

Getting Results in Housing

A Framework for Monitoring Results in Housing Projects Using Measurable Indicators

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Foreword

The housing projects currently financed by the Bank are characterized by an emphasis on regulatory reforms and more efficient targeting of public resources. Bank experience in the sector has shown that governments adopting an “enabling strategy” are more likely to achieve their housing sector goals than those using public funds to directly finance and construct housing units. In addition to financing settlement upgrading programs, these projects support a wide range of new housing delivery options, foster the participation of the private sector and nonprofit and community development organizations, and promote the use of transparent, direct and up-front subsidies. These projects are more complex than the housing programs of the 1980s, thus taking longer to mature and presenting a considerable implementation challenge for the Bank and its borrowing countries.

The efficient use of public resources and effective government intervention in the sector requires careful evaluation of project results. Presently, the quality of the evaluation reports of Bank-supported housing programs is not entirely satisfactory, partly because the underlying incentive structure does not promote evaluation, and also because of a lack of well-defined indicators to check progress on key aspects of sector performance. The borrower member countries and the Bank must rigorously evaluate projects in order to (i) determine whether loans were efficiently targeted, generated value in excess of investments and had the desired impacts; (ii) increase the transfer of knowledge from one project to the other to improve overall design; and (iii) present solid data on project performance to prospective borrowers in other countries, while promoting its lending program in the sector.

This document identifies and defines a set of indicators covering the key areas of intervention in housing projects. The main objective is to assist project teams and counterpart officials in selecting suitable indicators to measure project inputs, outputs, outcomes and long-term impacts. The Social Programs Division hopes that this publication will help improve the quality of Bank-financed projects and assist in evaluating its development contribution to housing, a key social sector.

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Contents

A Focus on Results:
Sharpening the Bank's Logical Framework for Housing Project
1

Indicators for Four Types of Housing Instruments
7

Annex
20

**Getting Results in Housing
Summary of Core Indicators**

INPUT	OUTPUT	OUTCOME	IMPACT
Neighborhood Upgrading			
<ol style="list-style-type: none"> 1. Subsidies, number planned. 2. Subsidies, funding planned. 3. Registration TC, funding planned. 4. Targeting, planned. 	<ol style="list-style-type: none"> 1. Change, water / sewage connections. change (percent/numbers), house extensions (square meter). 2. Registered titles change (percent/numbers). 3. Households benefited (percent/ numbers). 4. Targeting results (percent benefited in target group). 5. Total costs (subsidy and administrative expenses) per beneficiary household. 	<ol style="list-style-type: none"> 1. Market value of benefited houses, change. 2. Water use, change (m³ per household). 3. Leverage results (dollars subsidy/ total cost of improvements). 	<ol style="list-style-type: none"> 1. Change in asset values, per beneficiary household. 2. Change in incidence of water-borne disease. 3. Change in percentage households in overcrowded / substandard housing.
Up-Front Subsidy for Mortgage Financing			
<ol style="list-style-type: none"> 1. Subsidies, number planned. 2. Subsidies, funding planned. 3. Targeting, planned (median household income). 	<ol style="list-style-type: none"> 1. Households benefited / Houses purchased (percent/numbers). 2. Targeting results (percent benefited in target group). 3. Total costs (subsidy and administrative expenses) per beneficiary household. 	<ol style="list-style-type: none"> 1. Median price of purchased houses / median price commercial housing. 2. Leverage results (dollars subsidy/ total price of purchase). <ul style="list-style-type: none"> ➤ Household down payment ➤ Loan 3. Median income level of beneficiary / median income level of commercial homebuyer. 	<ol style="list-style-type: none"> 1. Down market mortgage penetration.
Mortgage Finance			
<ol style="list-style-type: none"> 1. TC funding. 2. Targeting, planned (median household income). 3. Planned improvements mortgage instruments: term, interest cost, fixed interest. 4. Planned improvements credit evaluation. 5. Planned improvements, foreclosure time. 	<ol style="list-style-type: none"> 1. Development of regulatory framework for purchase / sale of mortgages. 2. Development of new mortgage instruments. 3. Adoption of procedures for evaluating creditworthiness of lower income households. 4. Revision of legal / regulatory framework for mortgage foreclosure. 	<ol style="list-style-type: none"> 1. Down market mortgage penetration. 2. Mortgage spread over government bonds, change. 3. Average foreclosure delay, change. 4. Percentage of mortgages sold into secondary market, change. 	<ol style="list-style-type: none"> 1. Percentage of annual housing production financed by mortgages. 2. Housing as percentage of gross annual capital formation. 3. Mortgages as percentage of total outstanding loans in the financial system.
Land Development			
<ol style="list-style-type: none"> 1. Macro block infrastructure planned, Hectares serviced, plot price/square meter 2. Subsidies planned, amount, number 3. Targeting, planned 4. Regulatory costs: regulatory costs / new house price 5. Permit delay: Months required to obtain sub division permit 	<ol style="list-style-type: none"> 1. Macro block developed, Hectares serviced, total plots produced. 2. Households benefited, total funding/ number. 3. Targeting results. 4. Adoption of progressive subdivision regulations, number of municipalities. 	<ol style="list-style-type: none"> 1. Actual land price of plots, total funding /m2. 2. Land development multiplier, price of land with urban services / price of raw land. 3. Permits delay: months required to obtain subdivision permit. 	<ol style="list-style-type: none"> 1. Down market plots, lowest price of legal plot sold / median household income.

A Focus on Results: Sharpening the Bank's Logical Framework for Housing Projects

OVERVIEW

The aim of this paper is to help project teams develop results indicators for housing projects. These indicators are intended, primarily, as an instrument for managing projects and should help staff in the country offices, in headquarters and in executing agencies to identify the components of a project that are working as intended, and the ones that may need attention to keep the project on track. Additionally, the indicators can provide a foundation for project evaluations, at the mid-term or upon completion of the project.¹

The paper presents a wide menu of indicators for the housing interventions most frequently financed by the Bank. Project teams are invited to choose (or adapt) the indicators that are most relevant to the problems that the project is intended to address. Most likely, no single project will include all the indicators presented in this paper. In fact, fewer, well-chosen indicators will make it easier to track the progress of the project.

The results indicators are grouped into inputs, outputs, outcomes and impacts. These concepts are described in the next section and, although the language may be awkward or unfamiliar, the key ideas behind this approach are straightforward. Housing projects are interventions designed to deal with particular problems and, generally, a project team can begin by specifying the problem and the desired results of the intervention in terms of outcomes, such as, for example, increasing the consumption of potable water for an infrastructure upgrading project or

¹ In general, the relationship between monitoring arrangements and evaluation systems is fluid. In some sectors monitoring and evaluation appear to be largely unlinked; in housing, however, it seems that there is a more direct line between the concerns that preoccupy a monitoring system and the concerns that would be the focus of evaluation. In any event, this paper focuses principally on monitoring.

reducing the income threshold required to get a housing mortgage for a subsidy project. At the heart of the project design there is a hypothesis: if the project delivers the proposed goods or services, the specified problem will be reduced. The indicator values that measure the nature of the problem become the baseline to track project progress.

As the Bank's ability to track the results of its interventions increases, it will be necessary to find metrics that lie between the generic "project objectives achieved" indicators, measured at the level of the Bank's entire portfolio, and the myriad idiosyncratic indicators used at each project level. These "meso-level" indicators will make it possible to reliably aggregate, analyze and report results of comparable projects. This paper will help project teams in the housing sector agree on a common core of indicators that could pioneer the reporting of such "meso-level" results.

THE RESULTS FRAMEWORK: DEFINITIONS

The Bank's framework for systematically organizing project design and execution is known as the Logical Framework. Rather than reiterate material already documented,² this paper will focus on the four categories used to specify project results: inputs, outputs, outcomes and impacts.

The *impacts* of the project are statements of how the project or program will contribute in the longer term to the solution of the key problem (or problems) identified in diagnosing the sector. The project is expected to contribute, both directly and indirectly, to the Bank's strategic development objectives for the sector. Thus, the impacts could be classified in terms of their ef-

² A summary of the Logical Framework was prepared by OVE. See "Evaluation: A Management Tool for Improving Project Performance, Annex I Office of Evaluation and Oversight" (OVE), March 1997.

fects on poverty reduction and equity, increased sector efficiency, productivity and competitiveness, sustainability and the modernization of the State. Insofar as projects have policy reform goals that go beyond the direct beneficiaries of investments, aiming to reform the modes of delivering funds, goods or services and to “change the way of doing business,” the impact of a project or program is assessed at the sector level in the country as a whole or in the localities where the reforms were implemented.

The *outcomes* are the direct results obtained when beneficiaries make use of project outputs. Effectively, they are the results of a successful hypothesis about the sources of the specific problems addressed by the project. The project diagnosis identifies shortcomings in sector performance and chooses a particular kind of intervention to correct the situation. If the hypothesis is sustained, the goods or services delivered by the project directly resolve the problem or induce the beneficiaries to take actions that resolve the problem. Typically we measure the outcomes, which may be as specific and diverse as the goods and services provided by the project, when some specific intervention has been completed and beneficiary behavior has had time to adapt. In distinguishing the impacts from the outcomes of the investment components of projects, we do not expect a vivid dividing line, but rather focus on results that take longer to monitor and on second-order effects of project outcomes.

The *outputs*, achieved during execution, are the goods and services that the project executor is required by contract to deliver, and they are expected to generate the desired project outcomes. The indicators are succinct descriptions of each of the outputs that must be completed during execution. Again, the project design depends on the hypothesis linking the contracted outputs with the expected outcomes.

The *inputs* are the resources and arrangements that the executor must acquire and deploy in order to produce the project outputs. Inputs are required both at the outset and during the production of the outputs, and they must be sufficient for the production of the required outputs. Their indicators describe, among other aspects,

the cost and expected quality for each project output, while measuring the institutional arrangements and training needed to undertake the investment components of the project.

This conceptual framework posits clear *causal* connections between the four categories identified above. Given the assumptions laid out by the project team, the project outcomes are expected to have a positive and measurable impact on the well-being of the beneficiaries and to contribute to attaining key development objectives for specified population groups or society at large. In order to be worthwhile, the outputs of the project are expected to be sufficient to make a positive and measurable contribution to achieving the desired outcomes, while the inputs of the project should be sufficient for producing the desired outputs.

