



Incremental construction: a strategy to facilitate access to housing

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1. United Nations Economic Commission for Latin America and the Caribbean (ECLAC) (2000), "Urban consensus. Contributions from the regional action plan for settlement in Latin America

ABSTRACT The "enabling" approach to housing markets promotes financing systems based on family savings, public subsidies and mortgage loans to unleash the potential of individuals and communities to produce and improve dwellings. However, the approach failed to benefit lower-income households, as they have less ability to generate savings or make mortgage payments. These households are forced to use informal mechanisms to access housing, such as purchasing land in illegal sub-divisions or squatting on public land and incrementally building their dwellings. The present work argues that supporting the incremental housing construction undertaken by poor households through an enabling approach can make a significant contribution to solving the housing problem in Latin America. The paper discusses the challenges and opportunities in executing this new type of programme, which requires coordinating the resources and capabilities of the beneficiaries with those of the different levels of government and the civil society. While this paper draws on experiences in Latin America and the Caribbean, the proposed approach is also relevant in other settings.

KEYWORDS government programmes / housing policy / incremental house construction / informal housing / Latin America / microcredit / poverty / urban land development

I. FACILITATING ACCESS TO HOUSING MARKETS

Suitable shelter is a basic need. As such, universally, housing is considered a "merit good" – a commodity that is intrinsically desirable or socially valuable. In spite of governments' efforts to provide good quality housing to low-income households, conservative estimates indicate that in the year 2000, more than 17 million households in Latin America and the Caribbean were sharing homes, and 21 million lived in inadequate housing conditions. Currently, three million new houses are needed annually to provide proper shelter for newly formed households.⁽¹⁾ These discouraging statistics are the result of several interrelated factors, one being the historic slow growth of Latin American economies, which has meant that they have been unable to generate sufficient employment opportunities to increase the incomes earned by their populations; this situation has been made worse by a drastically unequal income distribution.⁽²⁾

Poorly developed public housing programmes have also contributed to the poor results in the sector, as demonstrated in countries with relatively high income levels that fail to provide adequate housing conditions

for the poor. There are also urban development factors, such as the increasing cost of land. In addition, the financial systems in the region are poorly developed.⁽³⁾ Today, few households can save sufficient funds to buy new homes and, in most Latin American and Caribbean countries, only a fraction of the population qualifies for the loans needed to purchase homes built by the formal sector. Consequently, most of the poor population lives in self-constructed dwellings, which frequently fail to meet suitable standards even when situated in formal settlements, and often lack access to many public services.

The experience of the last decades confirms that government programmes geared to build and finance finished homes directly for low-income households cannot solve the housing problem as a whole, as they offer a limited number of high-quality homes to few families, leaving most poor households without assistance. Even low-standard and low-cost programmes, such as sites-and-services, which only offer serviced lots and were created to increase the coverage of government-financed programmes, have proven incapable of solving the problems of all families in need. Housing financing institutions sponsored by the government, funded by employment taxes and providing subsidized loans, have been unsustainable.⁽⁴⁾

Many governments, admitting their inability to provide shelter for all needy households through traditional policies and programmes centred on the direct provision of subsidized houses or loans, moved to recognize the importance of mobilizing resources from the private sector for housing (including household savings and sweat equity). The goal is to stimulate private entrepreneurs and civil society organizations to develop programmes to construct and finance houses that are accessible to all segments of the population. Based on the "enabling approach to the markets", governments channel their efforts in order to:

- improve housing market operations (land, materials, the construction industry) and correct market inefficiencies through regulations and effective taxes;
- increase the supply of infrastructure and services; and
- provide subsidies to facilitate access to housing for the most impoverished.⁽⁵⁾

The benefits of fostering the potential of individuals, communities, developers, investors and industrialists to finance, construct, sell and improve homes are considerable.⁽⁶⁾ Nevertheless, the housing production and financing systems based on family savings, subsidies and mortgage loans have failed to benefit lower-income households, as they have less ability to generate savings or make mortgage payments; this situation affects more than 60 per cent of Latin American families.⁽⁷⁾ These households are forced to utilize informal mechanisms to access housing, such as purchasing land in illegal sub-divisions or squatting on public land and incrementally building their dwellings.

This situation leads governments to focus attention on the contribution made to solving the housing problem by the informal construction activities of households (that generally do not comply with building codes and land sub-division regulations). Central and local governments undertake neighbourhood improvement programmes to provide households with land tenure security, basic infrastructure and urban services to

and the Caribbean", Santiago, Chile.

2. De Ferranti, D et al. (2003), "Inequality in Latin America and the Caribbean: breaking with history?" Annual Research Report, World Bank, Washington DC.

3. Rojas, E (2005), "Housing finance in Latin America. Making progress through a bumpy road", Technical Notes, Inter-American Development Bank, Department of Sustainable Development, Washington DC.

4. Inter-American Development Bank (2006), "Sharpening the bank's capacity to support the housing sector in Latin America and the Caribbean", Technical Papers Series (SOC-142), Department of Sustainable Development, Washington DC, February.

