benefits. Hence, IEG has encouraged the International Finance Corporation (IFC), the Multilateral Investment Guarantee Agency (MIGA), and the World Bank jointly to adopt and use a shared set of objective criteria to assess social and environmental risks to ensure adequacy and consistency in project categorization across the World Bank Group (IEG 2010g).

The Bank especially needs to strengthen supervision, monitoring, and evaluation, (drawing on IFC's recent experience in emphasizing these functions) increasingly through its own clients. By the same token, IFC and MIGA must especially ensure third-party verification and full and timely public disclosure—as the World Bank is poised to do—for credibility and better results in the environmental and social areas.

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## II. Measuring Results the Right Way

**F**ocusing on the right results could be of limited value if we are not measuring those results properly. Poor monitoring and evaluation can send wrong signals and risk the achievement of desired outcomes by misallocating scarce resources from higher-value activities. However, measuring results the right way is less obvious in practice than it is thought.

There are at least three possible areas that can render measurement inappropriate. First, when there is weakness in the assumptions and methodologies, a composite indicator can be a poor proxy for what it aims to measure. Second, even if the indicators are well defined, when the elements in the results chain are missing or linkages broken, achievement of intermediate outcomes may be a poor measure of the likelihood of reaching the final desired results. Third, even if the right measurement exists for the desired results, when the distribution is skewed, the targeted population can be left out or wind up worse off, even if the results are achieved, when measured in averages.

### **Composite Indicators May Mislead**

Composite measures are appealing for their apparent simplicity, but they can send wrong signals when what is being measured does not match the claim. There can be a gap between what a composite indicator claims to measure and what it actually measures. They can send the wrong signals and lead to misdirected development activities. The soundness of the underlying premises is a prerequisite for a good indicator, and the theoretical foundation behind the indicator determines its relevance.

### ***Inconclusive Premises***

The Doing Business Indicators (DBI) claim to measure the overall state of the business regula-

tion in a country, if not the state of country reform, but place a value only on one side of the ledger, namely, lower cost to business from lighter regulation and lower taxes, and not on the other side, that is, benefit to society from a certain degree of regulation. Thus the indicators can lead to wrong prescriptions for regulatory reform.

The DBI are built on the premise that firms are more likely to flourish if they have to abide by fewer, cheaper, and simpler regulations. Its creators hypothesized that lighter regulation and less taxation encourage informal firms to move to the formal economy. But the literature is inconclusive about whether these factors can cause such change and whether they can create more jobs and lead to higher growth (IEG 2008f).

Furthermore, the *de jure* rather than *de facto* nature of the measured DBI implies that there may be large differences between what is listed in the rules and what is happening in the field, especially in areas where implementation is often a big challenge. Economic outcomes, be it growth or poverty reduction, are determined by many factors besides investment; investment, be it domestic or foreign, is affected by many factors besides firm performance; and firm performance, be it profit or sales growth, is influenced by many factors besides the business environment.

There are specific aspects of DBI too that have been of concern. First, DBI is constructed as an

average of 10 dimensions of the cost to firms of business regulations, and it is not clear which regulations matter, as compared with other determinants of the business environment, such as infrastructure, labor skills, and competition policies (Dollar, Hallward-Dreimeier, and Mengistae 2006). Second, regulations generate social benefits, such as safety, environmental protection, worker protection, and transparency, as well as private costs. Depending on whether the country starts with a little or a lot of regulation, reducing regulation is not always better for society. Third, the same constraints may have different implications for different types of firms, depending on countries' income levels, legal regimes, and other characteristics.

Finally, while DBI draws attention to the burden of business regulation and offers a consistent yardstick for comparing countries on regulation, as seen from the firm's point of view, it provides a very incomplete picture of the business environment, let alone country reforms. Attractive as it is to have a measure of the ease of doing business, the use of DBI as the measure of business regulation, if not country reform, overstates the scope of coverage and the explanatory power of the indicators and can be misleading.

### ***Clustering and Weights***

Evaluations give a more positive picture of the consistency between the content of the World Bank's Country Policy and Institutional Assessment (CPIA) index and what it claims to reflect. At the same time, the CPIA (along with the IDA [International Development Association] allocation formula) shows how changes in clustering and weights can have large implications (IEG 2009c). Both indicators have the same clusters: CPIA applies equal weights to each of the four clusters—economic management, structural policies, policies for social inclusion and equity, and public sector management and institutions. The IDA allocation formula gives equal weight (8 percent) to the first three clusters and to portfolio performance, but a much higher weight (68 percent) to the governance cluster.

A simulation in the above evaluation revealed that the effects of the much larger weight on governance in the Performance-Based Allocation are not due just to the governance rating but to how different the governance rating is, compared with ratings on other clusters (IEG 2009c). Some countries, though with low governance rating compared with other clusters, will gain due to a larger weight on governance for a given total of IDA resources.<sup>3</sup>

More generally, all core IDA countries (excluding small states) have worse governance ratings than ratings on other clusters, yet some countries gain but other countries lose from the larger weight on governance. Whether they gain or lose depends on how much worse is the ratio of their governance ratings to ratings on other clusters, compared with other countries. The choice of weights, along with the ratings of each element, has a critical effect on the value of the indicator.