In order to lay out this causal framework confidently, project teams and their counterparts in executing agencies must work from a rigorous diagnosis of the sector and a set of shared hypotheses about the interventions that are most likely to resolve the identified problems. The explicit deployment of these diagnoses and hypotheses is a necessary stage in setting up a results monitoring system in Bank-assisted projects.

A RESULTS FRAMEWORK FOR THE HOUSING SECTOR

Given recent diagnoses of the housing sector and the status of housing policy in a significant number of countries in the region, it is now possible to apply this framework to the housing sector in a more specific manner.

Impacts

The broadest impacts of the investment components of Bank-supported housing projects are improvements in the welfare of targeted beneficiaries. Typically, for low-income beneficiaries, this will involve an increase in the value of their housing assets, a reduction in the incidence of disease in their communities or, more generally, an increase in the value of the housing services they receive. Investment projects often involve housing policy improvements or institutional

reforms aimed at strengthening the delivery of housing funds, goods or services. In these cases, we would expect to see improvements in the overall performance of the housing sector within a particular country or in the jurisdictions where the program has been implemented. Additionally, the impacts may involve results such as an increase in the weight of mortgages in the overall assets of the financial system.

The expected impacts of housing sector programs and projects can be usefully grouped using the key development objectives of equity, efficiency, sustainability and good governance. In the housing sector, *equity* increases as the housing conditions of the poor improve, as housing becomes more affordable and as credit for land and housing becomes more accessible. *Efficiency* improves with the optimization of home values, with the adequate production of new and intermediate housing solutions, with a more competitive formal private sector that goes further down market and with the expansion of housing finance. *Sustainability* is a key concept in successful housing interventions, *environmental sustainability* is important given the region's vulnerability to natural disasters, and *financial sustainability* is critical to avoid designing unaffordable interventions that cannot be scaled up to meet the needs of the sector as a whole. In most markets, *governance* (or less pretentiously, the role of government), can be improved when the government switches from being a direct provider of housing and financing to the role of empowering intermediaries in the private, civic and community sectors, a process which frees up a vast array of actors to develop land for housing, to undertake housing construction and to mobilize resources for lending to housing purchasers. The government's role then shifts towards one of "regulator," provider of reliable information to help purchasers make good decisions, and supplier of well-tailored services and subsidies for targeted population groups. By refocusing their role, governments can ensure that the reforms introduced by a project are sustainable in the face of political change.

Outcomes

The expected outcomes of the investment components of Bank-supported housing projects and programs are their contributions to immediate improvements in the housing conditions of the beneficiary population. For low-income households, these improvements can take the form of more secure tenure, more substantial investment in housing, greater water consumption and better physical quality of housing. For middle-income households, these improvements are typically expected to reduce the income level required for mortgage loan access. The outcomes of the project's policy and institutional reform components would be the successful and smooth operation of new institutional arrangements, new ways of funding housing programs, new means of allocating housing subsidies or the involvement of new intermediary agents in the housing process. Outcome indicators measure the differential effect on project beneficiaries and participating institutions, when compared both to their conditions prior to intervention and more vigorously to other households, communities and institutions that lack intervention.

The Logical Framework and Results Indicators

Operational hint for constructing a results-focused framework: use *outcomes* as the analytic starting point. The initial statement of the problem to be resolved, and the results to be expected from the project, can be best described in terms of outcomes. Spell out the *risks* that threaten the achievement of those results. Write out an explicit statement of the project *objectives*. If this provides a bridge between the *problem* and the expected *result*, then you have the core of a well-focused results framework.

In most circumstances, the problem to be solved and the immediate targeted results of a housing project can be naturally expressed in terms of outcomes, meaning that the outcome indicators are often the best measurements for baseline data. Choosing the right indicators and carrying out reasonable (timely, economic and accurate) measurement procedures for a project baseline data may be the two most significant tasks in

setting up a monitoring system. Without this data it is very difficult to observe the changes influenced by the project. The importance of providing strong baseline data is impossible to overemphasize, for without it, the return to investing in monitoring is drastically reduced. If possible the baseline data should include both the “treatment” and “nontreatment” groups, such as populations that are statistically indistinguishable but that differ in whether or not they receive the project benefits. This sharpens the analysis of the outcome results attributable to the project and provides a foundation for subsequent impact evaluation.³

Outputs

The expected outputs of Bank-supported housing projects, generally produced by the inputs, are the measure of completion associated with specific housing investment and technical assistance components. Output indicators seek to measure the quality, quantity, targeting and completion time characteristics of the proposed outputs to be financed by the project loan.

At present, these outputs generally correspond to one or more of the following four types (which may correlate with different components of the same project):

1. *Urban upgrading*: improvements to infrastructure or homes. This includes enhancements in the quality or quantity of the public infrastructure services provided to the neighborhood and/or increases to the quality or quantity of (private) housing services, as well as strengthening the security (legality) of land title.
2. *Housing purchase subsidies*: improvements in housing conditions by allocating subsidies to households so they can access mortgage

financing for the purchase of a complete house. Both the construction of the house and the provision of the mortgage will generally be taken on by the private sector.

3. *Mortgage finance*: increasing access to mortgage finance by improving the local financial, legal and other components of the housing finance system through the project; and
4. *Residential land development*: improving access to residential land provided by the private and civic sector. Project interventions often finance the extension of infrastructure networks to new lands or support the reform of the regulatory regime governing land use, land subdivision and building codes. In the past, the Bank sought to achieve these results through the direct provision of serviced lots.

Inputs

The inputs in Bank-supported housing projects are the financial, fiscal, human and institutional resources that are mobilized to create and complete the specific housing outputs mandated by the project. Input indicators could measure the amount of fiscal and financial resources directed to each component; the per-household expenditure in each component; the time expended in different project activities; the accounting and reporting procedures put in place; the rate of disbursement; the institutional arrangements and regulatory framework for project execution; the use of intermediaries; the quality and characteristics of the staff and the institutions involved, and the capacity-building measures taken to improve that quality; and the quality of data and analysis required for project design.

Objective

The selection of a “chain” of indicators for monitoring the results of any intervention must be congruous with the stated objective. The best starting point is again the “outcome.” If the link between the outcome (before the intervention and after) and the objective is tenuous or unclear, then one or the other should be reconsidered. It is normal to find that objective and out-

³ From this perspective, the ideal procedure is one in which a population of eligible beneficiaries is identified and the actual beneficiaries are randomly selected from that universe. Random selection often poses political or operational difficulties. In general, the aim is to show how change in beneficiary outcomes (baseline vs. after treatment levels) differs from the change in outcomes of the nontreatment group (baseline vs. level achieved subsequently).

come do not quite match on the first attempt—it is good practice to adjust the outcomes iteratively to come closer to meeting the objective and to adjust the objective to match realistic outcomes.

GENERAL ISSUES

Characteristically, monitoring housing project results poses a number of issues that are spread among different types of interventions. In this section we discuss some of the dilemmas and solutions observed in recent Bank practices, such as distinguishing project level performance and sector-wide effects, treatment of institutional reforms, sustainability issues, targeting and combining interventions to produce a coherent strategy.

Project vs. Sector Scale. One goal of many of the Bank's recent housing operations has been to have a significant impact on those households that benefit directly from the investments, while improving arrangements for the delivery of housing funds, goods and services. These changes in arrangements, or "reforms," are intended to have a long-term effect on the housing sector as a whole. Typically, investment projects are expected to function both as pilot or demonstration projects, as well as laboratories for testing "new ways of doing business" that can be gradually expanded to replace outmoded methods of housing delivery. At the sector level, many of the expected results (outcomes and impacts) depend on a change in the behavior of various public, private and civic sector agents with respect to the supply or delivery side of housing markets. Monitoring the effects of changes in the housing delivery methods will require measuring their sector-wide results as significant differences may emerge between measuring project level performance and effects on project beneficiaries, and measuring project-initiated reforms and their impacts on sector-wide performance.

Projects with sector-wide ambitions have often been designed by combining one or more investment components with one or more institutional reform components. In some projects, the institutional reform component functioned almost as a precondition for the successful imple-

mentation of the investment component; while in other projects the two have been independent, making it possible (even if undesirable) to undertake the investments and ignore the institutional reform component altogether. Given the limited ratio of Bank resources to country needs in housing investments, some broader changes as a result of Bank investments are generally very desirable. These changes may take a variety of institutional and policy linked formats, ranging from minor improvements in subsidy targeting procedures, to wide ranging policy shifts away from direct government housing production toward the provision of up-front subsidies for the purchase of privately produced houses. The message, from the perspective of results framework, is straightforward: if the institutional change is critical, it is worth creating a matrix of input, output, outcome indicators to monitor its progress.

Institutional and Policy Reform. The variety of links between project investments in real assets and institutional and policy changes can pose conceptual and practical difficulties for monitoring arrangements. No single solution is likely to be adequate for the requirements of different projects with different ambitions in different countries. Nevertheless, the approach suggested in the sections that follow may be helpful. To provide some guidance, the matrices make a distinction for each component type between the input and output indicators for investments, and those for institutional and policy development. When the institutional efforts are narrowly tailored to the execution of the project investments, indicators for outcomes and outputs will only be required at the "project" level. However, when the institutional and policy activities have more extensive ambitions, outcome indicators can be developed at both the "project" level and the "sector" level, which in practice may mean city, region or countrywide results, depending on the level at which the project operates. When the projects or components rely exclusively on policy and institution building activities to achieve changes, outcome indicators would only refer to "sector" level results.

Sustainability. The financial sustainability of the changes introduced by a Bank intervention in housing is another critical crosscutting issue, as

the investments required by the housing sector in most countries dwarf by orders of magnitude the investments mobilized by a Bank program. Therefore, sustainability is typically an important dimension of ex post evaluation, provoking questions such as: Were the lessons learned from the Bank project applied broadly? Were the procedures piloted in the Bank project adopted throughout the sector? Were subsidies scalable at the sector level, or were they only viable in an isolated project environment? Did the design of the project require complex and costly administrative arrangements difficult to replicate on a bigger stage? These questions need to be answered to establish the sustainability of project benefits and, in many cases, can only be handled at the evaluation stage. Yet, projects with strong institutional or policy reform components should select indicators relying on sustainability to help monitor outcomes for project execution.