5. The United Nations originally proposed this approach in 1989 in the publication: *A Global Shelter Strategy Towards the Year 2000*, United Nations Centre for Human Settlements, Nairobi. This approach was adopted as policy by the World Bank in the early 1990s: *Housing: Enabling Markets to Work*, Housing Policy Paper, Washington DC (1993). Shortly thereafter, the Inter-American Development Bank did likewise: *Operational Guidelines for Housing* (SOC-111), Washington DC (1995).

6. Chile has been successful in reducing its housing problems, using enabling policies since 1976. Also, this type of policy enhances access to private sector financing. In Panama, a country with macroeconomic stability and low interest rates, households earning more than US\$ 250 per month (representing 70 per cent of the total) have access to mortgage loans supplied by private banks.

7. Inter-American Development Bank (2006), "Housing issues and opportunities at the base of the pyramid", in *Opportunities for the Majority*, Washington DC.

8. Brakarz, J, M Greene and E Rojas (2002), *Cities for All. Recent Experiences with Neighbourhood Upgrading Programmes*, Inter-American Development Bank, Washington DC.

informal settlements located mostly on the peripheries of Latin American cities.⁽⁸⁾

In many countries of the region, there has been a significant shift in the conception of existing housing policies and programmes, particularly in “what” is to be delivered by a housing policy. The objective has moved from delivering finished homes to enabling housing markets to allow lower-income households better access to financing for houses produced by the private sector. Also, governments are paying more attention to the informal processes for housing construction, albeit only for solving the deficiencies of urbanization and tenure in informal settlements. Still pending is the incorporation of support for incremental housing construction – the way in which the majority of the population build their homes – into structured housing policies. This is a significant challenge, implying a change in “how” to deliver the products and services provided by public housing policies. Increasing the flow of new housing involves not only facilitating new formal housing construction, but also improving access to incremental solutions. In addition, improving the existing housing stock involves not only enhancing the tenure and sanitary conditions of informal settlements but also addressing the limitations and inefficiencies of the incremental construction and upgrading process taken on by poor households.

This shift also implies overcoming the stigma that has overshadowed incremental housing construction. Many politicians and technicians associate incrementally built housing units with illegal land settlements. This view prevails because these units:

- are often constructed on land that is inadequate for residential use;
- are located within incomplete and unauthorized sub-divisions;
- lack secure land tenure or construction permits; or
- fail to meet the construction standards that ensure the safety and sanitation of the houses.

Although some of these settlements barely meet the legal standards of land sub-division and construction, a significant number of homes built via incremental housing methods are located on legal lots with secure land tenure, and achieve standards that do not diverge much from the norms.

The present work argues that it is imperative to support incremental housing construction by poor households. This objective involves adding to the traditional programmes promoting the construction of new houses (based on household savings, demand-side subsidies and the development of the housing finance markets), to include programmes based on an enabling approach to the markets that promote a more efficient incremental house construction process.

What is required are programmes that are developed to support the gradual process of construction, extension and upgrading of dwellings that is undertaken by many families. These new programmes can take advantage of the potential to mobilize the efforts and savings of poor households, supporting them with goods and services that significantly reduce the time taken up by the incremental building process, while improving the quality of the homes.

These programmes do not aim to deliver complete houses but, rather, to provide households with services that they cannot obtain on their own,

such as access to suitable lots for residential use and technical assistance for the most complex tasks involved in incremental house construction.

Based on an analysis of the key features of the incremental housing process, this paper identifies the most effective means of public support and interventions for achieving the described objectives. The paper then discusses the challenges and opportunities in executing these programmes, which require coordinating the resources and capabilities of the beneficiaries with those of the different levels of government and the civil society. While this paper draws on experiences in Latin America and the Caribbean, many of the themes and approaches it describes are also relevant in other settings.

II. THE PROCESS OF INCREMENTAL HOUSING: A STRATEGY TO ACCESS HOUSING THAT CAN BE IMPROVED

a. The process-based nature of incremental housing

An essential requirement for facilitating the incremental building of homes is to fully incorporate into the design and execution of public programmes its process-based nature. This is a process that lasts for many years and, in many cases, never ends. Many families work on the improvement and extension of their homes throughout an entire family cycle, first to obtain the minimum standards in size and quality, and later to accommodate changes in family structure or to get income from their investment in the house.

Separating the features acquired by the houses in each phase of construction and the actions required to secure them facilitates the analysis of incremental housing. Also, it is important to distinguish between the features of the actual houses and those derived from the neighbourhood in which they are located, since acquiring each of these involves different actors. Figure 1 illustrates a typical incremental housing process; it does not represent a specific case but, rather, a generalization of the sequence of activities in a standard process, as well as expected time frames in which they are implemented and average costs. A notable characteristic of this process is the long wait endured by families in obtaining a house with all the necessary features (an average of 8–10 years). The second characteristic is the small annual investment made in each case, which, along with the slow process of accumulating features or amenities, explains this long waiting period.