### ***Adding, Rating, Ranking***

Adding up multiple indices of different dimensions does not always get closer to a complete picture. The rationale behind the choice of coverage and methods conditions the relevance of the exercise. Rigor often can be compromised due to arbitrary weights and clustering and through rescaling from cardinal to ordinal series.

3. If a country's governance rating is much worse than its ratings on other clusters, whereas another country's ratings on governance are only slightly worse than its ratings on the other clusters, the former will lose and the latter will gain because of a larger weight on governance, given that the total IDA resource is unchanged. For example, country X has a better governance rating (3.7) than country Y (3.2). Country X also performs better on all the other clusters than country Y, with the ratings for clusters A–C averaging 4.4, compared with country Y's 3.3. Yet country X suffers a loss in Performance-Based Allocation of 13 percent under the current formula (versus a formula with equal weights on all four clusters), whereas country Y actually gains 20.5 percent.



Until 2010, the Human Development Indicator (HDI) was an equally weighted mean of uniformly scaled attainments in life expectancy, education, and income. The 2010 HDI relaxes its past assumption of perfect substitutability among its three components and switches from the original additive aggregation function (the arithmetical mean of the three components) to a multiplicative function (their geometrical mean). This change results in a significant reduction of the weight on longevity in poor countries. Based on the new construction method, a poor country experiencing falling life expectancy due to the collapse of its weak health care system could still see its HDI improve with even a small rate of economic growth (Ravallion 2010b).

The HDI shows how arbitrariness can lead to wide difference in the indicators when theory offers no evidence to justify any particular set of weights. Simply lumping several available data sets and assigning them unjustified weights without transparent documentation can result in “mashup indices” (Ravallion 2010a) that are opaque to users and risk distorting development policy making. Other examples include past efforts to combine multiple social indicators into one. The World’s Best Countries Index, for example, averages five groups of (often themselves composite) indicators measuring education, health, quality of life, economic competitiveness, and political environment, but does so without conclusive justification on the choice of any element.

Reliance on successive stages of ordinal rankings is another approach that obscures the underlying cardinal values. In the DBI, each ranking is translated from an indicator using cardinal values from its 10 subindicators: time, cost, number of procedures, and so on. These cardinal values are ranked according to their respective percentiles in each of the subindicator distributions. The subindicator percentiles are then averaged to come up with an indicator-level percentile; the 10 indicator percentiles are then averaged to generate the overall ease of doing business ranking (IEG 2008f).

This arithmetic means that countries at the ends of the distribution have to work harder to change their overall ranking. Moreover, the magnitude of the difference between the countries is not the same on all points of the distribution. A country’s location in the distribution affects how a given reform will change its ranking. Countries can make significant changes, yet fail to improve their rankings, if they are at the ends of the distribution for that indicator. The change in ranking for any country is driven largely by where the country is located on the distribution of countries on a specific indicator. Small changes can produce large ratings jumps, and vice versa, which contribute to anomalies in the rankings.

Using rankings, which can be highly volatile over time, to measure regulatory reform of a country can therefore be misleading. Rerankings can be generated by even very small differences in the underlying measure of interest (Høyland and others 2010).

Being clear on the data and the methodology behind the formulation of each indicator and providing detailed information of each subcomponent may allow users to better understand what the data actually measure. Recently, a Quality of Official Development Assistance assessment constructed in four dimensions of aid quality, built up from 30 separate indicators (Birdsall and Kharas 2010), is one step in that direction. So the enthusiasm for composite indicators needs to be balanced by warnings, and more critical scrutiny from users.

### **Achieving Intermediate Outcomes Does Not Ensure Desired Results**

Meeting intermediate outcome objective does not always mean progress toward desired results. Money can buy outputs, but to achieve development outcomes, policy needs to induce behavior change. Controlling and measuring the inputs and outputs of a program—for example, how much money is spent and how many textbooks are distributed—is important, but not sufficient for achieving the intended results. Whether

or not the desired results—for example, how learning outcomes have improved—are achieved is crucial for policy makers. However, the results chain from having access to schools with text books, to enrollment, to graduation, and to learning, is complex.

To be sure, projects often need to target intermediate outcomes to make things manageable, and they often (rightly) do so, keeping in mind frameworks of assumed links among inputs, outputs, and outcomes. Although these intermediate outcomes are easier to monitor, they may not lead to the desired final outcomes if critical channels in the causal chain are missing. And without the desired results spelled out and properly monitored, program achievements will remain unknown. As the desired results are not measured, success cannot be distinguished from failure and cannot be properly rewarded.

### ***Access versus Learning in Education***

There are well-known benefits in putting school-age children in classrooms, but focusing on access to schools alone is not sufficient to improve children's competency. How much a child learns matters more for future productivity and quality of life than how many years he or she spends in school. It is true that improved infrastructure can contribute to higher enrollment rates, and greater availability of school supplies can contribute to higher test scores. It is also true that improved student retention, along with enhanced teacher attendance, can help the achievement of learning outcomes. However, measures necessary to achieve the desired outcome of improved learning are often missing.

The absence of planning for improving learning outcomes and lack of political commitment for it can result in unnecessary trade-offs between improved access and student learning gains, especially among the poor (IEG 2006a). If primary school completion rates are raised by, for example, automatically promoting children to the next grade or without attending to student learning outcomes, higher completion rates will not reflect improved knowledge and skills.