Environmental sustainability is receiving higher salience in the region, following a series of disastrous hurricanes that resulted in extensive flooding and mudslides. Improved land use planning (fewer but better enforced regulations, clearly communicated to the public) together with housing subsidies delivered as demand-side vouchers may have the potential to provide stronger incentives to low-income households to locate in suitable sites. In general terms, environmental sustainability is attained when residential areas do not encroach on sensitive or unsafe lands (often lands vulnerable to mudslides or flooding), when homes are constructed to endure earthquakes and heavy storms, when proper storm drainage is in place and when urban residential expansion is properly managed.

Targeting. The arrangements that ensure the delivery of project benefits to the intended target population can be monitored in a number of ways, as subsidy targeting is often an important aspect of housing projects. The approach adopted in this document is intended to draw attention to these arrangements and to ensure their consistent handling. The design of targeting arrangements and assessment of their planned value are considered as inputs for institutional development. Their immediate results are measured as part of the output indicators and, depending on the component scope, the evaluation

might take place at the project level, at the sector level or at both levels. Basically, the purpose of the indicators suggested in this document is to verify the percentage of subsidy benefits that leak out to unintended population groups. In statistical terminology these are Type II errors, while a full evaluation study will often be concerned with Type I errors as well, which indicate the percentage of the target population that does not receive any benefits.

Multiple Components. A single Bank-supported housing project cannot be expected to address all the problems identified in diagnosing the housing sector. Each particular loan project will generally focus on one or more types of interventions in the sector, and therefore will have a limited scope and purpose. At the same time, it has become clear that housing investment components, traditionally regarded as quite separable, such as urban upgrading and residential land development, can only achieve their stated objectives when implemented in a coordinated manner. When housing loans have more than one component, it is recommended that each component have its own results framework.

It is worth noting here that among the four housing intervention types mentioned above, two types (up-front subsidy and residential land development) focus primarily on new housing, while only one (urban upgrading) focuses on the improvement of existing houses and neighborhoods.⁴ Frequently, the preferred strategy is *two-pronged*, a strategy balanced between projects addressing new housing needs and those addressing the improvement of the existing housing stock. This approach is favored because a strategy devoting resources to urban upgrading alone runs the risk of ignoring the causes of informal settlement. As a result, new informal settlements continue to emerge, presumably as targets of subsequent up-grading efforts.⁵

⁴ Of course, mortgage financing can improve the market for both new and “used” houses.

⁵ See also Eduardo Rojas. 2005. Sharpening the Bank’s Capacity to Support the Housing Sector. Sustainable Development Department Technical Papers Series No. SOC-142. Washington, D.C.: Inter-American Development Bank.

Indicators for Four Types of Housing Instruments

The general framework described above is employed to generate four indicator matrices for each of the key types of housing instruments now supported by Bank loans. These are: (i) urban upgrading (infrastructure and home improvement); (ii) up-front subsidies for mortgage financing; (iii) housing finance; and (iv) residential land development. Each of these projects, accompanied by the associated institutional reforms, seeks to provide an effective answer to a crucial housing problem identified in many countries in the region. In the following sections, the principal attributes of each instrument are described before introducing their associated indicator matrix.

The indicator matrices may appear overwhelming because they are intended to be reasonably comprehensive. They are intended to provide a wide range of mitigation options. Because fewer, well-chosen indicators are always better than a large number of indiscriminate ones, project teams will choose those indicators relevant to their objectives, develop additional indicators to reflect specific circumstances and then discard those remaining. In addition, in the descriptive text that follows, ten indicators are suggested as key for each project type. The indicators were chosen from the *outputs* and *outcomes* columns in the matrices presented at the end of the section. The impact columns contain mostly longer-term results and second-order effects of the projects, and therefore do not speak directly to those results that can readily be observed at project completion. The impact indicators often have a much wider range than the others, thus project teams will need to exercise additional pruning to leave only those impact indicators most relevant to the specific project.

The matrices are largely self-explanatory. Indicators are given names and summary definitions, and it is generally obvious whether a change in the value of an indicator implies an increase or a decrease in welfare. Clearly, the *desirable values* of the indicators that can be used as “quantitative goals to be attained” will be defined by

each project. In some cases, expected project results will be derived from nationally defined objectives, or from averages in comparable counties, while in other cases, the project teams (Bank staff and country counterparts) will agree on target values based on feasible improvements from the baseline values developed in the preparatory work. For example, in order to reduce overcrowding, a minimum amount of floor area per person must be guaranteed in each dwelling, taking into account the prevailing conditions in the sector, regional averages, accepted norms and the improvements that are feasible given institutional capacity and available resources.

SETTLEMENT UPGRADING: INFRASTRUCTURE AND HOME IMPROVEMENT - MATRIX 1

Bank projects often combine interventions to upgrade community infrastructure with assistance in improving individual homes. For example, to take advantage of the new infrastructure, projects will finance the introduction of potable water and sewage lines into the houses, and then provide help to households to construct kitchens and bathrooms. At the same time, there are often significant differences in the execution arrangements: *infrastructure improvements* must be delivered through the municipality or other communal agency, while *home improvements* are clearly more a task for individual households. However, the logical structure of the indicators for these two kinds of projects is very similar, hence a single results matrix of indicators is presented. The basic problems to be addressed by these projects are fairly constant, while the details of project benefits can vary widely from project to project. To accommodate this variety, the results matrix provides an exceptional number of possible indicators. Nonetheless, project teams are encouraged to make a ruthless selection keeping only those indicators that relate to key issues of their own project, along with those that characterize a fruitful comparison to similar projects in the Bank’s portfolio.

Upgrading Urban Infrastructure

The key objectives for these projects are to improve public infrastructure services in communities created originally through squatting or illegal land development. These improvements are achieved by providing households with improved basic services that were either inadequate or totally lacking, and by increasing the security of tenure of the households. By initiating an urban upgrading project, governments provide *de facto* recognition of these settlements, thus lessening the probability that they will be demolished or that the occupants will be evicted. Upgrading projects can create a sense of tenure security, enabling households to invest in their homes without feeling that they are taking an undue financial risk. Coupled with actions that remove any remaining stain of illegality by providing proper titles (or equivalent land tenure documentation), infrastructure upgrading increases home values in these communities; transforms houses into tradable assets, thereby reducing wealth-related poverty; improves the overall quality of life; and reduces health and environmental risks.

Infrastructure improvements may require the demolition of houses or other infringements on people's property, thus they cannot be implemented effectively without engaging the community. This usually requires the creation of sustainable organizations that, beyond their initial contribution to the implementation of the upgrading project, can have beneficial effects on the community as a whole. The community must rely on the municipality for the provision of numerous infrastructure services, as well as for legitimizing its building code, zoning and land subdivision violations. Thus, municipalities typically need to participate in upgrading projects as well.

Squatter communities and illegal subdivisions are usually well-targeted toward lower-income households. Upgrading projects lead to immediate improvements in water consumption and sewage disposal, two basic needs of such households, and as a result, can be part of a govern-

ment program focused on achieving the Millennium Development Goals. In addition, upgrading can support investments in housing extensions, thus reducing overcrowding and increasing home values.

It is important to note that urban upgrading projects are normally financed through direct contributions to the *suppliers* of infrastructure services, community facilities, property titles and other pertinent documentation. In contrast to other housing project types, upgrading projects typically do not deal directly with individual households, but rather with independent contractors who carry out the public works, with municipal, provincial or other government public work agencies or directly with communities that undertake projects by contract or through their participation in the planning and contribution of "sweat equity."

The success of upgrading projects is generally measured by the number of households benefiting from the project; by the proper targeting of resources to deserving households; by the investment level in housing generated by the upgrading projects; by the increase in wealth and quality of life of participating families; and by the increase in land value in participating and adjacent communities.

Ten key performance indicators for infrastructure upgrading projects:

1. *Households Benefiting from Upgrading*, the total number of households that have benefited directly from the upgrading project. (*Output*)
2. *Actual Targeted Households*, the percentage of beneficiary households in the upgrading projects that actually have incomes below specified target levels of household income. (*Output*)
3. *House Extension*, the net increase in floor area per person in upgraded communities, over and above the increase in floor area in non-upgraded communities during the same period. (*Output*)

4. *Actual Cost per Household*, the ratio between the total expenditures⁶ incurred by the project upon completion and the total number of beneficiary households. (*Output*)
5. *Registered Titles*, the number of households that were issued proper title documents by the completion date of the upgrading project. (*Output*)
6. *Value Added in Housing*, the average additional value added to a house in upgraded communities, over and above the added value in non-upgraded communities. (*Outcome*)
7. *House Improvement*, the average net housing investment by households in upgraded communities, over and above the housing investment per household in nonupgraded communities during the same period. (*Outcome*)
8. *Water Use*, the net increase in daily water use per household in upgraded communities. (*Outcome*)
9. *Wastewater Sewerage*, the net increase in the percentage of households with waterborne sewerage in upgraded communities, over and above the percentage in non-upgraded communities. (*Outcome*)
10. *Community Involvement*, the net increase in dues-paying memberships in community organizations that benefited from the upgrading. (*Outcome*)

Home Improvement Projects

The main objective of home improvement projects is to provide direct financial assistance, in the form of a subsidy or a microloan or a combination of both, to low-income families already occupying a plot of land for the building of a new core unit on the plot or the replacement, extension or improvement of an existing unit.

⁶ Total expenditures refer to the cost of subsidies, plus all administrative and additional overhead costs incurred in managing the project and delivering subsidies and other services.

This form of financial assistance is targeted directly toward qualified households, rather than communities, and does not usually include assistance for infrastructure upgrading. In special cases, it may also include funding for land titling, but in most cases land titling would be better handled at the community level rather than the household level.

A key issue in home improvement projects is the proper targeting of the limited resources available to qualified households, which requires setting up rigorous procedures for identifying beneficiaries and for ascertaining their incomes and home ownership status.

Another important issue in home improvement projects involves the use of limited project resources as leverage for harnessing additional resources toward the home building effort. These may include household savings, loans from family, friends and employers, and the sweat equity of households taking part in the construction and management of the building project.

Additionally, home improvement funds help increase households' earning capacity, either through the construction of spaces that could be used for home businesses—shops and workshops—or through the construction of rental rooms or complete rental units that could be used to generate additional income.

In general, home improvement projects assist beneficiaries that already occupy a plot of land in an existing community; therefore, these projects are not generally used to finance land purchases or infrastructure improvements to the plot, but only construction on the plot itself.