Tanzania won a United Nations award in September 2010 for its impressive progress toward attaining universal primary education five years ahead of the 2015 deadline set under the Millennium Development Goals.<sup>4</sup> But the results of a recent survey, led by nongovernmental organizations, of 40,000 children in Tanzania is sobering—about 20 percent of the children who had completed seven years of primary school could not read their own language, Kiswahili, at the grade-2 level; half could not read English, the medium of instruction in secondary education; and about 30 percent could not solve a simple (grade-2) multiplication problem.<sup>5</sup>

Tanzania exemplifies the hazards of an exclusive focus on raising enrollment (IEG 2010h). In Tanzania even significant increases in domestic budget and development partner support were not enough to finance all the goals of primary and secondary education development. Rapid expansion of secondary education was constrained by a shortage of qualified teachers. Learning outcomes were undercut by a one-third decline in the capitation grant for nonsalary items such as books and learning materials, and the doubling of teacher-pupil ratios.

Higher teacher attendance also cannot be presumed to lead inevitably to more learning. Banerjee and others (2001) evaluated a program in which an Indian nongovernmental organization placed a second teacher in nonformal education centers the organization runs in Indian villages. The study found that, in 21 of the 42 centers randomly selected to receive a second teacher, teacher attendance increased, as hoped, but test scores remained the same.

### ***Lessons Feeding into Strategy***

The broad lesson is that focusing only on intermediate outcomes puts at risk the achievement of desired results. The discrepancy between access

4. <http://www.dailynews.co.tz/home/?n=13281&cat=home>.

5. <http://blogs.worldbank.org/african/is-our-tanzanian-children-learning>.

to schooling and learning outcomes indicates the high cost of such neglect. Two-thirds of Bank primary education projects during the 1990–2005 period focused on increasing enrollment and reducing dropout rates. But only one-fifth of projects had objectives explicitly covering the expected results, such as improving reading, writing, and math skills and other learning outcomes.

This lesson has had an impact on the Bank and country strategies, which increasingly include learning outcomes as a goal. The 2005 Education Sector Strategy Update substantially increased the focus on results and learning outcomes, in part responding to IEG evaluation findings. A quality review framework for education programs was introduced in fiscal 2007 to benchmark and report annually on the degree to which lending and analytic activities measure learning outcomes and focus on improving the quality of teaching and learning. In fiscal 2009, 50 percent of operations specifically included support for countries to introduce learning assessment systems (IEG 2010f).

Evidence from Bank education projects suggests that to improve learning outcomes it would be helpful to have accountability-oriented reforms focusing on school-based management, information for accountability, teacher incentives, and leveraging the private sector (World Bank 2010a). A study by the U.K. Department for International Development (White and Masset 2004) concurs with the findings and shows that, in Ghana, promoting community engagement and enhancing the effectiveness of teaching contributed to learning outcomes.

A recent study by the Center for Global Development (2010) suggests that cash-on-delivery aid is one way to promote results-based programs. Tying aid to desired results, rather than to outputs or intermediate outcomes, can help strengthen accountability among funders, recipients, and their respective constituencies, which helps improve development effectiveness.

In a similar vein, strengthening organizational capacity requires more than individual learning

(IEG 2008a). Training is widely used as a tool for helping countries build the capacity of their institutions to achieve development objectives and most Bank-financed training resulted in individual participant learning. However, only about half the time did such training improve the capacity of client institutions and organizations to achieve the development objectives. For training to go from individual learning to workplace outcomes and organizational capacity, trainees must not only learn but also be able to apply what they have learned in their workplaces, and this learning must be relevant for the achievement of organizational goals.

### **Averages Can Mask Outcomes for Crucial Target Groups**

In many situations, averages may miss important constituencies and hide disparities between population groups. If growth accelerates by moving the concentration of wealth from the poor to the rich, a higher average may coexist with reduced wealth or income for the poorest segment of the population. Even if the project has a successful outcome at the average level, the targeted beneficiaries may still be left out or made even worse off.

A crucial assumption for an intervention to yield the intended impact is that it is addressing the right constraint or reaching the right target group—neither of which may be captured by the averages. The good intention of targeting the poor and vulnerable may not always yield the expected results.

### **Microfinance**

Microfinance is often considered a panacea for poverty reduction. The Consultative Group to Assist the Poor considers microfinance a powerful tool to help achieve the Millennium Development Goals. However, the fundamental argument for microcredit—that access increases profits, business scale, and household consumption—is not supported by some evaluations. The channels through which women’s empowerment improves children’s education and health status

may not hold because the assumed linkages could be missing. Microfinance is targeted at women, but it may, in fact, be used by male household members.

Banerjee and others (2009) found that opening a microfinance institution in Hyderabad, India, had no impact on measures of health, education, or women's decision making. In the short term, households with an existing business at the time of the program invested more in durable goods, while their nondurable consumption did not change. Households with a high propensity to become new business owners increased their durable goods spending and saw a decrease in nondurable consumption to pay the fixed costs to enter entrepreneurship, whereas households with low propensity to become business owners increased their nondurable spending.