Various intermediaries from the private, banking or civic sector can implement home improvement projects. Government agencies can take on minor roles such as administering subsidies or microloan insurance funds, and overseeing project implementation. The use of intermediaries, particularly in the administration of microloans, greatly increases the efficiency and sustainability of these projects.

The success of home improvement projects is typically measured by the number of units built or improved; by the proper targeting of beneficiaries; by the leverage created through the project; by the sustainability of intermediary participation in home improvement; by the increase in wealth and the long-term improvement in the quality of life of participating families.

Ten key performance indicators for home improvement projects are:

1. *Households Benefiting from Home Improvement Subsidies*: the total number of households that have benefited directly from home improvement subsidies. (*Output*)
2. *Households Benefiting from Home Improvement Microloans*: the total number of households that have benefited directly from home improvement microloans. (*Output*)
3. *Actual Targeted Households*: the percentage of households with incomes below the household median poverty line that are receiving subsidies and microloans. (*Output*)
4. *Actual Construction Cost per Square Meter*: the construction cost per square meter for house additions undertaken by beneficiaries of subsidies and microloans. (*Output*)
5. *Average House Addition*: the average floor area (in square meters) added to homes improved through subsidies and microloans. (*Output*)
6. *Actual Intermediary Participation*: the number of government, civic and private sector institutions that administered subsidies and loans for project beneficiaries. (*Output*)
7. *Actual Financial Institution Participation*: the number of financial institutions that administered home improvement microloans for project beneficiaries. (*Output*)
8. *Microloan Spread*: the difference between the cost of funds used for microloans and the lending rate to beneficiaries. (*Outcome*)

9. *Actual Subsidy Leverage*: the ratio between the total amount of household resources leveraged by these subsidies and the total expenditures incurred to deliver the project.⁷ (*Outcome*)

10. *Change in Value of Asset*: a professional valuation of the average change in real estate value (house and lot) due to the assistance provided by the project. (*Outcome*)

UP-FRONT SUBSIDIES FOR MORTGAGE FINANCING - MATRIX 2

The key objective in providing up-front subsidies to supplement down payments and mortgage loans is to help lower-income families that would not otherwise be able to afford new housing built by the formal housing sector. This component is typically introduced with an important policy shift in mind: moving the public housing agencies away from the role of building housing and administering mortgage loans and into a position of housing markets facilitator. Past experience has shown that loans issued by public agencies generally involve regressive interest-rate subsidies and high long-term default rates. When the public mortgage loan portfolio is poorly managed, mortgage funds cannot be replenished and are in short supply, a process that is exacerbated by the crowding out of private sector lenders. When up-front subsidies are issued directly to targeted households in a one-time payment, the level of subsidy and government budget obligations become transparent. Mortgage funding becomes the responsibility of private banks or other institutions that offer market-rate loans and have greater access to mortgage funds.

Up-front subsidies in association with mortgage loans are not usually targeted to very poor families, but rather to lower-middle and middle-income households that would otherwise be excluded from the housing market. Therefore, the aim of the up-front subsidy component is to bring financial institutions further down-market in order to cater to groups with lower incomes, as well as to bring private housing developers down-market, so they produce and market more

⁷ See footnote 6.

lower-priced housing units. As a result, the formal housing market is expanded downwards, making formal housing more affordable to a larger number of people. The provision of up-front subsidies may help inject new capital into the building industry in times of recession, which helps jump-start the economy and create new employment.

At the same time, bringing in private housing developers helps bring about a policy shift away from direct construction by public institutions. In many countries, experience has proven that housing constructed by the public sector is often inefficiently and expensively built, does not respond to market demand, is poorly allocated among targeted beneficiaries and has hidden subsidies. Up-front subsidy projects seek to improve the efficiency of the construction industry, as well as responsiveness to market demand, as private developers begin competing against one another in a genuine housing market setting. Most projects aim to make subsidies transparent and to employ more precise targeting mechanisms, and by requiring matching down payments, subsidies can be used to mobilize beneficiary resources. Accordingly, the immediate policy goal is to transform the role of government housing institutions from direct to indirect housing providers through the targeting of subsidies and the management of a system of intermediaries. Subsequently, the intermediary actors (developers and banking institutions) provide homes and loans directly to beneficiaries.

The success of up-front subsidy projects often depends on a number of external factors that are not necessarily under the control of the project. Examples are the rate of inflation, the strength and stability of the financial system and the availability of mortgage funds in the financial system. The willingness of financial institutions and developers to participate in the project in adequate numbers, so as to ensure competitiveness, is also a key factor in the success of these projects. Other crucial factors include, the willingness of municipal governments to change their regulations in order to allow the introduction of new forms of low-cost housing, a well functioning judiciary, and adequate administrative capacity in the executing agency. The key task for the executing agency is to create an ef-

fective system for targeting subsidies and monitoring participating developers and financial institutions.

As described here, the definition of up-front subsidy projects is limited to those involving subsidies coupled with down payments and mortgage loans. The structure of subsidy projects offered to beneficiaries *without* associated loans is very different, as shown in the settlement upgrading projects described previously. It is important to point out that, in contrast to urban upgrading subsidies provided directly to the suppliers of services, up-front subsidies are provided to individual households and, as such, are *demand-side* subsidies.

The success of up-front subsidy projects is typically measured by the number of households that have benefited from the program; by the targeting of subsidies to beneficiaries in need; by the improvement in housing conditions of beneficiaries; by the increase in their wealth and in their quality of life; and by the improved use of public resources for housing.

Ten key performance indicators for up-front subsidy projects are:

1. *Households Benefiting from Up-front Subsidies*: the total number of households that have benefited directly from up-front subsidies. (*Output*)
2. *Actual Targeted Households*: the percentage of households with incomes below specified target level of household income that received up-front subsidies. (*Output*)
3. *Actual Developer Participation*: the number of developers that provided new housing solutions to beneficiaries of up-front subsidies. (*Output*)
4. *Actual Commercial Bank Participation*: the number of financial institutions that provided mortgage loans to beneficiaries of up-front subsidies. (*Output*)
5. *Affordable Mortgages*: the lowest annual income qualifying a beneficiary household

for a mortgage loan from a private bank.⁸
(*Outcome*)

6. *Mortgage Spread*: the average difference (in basis points) between mortgage rates offered to buyers and interest rates on government bonds (1 or 5 or 10 years, as the market permits). (*Outcome*)
7. *Mortgage Default Rate of Subsidized Operations*: the ratio of mortgages acquired with up-front subsidies in arrears for more than three months to the mortgage portfolio in arrears held by private banks. (*Outcome*)
8. *Actual Subsidy Leverage*: the ratio between the total amount of household resources and mortgage finance leveraged by up-front subsidies and the total amount of up-front subsidies in the project. (*Outcome*)
9. *Production Leverage Effect*: the change in the ratio of total affordable housing units to total units in the relevant market. (*Impact*)
10. *Government Withdrawal from Mortgage Lending*: the change in the government's percentage share of the mortgage market (annual origination). (*Impact*)

HOUSING FINANCE - MATRIX 3

Undeniably, there is an economic logic in borrowing money for building or buying a house: "Housing yields a stream of services over a period of years and therefore, logically, it should be paid over time by means of loan repayments rather than in one lump sum. If people had to pay for their homes in full upon purchase, most could not afford to become homeowners until late in life. Therefore, financing through home loans is essential to make an owner-occupied housing market work with full efficiency."⁹

⁸ In terms of measurement, "lowest" can be more precisely defined as "average income of lowest 10 percent of households that obtained a mortgage from private sector."

⁹ Boleat, M. and Adrian Coles. 1987. *The Mortgage Market*. London: Allen and Unwin.

In focusing on the development of the mortgage system, housing finance projects typically have numerous policy goals. These projects generally aim to promote a gradual withdrawal of government institutions (especially government housing banks) from direct mortgage lending; to eliminate hidden subsidies in mortgage loans; to support lending at market rates; to increase the stability and viability of financial institutions; to standardize mortgages; and to stimulate the creation of secondary mortgage markets by creating viable mortgage insurance. Beyond the operations of the portfolio mortgage lender, a healthy mortgage market depends on a number of other factors. The most significant are: credit assessment by the mortgage originator, mortgage registration in local property office and execution of foreclosure proceedings by the judiciary. When the market assessment identifies weaknesses in these ancillary industries, these projects are designed to help strengthen their performance.

In recent years, the direct use of IDB funds for mortgages has been the exception rather than the rule because the Bank has encouraged countries to seek funding in the commercial banking sector. The rationale for the Bank's reluctance is that public funds tend to be lent at below-market interest rates; and, given that they are always in short supply, financial institutions engaged in mortgage lending cannot replenish their coffers once the funds have been lent. In exceptional cases, when policy considerations support the proposal, the Bank has consented to loan funds for mortgages.

Typically, the success of housing finance projects is measured by the number of beneficiaries that were able to obtain mortgage loans; by the down-market penetration of the mortgage market that makes it possible for lower-income families to gain access to mortgage funds; by the increased efficiency of mortgage lending; by the growth of the mortgage market as a share of total loanable funds in the banking system; by the overall improvement in the housing conditions of loan beneficiaries; by the increase in housing wealth as the result of improved access to financing; by the increased viability of the mortgage finance system; by the performance of the ancillary industries; and by the degree of government withdrawal from mortgage lending.

Ten key performance indicators for housing finance projects are:

1. *Households Benefiting from Mortgages*: total households that have benefited directly from mortgages financed by the project. (*Output*)
2. *Affordable Mortgages*: the lowest annual income qualifying a beneficiary household for a mortgage loan in the private banking sector (*Output*)
3. *Actual Commercial Bank Participation*: the number of financial institutions that provided mortgage loans to beneficiaries of up-front subsidies. (*Output*)
4. *Reduction in Foreclosure Time*: the change in time required for foreclosure execution on defaulted mortgage. (*Output*)
5. *Mortgage Spread*: the average difference (in basis points) between mortgage rates offered to buyers and interest rates on government bonds (one or five or ten years, as the market permits). (*Outcome*)
6. *Actual House Price*: the median sale price of houses bought by borrowers of mortgage loans financed by the project. (*Outcome*)
7. *Mortgage Tenor*: the change in longest loan tenor offered (number of years to repay). (*Outcome*)
8. *Mortgage Default Rate*: the ratio of mortgages acquired with up-front subsidies that are in arrears for more than three months to the mortgage portfolio in arrears held by private banks. (*Outcome*)
9. *Secondary Market Activity*: the volume of mortgage loans that are purchased with secondary market starter funds financed by the project. (*Outcome*)
10. *Government Withdrawal from Mortgage Lending*: the change in the government's percentage share of the mortgage market (annual origination). (*Impact*)

RESIDENTIAL LAND DEVELOPMENT - MATRIX 4

The key objective of residential land development is to increase the supply of affordable plots for building new homes. More generally, the objective of such interventions is to ensure that residential land in rapidly growing cities is in adequate supply; to eliminate supply bottlenecks, which can lead to steep increases in land prices and thus reduce housing affordability; and to ensure that residential land subdivision and development is not unduly regulated, making it unaffordable to poor families.