Furthermore, the channels through which microcredit works could be different from what is expected. A randomized evaluation by Karlan and Zinman (2009) found that microcredit, rather than working directly through the targeted businesses, might work broadly through risk management. There is no evidence that increased access to credit in Manila, Philippines, improved subjective well-being. Due perhaps to the higher returns to capital for men, male and higher-income entrepreneurs benefited more from microcredit than women operating small-scale businesses, who were traditionally targeted. Business investment did not increase; instead, the size and scope of "treated" businesses shrank by shedding unproductive workers, similar to the way that increased access to credit reduces the need for favor-trading within family or community networks.

### **Social Funds**

It is often assumed that participants in the programs affect the outcome. But selection bias may reverse this assumption. For example, it is often believed that social fund programs achieve their goal simply by observing ex post differences in the level of social capital among "treatment villages" and "control groups." But communities

with high levels of social capital are more likely to apply for social funds for community development programs, and hence the ex post difference is more likely a reflection of the ex ante differences rather than the impact of the programs.

Social funds projects worked in Malawi but were found to have limited impact in Zambia (IEG 2008d). Looking at how social funds have operated at the village level, just holding public meetings is not sufficient for the community to participate actively in the decision making. In Zambia, the leaders often make the decision; in Malawi they tend to be more inclusive, for example, by mobilizing the parent-teacher association.<sup>6</sup>

Moreover, in Zambia, there is little room for dissension at a public meeting because the meeting only takes place after considerable work has been done and the leaders have sought the backing of the chief. As a result, the majority of the community participates actively in the preparation work but rather more passively in decision making. This casts light on why social fund projects have limited impact on building social capital despite their participatory model; it is because a degree of social organization is required to apply for social fund resources.

### **Community-Based and Community-Driven Development**

The importance of good targeting has been increasingly recognized as part of poverty reduction programs. However, targeting efforts may not be enough to reach the very poor. For example, Bank-financed, community-based and community-driven development projects have aimed to reach the poor through targeting, but there is limited evidence to show that they have done this more successfully than any other Bank investments, and

6. In Zambia, only one-third of people knew of the meeting held for the subproject selection, one-fourth attended the meeting, and one-seventh spoke at the meeting. In Malawi, almost four-fifths knew about the meeting, three-fifths attended, and one-sixth spoke.

their administrative costs are significantly higher than for other investments. The projects improved living standards, but the improvement was greater for those better off among the communities than for the poor. There are even cases where the situations of the poor actually worsened in the context of some community-based and -driven development projects.

For example, under the Borgou pilot project in Benin, the community contribution typically required in Bank interventions created hardship for the poor. It is very difficult for the poorest to make a cash contribution, so they usually have to contribute time and labor, which takes them away from income-earning activities. In situations where the rich contribute on behalf of the community, the position of the elite is strengthened relative to that of the poor (IEG 2005). Furthermore, reaching the poorest requires fundamental social and cultural changes, which takes considerable time and sustained effort—something that is unusual in the implementation period of a Bank-supported project.

Even if the poor are formally included in a participatory role due to project requirements, their views, and their priorities are likely to be excluded from collective decision-making processes (Kumar and Corbridge 2002; Turton and Farrington 1998). For example, in the Matrouh Project in Egypt, where there had been a substantial focus on women, the percentage of women who believed that they had benefited from the project was highly variable. There were no elected women leaders or women's associations and there were substantial concerns about marketing products produced by women.

### ***Rural Electrification***

A similar concern holds for the benefit distribution of rural electrification, which can have neutral or even negative effects on the poor. Bank-supported projects that claim to have the objective of bringing rural electrification to the poor have typically neglected to include components that would help to achieve this objective.

Two factors underpin this pattern on the supply side: which communities get connected and which households can afford the connection once the grid is available (IEG 2008e). To start with, across villages, communities to be connected to the grid are identified on a least-cost basis, which favors larger communities nearer to the existing grid, roads, and towns. Although off-grid connections can serve remote communities that may not be connected to the grid for some years, they do not necessarily reach the poor better than grid extension does. Within villages, in most countries, increases in coverage come from extensive growth (extending the grid to new communities) rather than intensive growth (connecting the unconnected in already electrified villages). In Lao People's Democratic Republic, even in villages that have been connected for 15–20 years, it is not uncommon for 20–25 percent of households to remain unconnected.

Inappropriate design of a price scheme targeted at the poor could even have the unintended result of keeping them from reaping the full benefits. Keeping the fixed charge low for the initial limited amount of usage and imposing a significantly higher rate after the threshold is passed can in fact become an obstacle for the poor. The objective of this lifeline tariff setting is to encourage the poor to get connected to electricity. But the unintended result is that to benefit from a low tariff rate, the poor restrict consumption.

On the one hand, this results in a false savings and limits the real benefit electricity can bring to the poor; on the other hand, it unintentionally lowers the financial viability of providing the electricity because of low load factors resulting from consumption being heavily concentrated in the evening peak hours. Measures encouraging lower demand may aggravate the constraint on the financial viability of rural electrification, which can put unnecessary pressure on the sustainability of the projects.

### ***Education and Health***

Chile's voucher for private school programs was intended to improve the quality of education by

providing low-income students access to private education and stimulating public schools to perform better. But, contrary to public belief, there is no evidence to suggest that vouchers and increased choice improved education outcomes. However, the sorting mechanisms that resulted from the scholarship programs meant that better-qualified students tended to move to private schools—an outcome that was not intended and that had negative consequences for public schools and particularly for low-income students (World Bank 2009).

Similarly, the assumption that because malnutrition is more common among the poor, children living in poverty will disproportionately benefit from an intervention is misleading. In Ethiopia, free distribution of food raised the weight-for-height z-score of children younger than five years in high-asset households, but not in low-asset households (Quisumbing 2003). In Madagas-

car, a large-scale community-based nutrition program (Expanded School and Community Food and Nutrition Surveillance and Education Program, or SEECALINE) tended to benefit the nutritional status of children in better-off communities even though it was targeted at the poorest areas (Galasso and Umapathi 2009). But overall, evidence on who is benefiting and who is not, as well as on the cost effectiveness of interventions, is scant. Fewer than half of the 46 evaluations on nutrition programs measured the distribution of impacts by gender, mother's education, poverty status, or availability of complementary health services (IEG 2010h). Only nine evaluations assessed the impact on nutritional outcomes of the poor compared with the nonpoor. Among the evaluations that did examine variation in results, several found that the children of better-educated mothers or children living in better-off communities are benefiting the most.

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### III. Using Evaluative Findings for Results

**F**ocusing the results at the right level and measuring them in the right way can still be of limited value if we are not using the evaluative findings properly. For evaluative findings to have the desired results, it would pay to present them at the right time, in the right format, to the right audience, and apply them in the right context.

We might think of at least three circumstances in which even good evaluative findings can be under- or mis-used. First, in a rapidly changing context, simply replicating what has worked in the past may not be helpful for future work. Focusing on the underlying condition and adapting to a dynamic situation are key. Second, focusing only on what worked and what did not may still overlook a potential area where evaluation can bring value: capturing missed opportunities. Third, doing the right thing in the right way is most effective when lessons are learned and applied at the right time. Seizing the crucial moment to influence policy is of the highest importance for evaluation to contribute toward improved development effectiveness.

#### **The Future May Not Resemble the Past**

The uncertainties and complexities of development situations are increasing. Environments in the developing world keep changing and new challenges are emerging. High performance ratings for a portfolio do not necessarily lead to high development impact if activities undertaken are not being adjusted to a country's current and emerging needs. More investment is beneficial only if it responds to these changes, otherwise it results in inefficient resource use. Meeting today's needs while putting in place innovative and sustainable strategies to address future requirements is a worldwide challenge.

#### **Water**

One example is the Bank's interventions in water. Water stress is about more than water availability; rapid economic growth increases water use and pollution. Sustainable management of water resources has acquired a new urgency in the face of growing populations, increasing urbanization, and economic development. Changes in development patterns, increases in population pressure, and the demand for better livelihoods across the globe all contribute to a looming global water crisis. The Bank's involvement in water is facing heightened challenges due to climate change, migration of people to coastal zones, and the declining quality of the water resources available to most major cities and businesses.

Although water has long been a major focal area for Bank lending to developing countries and water project performance has improved steadily, the approach taken thus far has underemphasized some of the most difficult challenges, such as coastal zone management, pollution reduction, and groundwater conservation (IEG 2010i). New ways need to be found to help countries make water sustainability a cornerstone of their development plans. Just repeating successful projects and not tackling the toughest challenges is not a way to achieve better investment results.

Coastal zone management and pollution control illustrate the urgent need for the Bank to shift

toward addressing complex environmental challenges. In the 1980s and 1990s, the Bank financed investment in shrimp farming in coastal areas to create jobs and alleviate poverty. Meanwhile, the world has lost 5 million hectares (or one-fourth) of mangrove forest since the 1980s. One of the major reasons was the conversion of mangrove swamps into aquaculture ponds. As a result of depleted mangrove forests and drained wetlands, pollution has reduced the water quality.

In India and Vietnam, shrimp farming increased the vulnerability of local communities to storms and floods and degraded freshwater resources (Primavera 2005). Two cyclones—one in Andhra Pradesh in 1997 and one in Orissa in 1999—completely destroyed the newly constructed sites for shrimp farming. New instruments, such as replanting mangrove forests and improving water quality, are required to protect and restore the environment and improve people's livelihoods.

The sustainability of large-scale irrigation infrastructure highlights the need for alternative environmentally sustainable approaches. During the 1970s, the Bank supported large-scale irrigation infrastructure to improve agricultural productivity. For example, three large pumping stations were built in China to use water from the Yellow River to irrigate farmland. At times, river water in the China scheme was completely dried up, and concerns are increasing that the Yellow River will no longer reach the sea.

In many other countries, due to limited and unreliable access to river water, irrigation schemes relied heavily on extracting groundwater. In the long run, continuous overexploitation of groundwater may result in salinization and depletion of groundwater resources, as has occurred in the Republic of Yemen. Initial results indicate that investing in new technologies, such as sprinkler, drip, and pipe irrigation and implementing regulations, such as a water quota system, to raise the efficiency of water usage are promising.

Connecting households to water supply systems used to be a way to provide access to safe water.

However, Bangladesh, Morocco, and Vietnam, among others, have experienced severe degradation of their water resources due to pollution. Hence, water must now be pretreated to improve its quality before connecting it to households. For example, since the early 1990s, the city of Hanoi has had a problem with the presence of ammonia in the groundwater it taps for system use from a series of wells near the Red River. The 1997 Vietnam Water Supply Project installed special ammonia-removing units at the treatment plant to remove this contaminant from the water before connecting to households (IEG 2006b; World Bank 2006b).