Most current residential land development projects are second-generation projects seeking to overcome the difficulties, and in many cases, the failures of the sites-and-services projects promoted by multilateral development institutions in the 1970s and 1980s, which have now been largely discontinued. Sites-and-services projects attempted to reform programs that offered complete housing units, into a system capable of recovering costs by offering serviced plots rather than completed units, and mortgage loans instead of subsidies. Eventually, it was observed that these projects still contained numerous subsidies in the form of land distributed at nonmarket prices, below-market interest rates, high rates of default and improper targeting. In addition, it became evident that while these projects were slow to deliver, the informal private sector was delivering large quantities of minimally-serviced sites at prices that were affordable by low-income families.

Second-generation land development interventions sought to correct some of these deficiencies by insisting that they be carried out by intermediaries from the private, civic, or informal sectors rather than public authorities. To the extent that the government is indeed involved in urban land development, it should be on a macroblock rather than an individual plots scale, thus preparing new lands for urban, or more specifically, residential development. The government should also ensure that private and informal land developers provide affordable plots with more relaxed zoning and land subdivision regulations, allowing the progressive development of land subdivision without having to pro-

vide a full complement of services before they can be inhabited. Rather than ignoring the role of informal developers in the supply of minimally-serviced land, new projects have sought to recognize and legitimize their contribution to the supply of affordable residential plots through a process of certification.¹⁰

Bank projects that focus on residential land development may include both investment and technical assistance components. These components may include funding primary infrastructure services for new lands; funding targeted subsidies for serviced sites to be prepared and managed by intermediaries, possibly in conjunction with down payments by participating households (and in some cases accompanied by mortgage loans or microloans); technical assistance in the preparation of zoning and infrastructure plans for managed urban (and residential) expansion; and technical assistance for preparing and initiating regulatory reforms and for the certification of the activities of informal land developers.

The success of residential land development projects can be measured by the stability of land prices on the urban fringe, the amount of land made available for urban development through zoning changes and the provision of primary infrastructure financed by the project; the number of new plots provided by project intermediaries; the affordability of plots for low-income households; the institution of effective reforms of land subdivision regulations (usually at the municipal level); and the withdrawal of public

¹⁰ The potential for low-income land development certification has been scarcely explored. International trade has driven the development of certification standards in areas such as environmental safety and quality control, yet the quality of information about land markets is poor, especially for low-income households. Reliable certification of developers or of specific land development, as well as widespread dissemination of certified information, could help low-income households avoid developments that are vulnerable to legal disputes regarding ownership, flooding and other natural disasters or abusive financing practices. Certification thus offers a fertile middle ground between the “free” market illusion and the anti-poor bias of most government-enforced land development standards.

authorities from the direct provision of building sites.

Ten key performance indicators for residential land development projects are:

1. *Actual Targeted Households*: the percentage of households receiving subsidies and microloans whose incomes are below the median household poverty line. (*Output*)
2. *Affordable Building Lots*: the number of new building lots affordable to below-target income households, financed directly or indirectly by the project. (*Output*)
3. *Adoption of Progressive Land Subdivision Regulations*: the total number of municipalities that have adopted new land subdivision regulations that allow the sale of plots in incomplete land subdivisions. (*Output*)
4. *Share of Land in Total House Cost*: the percentage share of the cost of serviced land in the total cost of a median-priced house in the urban area. (*Outcome*)
5. *Land Development Multiplier*: the average ratio of the land price, fully complemented with urban services, in a median-priced subdivision and the raw land price in the vicinity of the subdivision. (*Outcome*)
6. *New Residential Land Area*: the amount of residential area (in hectares) made available for urban expansion through infrastructure investments financed by the project. (*Outcome*)
7. *Share of Residential Land in Low Cost/Informal Subdivisions*: the share of total residential land made available annually in informal/low-cost land subdivisions. (*Outcome*)
8. *Permits Delay*: the amount of time (measured in months) currently required to obtain all necessary permits for a medium-size urban land subdivision. (*Outcome*)
9. *Land Conversion Multiplier*: the ratio of the price of one square meter of land zoned for

urban development and one adjacent square meter not zoned for urban development. (*Outcome*)

10. *Plot Production by Certified Informal Land Developers*: measured by the number of plots produced annually by informal land developers certified by the project. (*Outcome*)

CONCLUDING REMARKS

Most attempts to evaluate Bank-supported housing projects in the past have failed to provide adequate results because (i) projects were not initially designed to support a sufficient monitoring framework; and (ii) good quality, accurate data for effective project monitoring was not available. As a result, it is still uncertain whether or not Bank-supported housing projects are yielding the promised results, including helping to attain the Bank's key development goals of equity, efficiency and sustainability. The proposed framework aims to correct this deficiency.

Clearly, the selection of correct indicators is a function of the intervention objectives. Project design often begins as a process of iterative adjustment between ends and means. Thus, it is generally more effective to think in terms of the outputs and outcomes and the hypothesis that links them. When the design is finalized, the relationship between the initial problem, the final outcome and the objective of each intervention should be entirely transparent.

The framework is designed as a practical tool for Bank staff and personnel in executing agencies. The state of the art, both in housing projects and in results monitoring (topics that need further attention), is far from ideal, meaning that the "chain of results" that underlies any monitoring framework is a complex set of overlapping hypotheses. As we get feedback from the monitoring systems and results of projects in diverse circumstances, certain hypotheses will be confirmed, while others will be discarded. As the hypotheses are refined and confirmed, the "lessons learned" and "good practice" will progress from condescending *clichés* to reliable methods of cultivating results.

Matrix 1: Urban Upgrading with Subsidies			
Inputs	Outputs	Outcomes	Impacts
<p>Investments</p> <p>Benefited households, planned values, measured by:</p> <ul style="list-style-type: none"> Number of households. Subsidy cost per household. Total subsidy invested. <p>Water & sewage budget, total amount of project funds allocated to the construction of water and sanitation works; number of planned water and sewage connections.</p> <p>Targeting poor communities, the percentage of households in communities to be upgraded with income levels at or below threshold for subsidy.</p> <p>Upgradeable communities, the percentage of households in all urban informal communities that can potentially be upgraded by the project.</p> <p>Improper titles, the percentage of households in the urban area without proper titles; number of titles planned for delivery.</p> <p>Institution and Policy Development</p> <p>Design of delivery system for subsidy targeting, as measured by:</p> <ul style="list-style-type: none"> Planned ratio of median household income of target population, to median household income in urban area. Planned percentage of total subsidies delivered to target households. <p>Design of titling delivery system, planned average cost of delivering registered title, total funding amount per household.</p> <p>Areas unsuitable for upgrading, the portion of households in informal communities that cannot be upgraded due to high probability of an environmental catastrophe.</p> <p>Resettlement / Open Space / Road / Titling / Community Space Budget, the volume of upgrading funds allocated to each element.</p> <p>Cost recovery scheme, the planned portion of project expenditures to be recovered from beneficiary households.</p>	<p>Benefited households, actual values, measured by:</p> <ul style="list-style-type: none"> Number of households. Subsidy per household. Total subsidy invested. Number of registered titles delivered. Number of water/sewage connections implemented. <p>Actual targeted households, the percentage of beneficiary households in the upgrading projects with incomes below specified target level of household income.</p> <p>House extension, the net increase in floor area per person in upgraded communities, over and above the increase in floor area in nonupgraded communities during the same period.</p> <p>Actual cost per household, the ratio between total expenditures incurred by the project at the time of project completion and total beneficiary households.</p> <p>Improvements implemented, the number of families resettled, open space area provided, covered community space area and kms access roads constructed.</p> <p>Implementation of delivery system for subsidy targeting, as measured by:</p> <ul style="list-style-type: none"> Realized ratio of median household income of target population to median household income in urban area. Realized percentage of total subsidies delivered to target households. <p>Implementation of titling delivery system, realized average cost of delivering registered title, total funding amount per household.</p> <p>Actual intermediary participation, total governmental, civic and private sector institutions that have administered home improvement subsidies and loans to project beneficiaries.</p> <p>Actual financial institution participation, total financial institutions that have administered home improvement microloans to project beneficiaries.</p> <p>Property tax collection, the percentage of the official estimated property tax in upgraded communities, collected in the first year after project completion.</p> <p>Persons trained, number of community members and municipal officials trained in managing and executing urban upgrading projects.</p>	<p>Project Level</p> <p>Value added in housing, the average home value added in upgraded communities, over and above the added value in non-upgraded communities</p> <p>House improvement, the average net housing investment by households in upgraded communities, over and above the investment per household in nonupgraded communities during the same period.</p> <p>Subsidy multiplier, the average net housing investment by household / average subsidy per household.</p> <p>Water use, the net increase in daily water use per household in upgraded communities.</p> <p>Water-borne sewerage, the net increase in the percentage of households with water-borne sewerage in upgraded communities, over and above the percentage in nonupgraded communities.</p> <p>Urban land titling, the percentage of all beneficiary households in upgraded communities with proper land titles.</p> <p>Home-based businesses, the increase in the percentage of homes in upgraded communities with home-based businesses or rental units.</p> <p>Densification, the increase in net residential density in upgraded communities.</p> <p>Public outdoor space, the ratio of average outdoor space per person in upgraded to nonupgraded communities</p> <p>Landslide and flood protection, the number of households provided with adequate landslide and flood protection by the project.</p> <p>Vehicular access, the increase in the percentage of households with vehicular access to their homes.</p> <p>Community involvement, the increase in due-paying memberships in community organizations in upgraded communities.</p> <p>Municipal involvement, the share of municipalities with ongoing urban upgrading projects after the completion of Bank-supported upgrading projects.</p> <p>Cost recovery, the ratio of the present value of property tax payments and betterment levies to total project expenditures.</p> <p>Microloan spread, the difference between the total funds used for micro loans and the lending rate to beneficiaries.</p> <p>Actual subsidy leverage, the ratio between the cost of household resources leveraged by home improvement subsidies and the total home improvement subsidies in the project.</p> <p>Sector Level: Similar indicators measured with corresponding scale of government programs expanding beyond Bank financing.</p>	<p>Poverty, the change in value of assets and income levels of households in upgraded areas over households in non-upgraded areas.</p> <p>Overcrowding, the median floor area per person in urban areas.</p> <p>Water-borne disease, the average annual occurrence of reported water-borne diseases by all household members.</p> <p>Urban density, the ratio of the urban population to the built-up area (persons per square kilometer).</p> <p>Permanent structures, the percentage of all urban dwelling units constructed with permanent materials capable of lasting twenty or more years.</p> <p>Access to outdoor space, the percentage of the urban population within a ten-minute walk from an outdoor public space.</p> <p>Landslide and flood damage, the average annual number of houses in the urban area destroyed or severely damaged by landslides and floods.</p> <p>Journey to work, the average time spent commuting to work, by all means of transportation, in the urban area on a typical workday.</p> <p>Urban property taxation, the percentage of annual municipal revenues collected through property taxation and betterment levies.</p>

Matrix 2: Up-front Subsidies for Mortgage Financing

Inputs	Outputs	Outcomes	Impacts
<p>Investments Benefited households, planned values, measured by: Number of households. Subsidy cost per household. Total subsidy invested. Median price of houses to be purchased. Median price, per constructed m2.</p> <p><u>Institution and Policy Development</u></p> <p>Design of delivery system for subsidy targeting, as measured by:</p> <p>Planned income range, Maximum/minimum/median income beneficiary households.</p> <p>Planned down-market mortgage penetration, ratio of median household income of beneficiaries to median household income of mortgagors with commercial banks in urban area.</p> <p>Design of delivery system for achieving leverage as measured by:</p> <p>Planned total leverage, ratio of median subsidy per household to median total purchase price of houses.</p> <p>Planned down payment leverage, ratio of median payment per household to median subsidy.</p> <p>Planned mortgage leverage, ratio of median mortgage to median subsidy.</p> <p>Design of delivery system for achieving competition as measured by:</p> <p>Planned number of developers supplying houses purchased with subsidies in each urban area.</p> <p>Planned number of banks/financial institutions supplying mortgages to subsidy beneficiaries in each urban area.</p>	<p>Benefited households, actual values, measured by: Number of households. Subsidy cost per household. Total subsidy invested. Median price of houses purchased. Median price, per constructed m2.</p> <p>Implementation of delivery system for subsidy targeting, as measured by:</p> <p>Realized income range, Maximum/minimum/median income beneficiary households.</p> <p>Realized down-market mortgage penetration, ratio of median household income beneficiaries to median household income of mortgagors with commercial banks in urban area.</p> <p>Affordable mortgages, measured by the lowest annual household income that made a beneficiary household eligible for a mortgage loan in the private banking sector.</p> <p>Implementation of delivery system for achieving (nominal) leverage as measured by:</p> <p>Realized total leverage, ratio of median subsidy per household to median total purchase price of houses.</p> <p>Realized down payment leverage, ratio of median payment per household to median subsidy.</p> <p>Realized mortgage leverage, ratio of median mortgage to median subsidy.</p> <p>Actual developer participation, measured by realized number of developers supplying houses purchased with subsidies in each urban area.</p> <p>Realized number of banks/financial institutions supplying mortgages to subsidy beneficiaries in each urban area.</p>	<p>Project Level Measured approximately 24 months after purchase by beneficiary.</p> <p>Assessed value of house, professional valuation of houses purchased with subsidies and also expressed as ratio of valuation to original purchase price deflated by housing price index; assessed value per constructed m2.</p> <p>Sustained targeting, ratio of beneficiaries living in houses purchased with subsidy to beneficiaries originally reported.</p> <p>Economic leverage, realized total leverage, ratio of median subsidy per household to median assessed value.</p> <p>Mortgage spread, change in average number of points between mortgage interest rate offered to buyers and interest on government bond (one or five or ten years, as market permits).</p> <p>Access to adequate housing, as measured by median years between household formation and occupation of house by beneficiaries [better expressed as change from baseline value: median number of years between household formation and occupation of own house with on-site water and sewage services for nonbeneficiary households with income equal to beneficiaries median income].</p> <p>Mortgage Default Rate, ratio of mortgages acquired with subsidy more than 90 days in arrears to mortgage portfolio in same arrears held by private banks.</p> <p>Sector Level: Similar indicators measured at corresponding scale as government programs expand beyond Bank financing.</p>	<p>Realized down market mortgage penetration, ratio of median household income of beneficiaries, to median household income of mortgagors with commercial banks in urban area.</p> <p>Access to adequate housing, as measured by median years between household formation and occupation of house by beneficiaries [best expressed as change from base line value: median number of years between household formation and occupation of own house with on-site water and sewage services for non beneficiary households with income equal to beneficiaries median income].</p> <p>Urban property taxation, the percentage of beneficiaries paying property taxes on houses purchased with program support [best expressed as change from baseline value: percentage of households with incomes equal to median living in own house and paying property taxes].</p> <p>Housing credit portfolio, share of mortgage credit in overall risk assets of financial system [best expressed as change from base line value].</p> <p>Down-market penetration, measured by the ratio of the price of the cheapest new house produced and sold by the private sector in substantial quantities, to the median annual income of urban households.</p> <p>Informality, the share of the total housing stock occupying land without owner having full registered legal title.</p> <p>House improvement, measured by median net additional investment over the price paid for the house.</p> <p>Production leverage effect, change in the ratio of affordable housing units to the total housing units in the relevant market.</p> <p>Government withdrawal from direct housing supply, measured by: Change in government's percentage share of mortgage market. Annual number originations. Value of annual origination.</p>

Matrix 3: Housing Finance (On lending of Bank resources, or, more commonly, on lending of local resources)

Inputs	Outputs	Outcomes	Impacts
<p>Investments Benefited households, planned values, measured by: Number of households. Value of loan per household. Median price of house purchased. Median price per constructed m2.</p> <p>Institution and Policy Development Design of delivery system for program targeting, as measured by:</p> <p>Planned income range, Maximum/minimum/median-income households.</p> <p>Planned down-market mortgage penetration, ratio of median household income of beneficiaries to median household income of mortgages of commercial banks in urban areas.</p> <p>Design of delivery system for mortgage instrument diversification:</p> <p>Planned Ratio: Downpayment / House price. Planned new mortgage instrument characteristics: extended duration, fixed interest loans, nontraditional payment profile, other down payment leverage, ratio of median payment per household to median subsidy.</p> <p>Design of delivery system improvements for ancillary mortgage services: Credit assessment / underwriting procedures. House value appraisal. Foreclosure proceedings. Mortgage registration.</p> <p>Design of delivery system for achieving competition as measured by: Planned number of banks/financial institutions supplying mortgages to subsidy beneficiaries in each urban area.</p> <p>Design of delivery system for developing secondary mortgage market as measured by: Planned number of issues per year. Total volume issues per year.</p>	<p>Benefited households, actual values, measured by: Number of households. Loan per household. Median price of houses purchased. Median price per constructed m2.</p> <p>Implementation of delivery system for program targeting, as measured by:</p> <p>Realized income range, Maximum/ minimum/median-income households.</p> <p>Realized down market mortgage penetration, ratio of median household income of beneficiaries to median household income of mortgages of commercial banks in urban areas.</p> <p>Implementation of delivery system for mortgage instrument diversification:</p> <p>Achieved Ratio: Down payment/house price. Achieved new mortgage instrument characteristics: extended duration, fixed interest loans, nontraditional payment profile, other down payment leverage, ratio of median payment per household to median subsidy.</p> <p>Implementation of delivery system improvements to ancillary mortgage services:</p> <p>Credit assessment/underwriting procedures. House value appraisal. Foreclosure proceedings. Mortgage registration.</p> <p>Implementation of delivery system for achieving competition, as measured by:</p> <p>Realized banks/financial institutions supplying mortgages to subsidy beneficiaries in each urban area</p> <p>Implementation of delivery system for developing secondary mortgage market as measured by: Planned number of issues per year. Total issues per year.</p>	<p>Project Level! Measured approximately 24 months after purchase by beneficiary.</p> <p>Realized down market mortgage penetration, change ratio of target income mortgagors to median household income in urban area.</p> <p>Down market penetration. Mortgage spread, change in average number of points between mortgage interest rate offered to buyers and government bond (one or five or ten years, as market permits)</p> <p>Normal financing: Houses purchased per year with mortgage over the total number of houses purchased per year [best expressed as change from base year].</p> <p>Secondary market activity, the volume of mortgage loans bought with secondary market starter funds financed by the project.</p> <p>Mortgage instrument diversification, change baseline values: Increase in tenor (years to repay mortgage). Increase fixed interest loans. Fall in down payment percentage. Other.</p> <p>Mortgage default rate, total mortgages acquired under program three months in arrears to share of total mortgage portfolio in arrears held by private banks.</p> <p>Foreclosure delay, change in time required to execute foreclosure on defaulted mortgages.</p> <p>Mortgage registration, change in time required to register/view mortgage lien on property.</p> <p>Sector Level! Similar indicators measured at corresponding scale as government program expands beyond Bank operation.</p>	<p>Housing credit portfolio, share of mortgage credit in overall risk assets of financial system [best expressed as change from base line value].</p> <p>Government withdrawal from direct housing supply as measured by:</p> <p>Percentage reduction in annual number of mortgage loans issued by public institutions</p> <p>Percentage reduction in annual number of housing units directly financed by government agencies.</p> <p>Similar indicators to those measuring outcomes</p>