Meeting today's water needs while putting in place innovative strategies to address future requirements is a worldwide challenge. Bank projects have largely met their stated goals in recent years. The continuing challenge is to reinforce and scale up innovative ways to confront the mounting problems. Other country examples include paying more attention to wetlands, as in Vietnam; being cautious in expanding irrigation that relies on falling underground water tables, as in Yemen; or confronting agricultural water pollution, as in Morocco. The direction taken regarding dams must continue to take into account environmental and social impacts.

### ***Transport***

Another example is the Bank's intervention in transport. The sharp increase in population in the next decades, especially in urban areas of the developing world—the number of cities exceeding 1 million inhabitants is on track to surge from 268 in 2000 to 358 in 2015—coupled with continuing globalization and trade liberalization is expected to accelerate significantly the demand for transportation of both people and goods.

Although the Bank's past assistance to the transport sector has been well managed and effective, with above-average project ratings, greater attention is needed on efficiency, safety, health, and the environment to address the tougher issues, such as growing population density and rising environmental vulnerability (IEG 2007). The Bank's experience in transport—



narrowly focusing on roads—although successful, will be insufficient to provide for the Bank’s future response to the emerging challenges.

The next generation of projects is expected to have a much more urban focus. Rapid urbanization, congestion, pollution, and resource overuse exacerbate the negative impacts of transport investments. The removal of the highly polluting three-wheeled taxis with two-stroke engines in Dhaka, under the Bank’s Air Quality Management Project, is one example of addressing the increasing concern of worsening urban air quality.

Given the increasing and vital linkages with energy, land use, urbanization, the environment, and climate change, transport will require programmatic, cross-cutting, and multisectoral approaches. The Bank may have to reconsider its priorities and shift resources for multimodal transport, rural linkages, and urban transport. The Jamuna River Bridge in Bangladesh is an example how a multifunctional structure can stimulate development (IEG 2007). The bridge, which connects Bangladesh’s less-developed northwestern region with its more developed eastern region, reduces journey times and transport operating costs.

The need to shift focus is strong from the demand side. For example, in China, where traditional expressway projects were among the most successful in the sector, the government has enlisted Bank support for transportation projects connecting interior regions with the coast. The project pipeline is shifting toward railway, inland waterway, and urban transportation projects (World Bank 2006a). Accordingly, the share of urban transportation, railways, and inland waterways in technical assistance and investment lending continues to increase.

### **Identifying Missed Opportunities Can Help in Crafting Better Strategies**

An underappreciated role of evaluation is to identify missed opportunities in operational work. Traditionally, the evaluator’s role has been to draw lessons from the past and to inform future

policies. Yet to bring out the value of evaluation in a rapidly evolving and interconnected world, evaluators’ tasks are becoming more complex.

### ***Cost-Benefit Analysis***

Cost-benefit analysis can be a valuable tool in prioritizing allocation of resources to high-return areas. However, the use of cost-benefit analysis as a tool to help measure results and ensure accountability has been largely missed. Overall, the percentage of projects with cost-benefit analysis dropped from 70 percent to 25 percent between the early 1970s and the early 2000s. The low and declining quantity and quality of cost-benefit analysis have made it less relevant in providing information for decision making. The World Bank Group’s ability to identify high-return investments could have been improved had cost-benefit analysis been better used (IEG 2010b).

Furthermore, not just the use but also the formulation and timing of the analysis have undermined its effectiveness. The estimates of the economic rates of return are often not only biased but also delayed. Out of the 51 project leaders randomly chosen from projects closed in fiscal 2006–07 and 2008–09, only 5 reported that cost-benefit analysis is given significant weight at the project identification stage, and 18 reported that it is given significant weight at the preparation stage. At appraisal, “everything goes according to plan” is often the underlying assumption of cost-benefit analysis. The likelihood that the economic rate of return is recalculated at the close of projects is lower for projects with low outcome ratings. Many cost-benefit analyses were conducted after the decision to proceed. This put the analysis under considerable pressure to reach conclusions consistent with the decisions already taken, rather than providing critical information for decision making about whether the project is justified.

### ***Environmental Protection***

Two evaluative findings on climate change related to energy efficiency and protected areas show how identifying missed opportunities can provide practical guidance (IEG 2009e). Potential

win-win strategies can help address simultaneously the urgent environmental concerns and economic needs.

The Bank has long supported reductions in energy subsidies, coupled with improvements in energy efficiency, as well as improving energy availability for the poor (IEG 2009e). Evidence from European transition countries shows that cutting energy subsidies quickly leads to efficiency gains as prices to end users rise toward their full production cost. In addition, a number of studies show that subsidies tend to go disproportionately to the better off, providing few benefits for the poor.

A win-win strategy could be built around reducing subsidies and targeting them to the poor. This would simultaneously reduce the strain on government budgets, free up resources to allow extension of energy sources to the poor, and promote more efficient energy use. But opportunities were missed because little effort has been made to use the introduction of energy efficiency as an adjustment vehicle for higher tariffs (IEG 2009e).