Matrix 4: Residential Land Development			
Inputs	Outputs	Outcomes	Impacts
<p>Investment</p> <p>Individual subsidies planned, measured by: Number of subsidies. Funding amount per subsidy. Total investment.</p> <p>Macro block infrastructure planned, measured by: Number of hectares of serviced land. Total serviced plots produced. Total invested. Planned sales price of plots \$/M2.</p> <p>Institution and Policy Development</p> <p>Design of delivery system for subsidy targeting, as measured by:</p> <p>Planned ratio of median household income of target population to median household income in urban area.</p> <p>Planned percentage of total subsidies delivered to target households.</p> <p>Urban expansion plans, the expected/needed total plans for land use and infrastructure provision for estimated population growth during the next 15 to 20 years.</p> <p>Informal developers inventory, the number of informal developers active in the provision of building sites to low-income households in the urban area.</p> <p>Certification process: the expected number/percentage of informal developers required to be certified annually.</p> <p>Adoption of progressive land subdivision regulations, the expected/planned number of municipalities that have adopted new land subdivision regulations that allow for selling plots in incomplete land subdivisions.</p> <p>Regulatory costs, the current ratio of the total regulatory fees, taxes and transaction costs to the selling price of a median-priced new house in the urban area.</p>	<p>Individual subsidies executed, measured by: Number of subsidies. Funding per subsidy. Total invested. Total percentage reaching target-population.</p> <p>Macro block infrastructure executed, measured by: Number of hectares of serviced land. Total serviced plots produced. Total invested. Percentage purchased by target population.</p> <p>Implementation of delivery systems for subsidy targeting, as measured by:</p> <p>Realized ratio of median household income of target population to median household income in urban area.</p> <p>Realized percentage of total subsidies delivered to target households.</p> <p>Urban expansion plans, total completed plans for land use and infrastructure provision required for estimated population growth during the next 15 to 20 years.</p> <p>Certified informal developers inventory, the number/percentage of informal developers certified and active in the provision of building sites for low-income households in the urban area.</p> <p>Adoption progressive land subdivision regulations, the actual number of municipalities that have adopted new land subdivision regulations that allow for selling plots in incomplete land subdivisions.</p>	<p>Project Level</p> <p>Actual land price, the sales price of plots, value/m2 as purchased by project beneficiaries.</p> <p>Down-market plots, the ratio of the price of the lowest cost legal plot sold in substantial quantities to the median annual urban household income.</p> <p>Plot supply by certified/informal land developers, the total legal plots sold annually by informal land developers certified by the project.</p> <p>Land development investment leverage, the ratio of the total investment in land development financed by the project to the total investment by project beneficiaries.</p> <p>Sector Level</p> <p>Share of residential land in low cost/informal subdivisions, the share of total residential land produced annually in the urban area in informal/ low-cost land subdivisions.</p> <p>Share of land in total house cost, the percentage share of serviced land cost to the total cost of a median-priced house in the urban area.</p> <p>Regulatory costs, the ratio of the total regulatory fees, taxes and transaction costs to the selling price of a median-priced new house in the urban area, after adoption of progressive subdivision regulations.</p> <p>Permits delay, the amount of time (measured in months) currently required to obtain all necessary permits for a medium-size urban land subdivision.</p> <p>Land development multiplier, the average ratio of the land price, fully complemented with urban services, in a median-priced subdivision to the raw land price in the subdivision vicinity.</p>	<p>Annual new lot production, the ratio of total new lots produced annually in the urban area to the annual increase of urban households.</p> <p>Land price escalation, the average annual real increase in land price in the urban area during the past five years.</p> <p>Land price gradient, the rate of decline in average land prices as the distance from the city center increases.</p> <p>Salable land ratio, the average percentage of land in typical urban subdivisions in salable plots.</p> <p>Per capita urban land consumption, the gross amount of built-up urban area consumed per person living in the urban area benefiting from the project.</p> <p>Impact fees, the projected share of public infrastructure investment in urban land expansion to be recovered from impact fees and other property assessments benefiting from these investments.</p> <p>Average plot size, the average plot size (in m2) in residential subdivisions financed by the project.</p> <p>Share of land in total house cost, the percentage share of serviced land cost in the total cost of a median-priced house in the urban area.</p> <p>Assessed value of new houses, a professional valuation of the average value of new houses built on plots financed by the project.</p> <p>New built-up floor area, the net increase in floor area per person in beneficiary households.</p>

Annex

Collecting Data for Measuring Performance Indicators Methods and Indicative Costs

INSTRUMENTS

Information for assigning values to the proposed indicators can be obtained by monitoring each project at these four phases: (i) initial housing sector assessment; (ii) baseline survey; (iii) mid-course evaluation; and (iv) completion evaluation.

Initial Housing Sector Assessment

During the early stages of project identification, once the general outline of the project has been determined and project components have been tentatively selected, the Bank will commission a housing sector assessment as a short-term consultancy. This assessment will focus on tasks including (i) assembling the available data from documents in the country and elsewhere; and (ii) providing initial estimates for the performance indicators that pertain to existing conditions in the sector (impact indicators) and costs and dimensions of the current regulatory and institutional environment (input indicators). These housing sector assessments will be similar to those already carried out by Bank consultants in several countries, yet, given the proposed indicator framework, future assessments will be geared toward collecting the precise data needed to complete one or more matrices associated with the envisioned project components. A typical assessment for a mid-size country would require hiring an international consultant for 40 days and a local consultant for 20 days, with an estimated cost of \$30,000 to \$40,000 including fees, translations, travel, per diem and incidental expenses.

Baseline Survey

The second phase of monitoring will commence once the project has been approved and has started disbursing, and, similar to the third and

fourth phases, will normally be financed with project loan funds. The objectives of the second phase include (i) conducting the baseline community and household surveys that will eventually be used in the project output and outcome evaluation; and (ii) obtaining countrywide data on key aspects of current housing conditions that might be affected by proposed project, typically by appending a special section to the national household survey conducted semi-annually or annually by national statistical institutes. The estimated cost of a baseline survey for a mid-size project in a mid-size country is \$200,000 to \$250,000, yet the cost may vary considerably depending on the size of the country and other pertinent factors.

Mid-Course Evaluation

The third phase will take place once 50 percent of the project funds have been disbursed. The objectives of the third phase include (i) ensuring that all planned project inputs are in place; (ii) making sure that the project is receiving and disbursing funds according to the original plan and schedule; (iii) confirming that all tasks are properly executed and targeted, while remaining within the budget; and (iv) ensuring that the project begins to yield the expected results. The estimated cost of a mid-course evaluation for a mid-size project in a mid-size country may be close to \$150,000 to \$200,000, with a detailed breakdown of the monitoring activities leading to this estimate provided in the following section. Again, mid-course evaluation estimates may vary considerably depending on the size of the country and other pertinent factors.

Completion Evaluation

The fourth phase will be undertaken after all (or almost all) the project funds have been expended. The major objective of this phase is to

measure project outputs, outcomes and initial sector-wide impacts and to evaluate the main lessons learned in project execution that could be useful for future projects. Completion surveys may also involve collecting countrywide data on key aspects of housing conditions that were likely to be affected by the proposed project. The preliminary estimated cost of a completion evaluation for a mid-size project in a mid-size country is \$200,000 to \$250,000, varying considerably depending on the size of the country and other pertinent factors.

The proposed four-phase monitoring scheme will make use of ten monitoring instruments, while providing a comprehensive framework for monitoring IDB-assisted housing projects. The estimated budget for a typical mid-size housing project in a mid-size country is \$600,000 to \$750,000, which does not include two important monitoring activities, such as: (i) in-house monitoring of the project undertaken by the executing agency, and (ii) external auditing of the project based on common and established procedures. These activities will require separate budgets, yet should be coordinated with the four monitoring activities previously mentioned and, when the executing agency takes on the role of overseeing the housing sector, separate budgets should be available for setting up and operating a monitoring system for the housing sector as a whole.

SURVEY INSTRUMENTS FOR MONITORING

Baseline, mid-course and completion monitoring will be based on ten complementary survey instruments designed as modular units usable, with

minor modifications, in different Bank-supported housing projects in different countries. These instruments will be introduced as pilot surveys, and later adjusted and improved, facilitating the introduction of monitoring activities in all the Bank-supported housing projects in coming years; and more importantly, by using similar instruments, it will be possible to compare the performance of various projects in different countries.

Data Generation in the Monitoring Process

Monitoring IDB-supported housing projects cannot rely solely on impressionistic or ‘journalistic’ reporting of successes and failures, and may require a complex mixture of field reports, expert observations, interviews with project participants at all levels, and most importantly through the analysis of rigorously acquired data used to measure *quantitative* indicators in an objective scientific manner. Limited experience with monitoring Bank-supported housing projects strongly suggests that monitoring *cannot* rely solely on existing secondary data, nor on data normally assembled by the executing agency in the course of project implementation, nor on financial project audits, nor on regularly published documents such as national household surveys, the decennial census and construction permit statistics. Effective monitoring of Bank-supported projects necessitates *new* quantitative *and* qualitative data.

Monitoring Instruments and Their Associated Costs

Monitoring Bank-supported housing projects in the baseline, mid-course and completion stages

Ten Monitoring Instruments and the Estimated Direct Costs

Monitoring Instruments	Estimated Direct Cost (\$)
The survey of targeted and control -group households	30,000
The inventory of informal settlements	30,000
The study of urban land consumption	30,000
The intermediaries' survey and reports	20,000
The regulatory audit	10,000
Short-term expert visits	60,000
Participant observation	20,000
Structured interviews with stakeholders	10,000
Land and house appraisal surveys	20,000
Appending a special section to the National Household Survey	40,000

can make use of numerous instruments, including the ten listed in the table above. Specific instruments will need to be chosen for each particular assignment, largely depending on the indicators for which values are being sought and on the assessment of qualitative policy outcomes. The estimated direct costs listed with the instruments in the table do not include expenses for data analysis and the preparation of reports, nor do they include management costs and overhead expenditures for participating consulting firms, which collectively can add 50 to 100 percent to the costs shown in the table.

The Survey of Targeted and Control Group Households

The objectives of the household survey will be (i) to determine the improvement level in housing conditions for project beneficiaries in comparison to a control group that did not benefit from the project; (ii) to determine whether the project was truly targeted at the poorer segments of the population; and (iii) to estimate the overall contribution of the project in economic terms. A typical household survey sample would include approximately 800 to 1,200 households in two populations, those that have benefited from the project and those that have not. The second group will be selected from communities containing and not containing project beneficiaries and will be based on a household questionnaire, which will be taken during baseline, mid-course and completion monitoring. The goal of the baseline survey will be to record the conditions of designated beneficiary households before project implementation (if identifiable) in order to make comparisons with their conditions after implementation.