On average, protected areas significantly reduce tropical deforestation, preserving carbon and biodiversity (IEG 2009e). Yet, contrary to common expectations, evaluations find that these impacts are greater when the protected areas allow sustainable use by local populations (table 4). The value of protection is even greater

in areas where there is economic use of forests, where the counterfactual would have been more deforestation, (as compared with pristine areas, where the counterfactual to providing protection would have been less deforestation).

Identifying the missed opportunities helps address the urgent need to combine forest protection with economic development in the Reduced Emission from Deforestation and Degradation agenda. It suggests that there is some compatibility between environmental goals (carbon storage and biodiversity conservation) and support for local livelihoods. This sheds light on the debate of the relative effectiveness in deforestation reduction of strictly protected areas versus areas that allow some degree of sustainable use by local people. Reduced Emission from Deforestation and Degradation can be win-win, by not merely putting up fences to conserve pristine forests but also addressing the fundamental interests of communities and promoting local environmental and developmental goals.

### **Structural Issues**

Sometimes missed opportunities result from structural issues that need to be addressed before operations can be undertaken. For example, IEG's annual report on MIGA (IEG 2009f) found that restrictions imposed by MIGA's convention on eligible risks had hampered the agency's effectiveness, including in IDA countries, and mandated restrictions were limiting its ability

**Table 4: Summary of Estimated Protected Area Impacts on Fire Incidence (%)**

Area	Mean fire incidence	Mean reduction due to strict protected areas	Mean reduction due to multiuse protected areas	Mean reduction due to indigenous areas
Latin America and Caribbean	7.4	2.7–4.3 3.8–7.7	4.8–6.4 6.2–7.5	16.3–16.5 12.7–12.8
Africa	6.1	1.0–1.3 4.4–4.5	(0.1)–3.0 <i>Not calculated</i>	Not applicable
Asia	5.5	1.7–2.0 2.9–3.1	4.3–5.9 5.1–6.7	Not applicable

Source: IEG 2009e.

Note: Italics indicate estimates for protected areas established between 1990 and 2000.

to respond to country needs during the global financial crisis.

The report came out just as the crisis was heightening the need for MIGA to enhance its range of products to better serve its client countries. MIGA has begun to address institutional effectiveness, including amending its Operational Regulations and some policies, conducting a Business Process Review, and taking a first step toward implementing self-evaluation. The timely completion of IEG's report meant that the evaluation findings could inform these changes.

World Bank Group safeguards policies have been found to have important gaps (IEG 2010g). The narrow coverage of social safeguards in Bank projects, compared with IFC and MIGA, leads to an underestimation of risks and, in some instances, to risk avoidance. Equally, project categorization at IFC and MIGA leads to an underestimation of environmental risks, compared with the Bank. When social and environment risks are underestimated, or when communities are excluded from project benefits to avoid dealing with safeguard risks, development benefits are significantly lower.

Instances such as these highlight the role that independent evaluation can play in getting outside the assumptions and received wisdom that inevitably affect most organizations, particularly mature ones with long histories, such as the World Bank Group. By looking with a fresh eye and in depth at what the organization is doing on particular issues, evaluation can shine a light into the dark corners where inertia lurks and provide new insights that can help shift behavior, or even entire ways of doing business.

### **Timing and Process Can Make the Biggest Difference**

Focusing on the right issues and employing sound methodologies are not enough. Evaluations must be conducted at the right time, delivered in an appropriate format, and be based on collaboration and follow-up with those evaluated and stakeholders. For higher impact, it is crucial to

learn faster what works and what does not, and to focus on results at the right time. Evaluators need to be cognizant of the political dialogue and inform the dialogue with evidence when critical decisions are about to be made. Timeliness in the provision of evaluative findings is crucial for ensuring its relevance and impact.

### **Crucial Timing**

The value of proper evaluation in the early stages of project implementation is high, particularly for programs that are expected to be scaled up, because the risk of wasting funds on ineffective programs is acute. Even popular programs can prove to be ineffective. Good evaluation can avoid costly mistakes and prevent real harm. For example, in the United States, the Drug Abuse Resistance Education program, which was believed to be effective, had been adopted in 75 percent of school districts. But evaluation with random assignment found that it was a waste of financial resources and school time (Lynam and others 1999). Another example is a U.S. program called Scared Straight, which sought to reduce juvenile delinquency by taking at-risk youths to visit prisons. Randomized experiments found this well-intentioned program was actually harmful, leading to higher delinquency among participants (Petrosino, Turpin-Petrosino, and Finckenauer 2000).

Early results of the evaluation of Mexico's conditional cash transfer program *Progresas-Oportunidades* (since 2002) showed impacts on schooling, health, labor supply, and consumption. The evaluation helped convince a new administration not to cancel the project and, instead, to expand the program to new areas and extend eligibility to additional children within the original areas. It also encouraged the administration to embrace a program of rigorous impact evaluation, more generally, in developing its social safety net programs. Similarly, the evaluation of the early childhood development program in the Philippines was used to justify expansion of the program. The findings reaffirmed the existing strong support for the program and played a role in the decision to expand the innovations.

In a rapidly changing environment, delays in action could disproportionately increase the eventual costs. In fact, options may disappear entirely if actions are not taken soon enough. However, if efforts are unduly scaled up and generalized before their true impacts are reliably estimated, it could result in waste of scarce resources and add to the burden in the future. In an uncertain world, it is important for real-time inputs to inform policies and programs based on the best available evidence. With the right timing, even minor course corrections, based on emerging evaluation evidence, can have disproportionate impacts. When tens of billions of dollars are to be used to tackle the global financial crisis and climate change, traditional evaluation cycles are too slow, leading to lost opportunities for learning.

The challenge of being timely is to ensure that evaluation work is available when it can influence decision making. The recent global financial crisis, for example, put a premium on the speed with which evaluative findings could be used. Based on the most recent estimate from *Global Economic Prospects 2010* (World Bank 2010b), the crisis is having serious cumulative impacts on poverty, with 64 million more people expected to be living in extreme poverty by the end of 2010 than would have been the case if the crisis had not occurred. The World Bank Group's lending to financial and private sector development has increased substantially and has reached an all-time high of \$80 billion in the past two fiscal years. The series of evaluation briefs and reports on crisis response (IEG 2008h, 2009h, 2010k) provided timely assessment of the World Bank Group's activities.

Another example of real-time evaluation performed during a crisis is the World Food Programme's assessment (2003) of its Southern Africa Emergency Operation, in response to the Southern Africa crisis in 2002–03. The study evaluated the humanitarian relief operations as they unfolded from inception through implementation, and to closing. Evaluative lessons captured at several stages aimed to promote

corporate learning, assess the relevance of the response, and measure the effectiveness of the mode of implementation and appropriateness of operational policies.

On climate-related development work, the costs of waiting to evaluate until projects are fully completed are high. IEG recently did two phases of evaluation on climate change, and a third phase is currently being completed (IEG 2010a). The evaluation stresses five measures that offer attractive local benefits while fighting climate change: energy efficiency, forest protection, appropriate project finance, technology transfer, and accelerated learning. The study notes that carbon finance has yet to realize its promise of catalyzing large-scale, new investments in renewable energy. The Bank also needs to actively assist clients to move away from coal, using analyses that span entire energy systems to find cleaner, more cost-effective, and financeable alternatives.

A constant problem for established independent evaluation organizations is they have internal processes and procedures resulting in evaluations that address the right issues but are not well timed. To counter this problem, IEG has timed its sector evaluations to provide inputs for sector strategies, and its country assistance evaluations aim to contribute to new CASs. More recently, it also has produced rapid-response evaluations providing relevant findings on current issues such as the Haiti earthquake, Pakistan floods, and West Africa floods (IEG 2010d).

### **Effective Process**

Translating evaluative lessons to development results requires not just quality standards but also effective processes. Evaluation recommendations should be presented in a way that is attractive to key constituents or stakeholders. Messages need to be tailored to the needs of the targeted audience and demonstrate the points with enough solid evidence to demonstrate their validity, but not overly much so as to obscure the message (Grasso 2003). The recommendations

of evaluations must be relevant and specific to be useful and implementable. Thus, IEG has developed a wide range of print, online, and in-person communication strategies to ensure that key messages are delivered effectively to those most likely to implement them, whether it is within the World Bank Group, member governments, other donor agencies, civil society, or nongovernmental organizations.

Timely dissemination of evaluation results may enable new projects to incorporate the lessons learned into their designs. Publicly disclosed monitoring of carbon projects shows the gains such feedback can deliver. Landfill gas projects proliferated with the advent of the carbon market, but monitoring reports soon showed that these projects were underperforming relative to their design expectations. This feedback revealed that the appraisal models used were based on U.S. experience, which is not applicable to the waste streams of developing countries.

Collaboration with clients and stakeholders is essential at the design stage of evaluations, during the evaluation process, and in the formulation and follow-up to recommendations for an evaluation to be effective. In explaining why intended outcomes and impacts were not achieved, it is essential to know whether a lack of results was due to design failure or implementation failure because projects are often not implemented as planned (Bamberger and others 2010). For example, on safeguard issues, the effectiveness of the regulatory regime depends not only on up-front risk assessments that the World Bank Group and countries carry out but also on effective implementation and supervision and on the checks and balances provided by monitoring

and evaluation, disclosure of findings, and verification of results (IEG 2010g).

It pays to stay engaged on an issue after an evaluation by keeping track of how recommendations have been incorporated. The impact of evaluations would be short-lived with only a one-off engagement at the completion of an evaluation report. Real change takes place only when findings are accepted and learning takes place.

Weak follow-up on the implementation of results and recommendations and poor dissemination of findings have been identified as key factors explaining why some technical assistance projects of the Asian Development Bank are less successful than others (Adhikari 2007). Similarly, a review of World Bank economic and sector work and technical assistance over 2000–06 showed that in addition to high technical quality, close collaboration with clients during the process mattered for effectiveness, whether clients actually produced part of the work or not (IEG 2008b).

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The examples from evaluations by IEG and other development evaluators cited in this paper show that evaluation findings often add the most value when shedding new light on policy directions and bringing out new content or novel ways of looking at issues. The value added would seem to be especially great when evaluations highlight underemphasized but crucial factors, and challenge conventional wisdom. Although it may not be possible to set such outcomes as a goal, having frameworks that promote innovation and risk taking in evaluation and following up on the findings would seem to have a high payoff.



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