The Inventory of Informal Settlements

The goal of the informal settlements inventory, conducted only during baseline monitoring of urban upgrading projects, is to compile a complete inventory of informal settlements in the urban area(s) in which upgrading activities are planned. The survey will be based on remote sensing data, most effectively a 30-meter resolution satellite image in combination with air photographs at 1:5,000 scale, which will make it possible to identify the boundaries and count the

number of houses in each informal settlement. Following identification, a map of all the informal settlements will be prepared and surveyors will be sent to obtain the following data from each settlement: the name, population, age, land ownership information, levels of infrastructure services, upgrading and tenure status and community organization. The informal settlements inventory, in combination with the household survey described above, will make it possible to estimate the population and overall conditions in informal settlements and should also be used by the executing agency to classify the settlements as: those that (i) will be improved; (ii) can be improved at a later stage; and (iii) cannot be improved for one reason or another.

The Urban Land Consumption Study

The urban land consumption study is a baseline study to be conducted in projects with a residential land development component. The key objective will be to determine the total and per-capita annual land consumption in the urban area under study; the share of the land consumed by residential development; and the share of residential development supplied by informal land developers, including squatters. This study is essential in assessing residential land needs and determining the parameters of projects that seek to increase the production of legal plots, while impeding the production of illegal and informal plots. It will be conducted using satellite imagery and selected 1:5,000 scale air photographs and will be coupled with interviews of selected intermediaries in the land development business (see following section).

The Intermediaries Survey and Reports

Most Bank-supported housing projects seek to involve intermediaries in the implementation stage. In fact, a key policy reform goal for the housing sector is to transfer the responsibility of direct provision of social housing units, serviced sites and mortgage loans from public housing agencies into the hands of private, banking, civic and informal sector intermediaries. The intermediaries survey, undertaken during baseline monitoring, would aim to identify all possible intermediaries, approach them and then obtain data on their activities, capabilities, interests and op-

eration costs. After the selection process, the intermediaries chosen will be provided with a form containing specific data requests to be submitted regularly to the executing agency, as well as to the consulting firm engaged in project monitoring. The consulting firm will conduct random inspections with a small number of intermediaries to check the consistency and accuracy of their reports.

The Regulatory Audit

The main objective of the regulatory audit will be to monitor the degree to which zoning, land use and subdivision regulations and building codes inhibit the equitable, efficient, and sustainable development of residential land. Another purpose of the audit is to determine the values of numerous indicators in residential land development projects, such as the amount of land removed through zoning restrictions; metropolitan or urban growth boundaries; maximum allowable densities; maximum salable land ratio in new subdivisions; the delays in issuing permits and zoning variances; and the various taxes and fees associated with the process.

Short-Term Expert Visits

Short-term visits of international experts will be an integral part of the monitoring process. These experts will visit projects, communicate with project officials, interview selected stakeholders and then issue assessment reports based on key project features along with an analysis of their comparative performance to similar projects in other countries.

Participant Observation

The objective of the participant observation component will be to discover a more intimate view of the various aspects of the project and will typically require trained participant observers to remain in two or more communities of the project area for a one-month period. The reports of participant observers will focus mainly on the qualitative aspects of the project; on the beneficiaries' responses to the project; and on numerous other elements that cannot be effectively quantified.

Structured Interviews with Stakeholders

Project monitoring staff will interview all project stakeholders, such as project officials, construction personnel, beneficiary households, community leaders and local officials. The key objectives of these interviews are to assess the stakeholders' satisfaction levels with the various parameters of the project and solicit their suggestions for improving overall performance.

Land and House Appraisal Surveys

In order to assess the net benefits of a given project, appraisal surveys will be used to determine the value of plots, as well as the houses of project beneficiaries and nonbeneficiaries. Professional appraisers will estimate the value of a sample of homes in the household survey area. The appraisal survey data together with the data obtained in the household survey will then be used to construct a hedonic house price model. Subsequently, this model will be used to estimate the values of plots and houses of all project beneficiaries and then compare them to home and plot values of nonbeneficiaries, as well as to determine the net increase in housing wealth as the result of the project.

Appending a Special Section to the National Household Survey

Most countries in the region conduct an annual or semi-annual household survey of several thousand households. In a number of countries, it is possible to make an arrangement with the government agency conducting the survey, usually the national statistical institute, to include a special section that will assess countrywide housing aspects that they expect to be influenced by the project. Typically, they would need to be measured in two periods—during the initial baseline survey and the completion survey—to assess the overall project impact on sector-wide dimensions of the housing sector.

MODEL TERMS OF REFERENCE

The model terms of reference (TOR) in this section are intended to provide a prototype for a typical housing project, and in this case, a mid-course evaluation of a Bank-supported home

improvement project. Clearly, each of the five types of housing interventions or projects discussed earlier will require certain variations of this basic model, just as terms of reference for baseline monitoring will vary from a mid-course and completion evaluation of the project. Some of these variations will be discussed at the end of this section.

Outline

Generally, the terms of reference for monitoring assignments will follow the outline given below:

1. Project description;
2. Monitoring objectives;
3. The indicators to be monitored;
4. Monitoring activities;
5. Human resources;
6. Time commitments; and
7. Estimated budget.

Project Description

This section contains a summary of the project design and its progress to date. It can be based on the project document and progress reports from the executing agency.

Monitoring Objectives

The objectives of the monitoring activities will be to provide a *mid-course* evaluation of the project. More specifically, these activities will focus on a comprehensive mid-course evaluation, undertaken by a consulting firm, of the investment program performance and the progress of the institutional reform elements. This evaluation will be carried out between (*here specify the dates for the evaluation*). At the end of the consultancy, a report will be submitted to the executing agency and to the IDB, and then presented in summary at a workshop organized through the executing agency.

The Indicators to be Monitored

Assuming that the IDB and the executing agency jointly prepare and agree upon a complete project indicator matrix as part of project design, this matrix will accompany the terms of reference (*the indicator matrix will be introduced and described here*). The focus of the mid-course evaluation will be illustrated in the first two columns of the matrix, detailing input and output indicators as well as measurable outcomes in a more limited manner.

Monitoring Activities

A comprehensive mid-course evaluation of the project will be based on the data provided by eight components. This data will allow the estimation of all the indicators in the project matrix. As each of the monitoring activities has already been described in more detail in the section above, the following is a summarized list:

1. The Household Survey
2. The Appraisal Survey
3. Hedonic House Price Model
4. Participant Observation
5. The Intermediaries Survey
6. Structured Interviews with Stakeholders
7. Short-Term Expert Visits
8. Housing Sector Reassessment

As part of the mid-course review of the project, the consulting firm will revise and update the housing sector assessment (see above), which will entail updating the data in the original document; interviewing personnel involved in housing policy formulation; obtaining and analyzing documents; and providing a new assessment of the current housing policy and housing sector status.

Human and Financial Resources

It is assumed that the mid-course evaluation will be conducted by an international consulting firm; or alternatively, that the evaluation contract will be open to international bidding.

1. *Personnel:* To ensure a high-quality evaluation, the consulting firm should recruit a senior international housing expert as the principal investigator as well as an urban economist trained in the analysis of housing surveys; in analyzing the data and subsequently formulating a hedonic price model for estimating house value; and in generating the indicator values from the data concerning targeting, housing wealth, and the net economic benefits of the project. The evaluation will also require a study administrator and two or more individuals responsible for participant observation in two communities for a one-month period, as well as for administering a series of structured interviews with project intermediaries and all stakeholders in the program. One of the participant observers, with at least two years of management experience, will act as the local coordinator for the project. In addition, the executing agency will appoint two or three professionals to assist the consultants in collecting internal data and to coordinate their activities with those of the executing agency.
2. *The Household and Appraisal Surveys:* The household survey will be subcontracted to a professional survey firm with experience in urban (or rural) housing surveys, while the appraisal survey will be subcontracted to a professional residential property appraisal firm.
3. *Location of Work:* The work required in this study will be conducted both in the borrowing country and in the home country of the international consulting firm personnel. The consulting firm will send a team of individuals to the borrowing country to spend 30 to 50 person-days during the study.
4. *Preparation and Presentation of Final Report:* The final monitoring report will be

completed and then presented to the executing agency and the IDB in a workshop organized by the executing agency.

Time Commitments

The mid-course evaluation, which will take 4 to 6 months from initiation to the final presentation, will require an estimated 100 to 150 professional person-days by the international staff of the consulting firm. In addition, the evaluation will require 40 to 80 person-days for participant observation and interviewing by local professionals.

Estimated Budget

The estimated budget for all the above-mentioned activities of a typical Bank-supported mid-course evaluation is \$150,000 to \$200,000. This budget should include professional fees, sub-contracts for the household and appraisal surveys, as well as travel, per diem, incidental, contingency and overhead expenses.

Variations on the Model Required by other Project Types

1. *Urban Upgrading Projects:* In addition to the monitoring activities listed above, monitoring upgrading projects will generally require an informal settlement inventory during the baseline stage. If intermediaries are involved, it will also require an intermediaries survey and intermediaries' reports. If the upgrading project is large-scale and is expected to have a significant effect on housing sector performance, appending a special section to the national household survey during baseline and completion monitoring should be considered.
2. *Up-Front Subsidy and Housing Finance Projects:* Up-front subsidy and housing finance projects may include similar elements as shown above for home improvement projects. Again, if the subsidy project is large-scale and expected to have a significant effect on housing sector performance, appending a special section to the national household survey during baseline and completion monitoring should be considered.

3. *Residential Land Development Projects:* Residential land development projects will generally benefit from conducting the urban land consumption study and the regulatory audit during the baseline monitoring stage. Similar to the projects mentioned above, appending a special section to the national household survey during baseline and completion monitoring should be considered if the project and its associated regulatory reforms are expected to have a significant effect on housing sector performance.

**DATA COLLECTION:
CONCLUSIONS AND SUMMARY**

The key to effective indicator-based monitoring of housing projects is the production of accurate and relevant data. The proposed framework presented in this paper relies on a four-phase moni-

toring procedure encompassing the initial housing sector assessment, the baseline survey, the mid-course evaluation and the completion evaluation. Ten effective data collection instruments are proposed: (i) the survey of targeted and control group households; (ii) the informal settlements inventory; (iii) the urban land consumption study; (iv) the intermediaries survey and reports; (v) the regulatory audit; (vi) short-term expert visits; (vii) participant observation; (viii) structured interviews with stakeholders; (ix) land and house appraisal surveys; and (x) appending a special section to the national household survey. In addition, the costs of applying each one of these instruments are estimated. The budget for a four-phase monitoring scheme for a typical mid-size housing project in a mid-size country is estimated at \$600,000 to \$750,000.