From this process perspective, incremental housing can be described as an inverted version of the formal process of building and financing a house. In the formal process, the complete features of the house are available to the owners from the first day of occupancy, financed by the long amortization period of a mortgage loan while the house is in use. In contrast, in the incremental construction process, the house is acquired with only the most basic features and is upgraded later, at a pace based on the financing capacities of the families, through either savings, micro loans or self-help, which implies waiting until the final stage to obtain the completely finished house.

Realistically, if low-income families had access to financing that allowed them to acquire finished homes, the onerous incremental housing process would not be necessary. The income of the households

and the deficiencies of the formal housing production and financing mechanisms, which fail to reach low-income families, force families to adopt this strategy. The slow growth of the income of the majority of the population and the sluggish progress of the reforms in the housing sector perpetuate the need for poor households to resort to the incremental construction system.

This paper argues that the incremental housing process can be enhanced by adequate technical and financial support. Such support is a public policy concern, as it can provide significant benefits for low-income families and the community as a whole, such as improvements in the safety and health of the beneficiary households. Furthermore, as illustrated in Figure 1, families cannot undertake on their own the actions required to obtain some of the basic housing features, as they depend on improvements in the neighbourhood; thus local and national governments must intervene. This adds more complexity to the process as it involves coordinating activities with the communities and families with those in the neighbourhood.

The operational problem lies in determining the most efficient methods of assisting the families in need, including the coordination of essential income redistribution interventions, such as the delivery of subsidies, which can only be financed by the national government, with technical assistance and micro credit, which are mostly local activities. In sum, the execution of activities that support incremental housing construction requires productive cooperation among the local public utility companies, central and local governments, financial institutions, civil society and the beneficiary families.

b. Three phases of the incremental process

It is possible to distinguish three main phases of incremental housing construction: access to land for residential use, the construction of a basic, habitable nucleus, and the incremental improvement of the dwelling. In each of these three phases, there are opportunities for public intervention to create a more efficient and equitable process, each with its own characteristics.

Access to land. The first step in attempting to solve their housing deficiency is for families to obtain access to land suitable for residential use; this land makes it possible for families to construct the dwelling and access services and employment opportunities within the city. The real estate market rarely produces sub-divided and serviced land for low-income families.⁹ Consequently, they must access land through alternative means, such as illegal land occupation, purchases of illegal subdivisions, and government programmes, and they must be prepared to accept different levels of security in land tenure. With increased security, families are more likely to invest in improvements and in upgrading their surrounding neighbourhoods. Nevertheless, in many cases, secure land tenure is not an essential condition and the incremental housing process continues for many years without it, particularly in countries or cities where evictions are uncommon. Figure 2 illustrates the main methods of land access and the most usual processes for securing land tenure.

In the majority of cases, facilitating access to land requires public intervention, of which the most common and costly is the direct provision

9. There are cases in Panama and El Salvador where private developers found a lucrative market niche in low-cost residential land sub-division. See Jacobs, M and W Savedoff (1999), "There is more than one way to get a home. Housing strategies in Panama", Inter-American Development Bank, Research Department Working Papers, Washington DC, accessible at <http://www.iadb.org/res/publications/pubfiles/pubwp-329.pdf>. For the case of El Salvador, see Inter-American Development Bank (2006), *Opportunities for the Majority* (Box 6.1), Washington DC.

ACTORS		PROCESS						ACTIVITIES
Public sector	Private individual	Sub-division	Urbanization	Urban facilities	Housing core	Extension	Improvement	
•	•							Land sub-division
•	•							Opening of access roads
•	•							Construction of community water supply
•	•							Construction of individual wastewater disposal
•	•							Building the core house
•	•							Public acknowledgement of land tenure security
•	•							Installation of public lighting
•	•							Expansion of house built area
•	•							Provision of health services
•	•							In-house water provision
•	•							Provision of schools
•	•							Bathroom construction
•	•							Land registration in the fiscal cadastre
•	•							Construction of drainage systems
•	•							Roof improvements
•	•							Construction of sewerage systems
•	•							Construction of sports facilities
•	•							Floor improvements
•	•							Road paving
•	•							Improvements to walls
•	•							Title registration
•	•							Door and window improvements
•	•							Provision of recreational parks
•	•							Construction of house annexe for rent
•	•							Bath and kitchen improvements

		HOUSE						SUB-DIVISION	N'BOURHOOD	COSTS (in US\$)													
YEARS	FEATURES	Access to the plot	Security of tenure	Land title	Protection from weather	In-house potable water	Sanitary wastewater disposal	Sewerage	Sufficient space	Building quality	Access roads	Community potable water	Drainage	Public lighting	Education services	Health services	Sports facilities	Parks and recreation	House	Sub-division	Neighbourhood	Sub-Total	TOTAL
1		•	•		•		•					•							1,500	2,500		4,000	4,000
2			•						•					•					500	200		700	4,700
3																•			200	100	300	5,000	5,000
4						•									•				1,000	200	100	1,300	6,300
5		•											•						100	100	200	6,500	6,500
6							•			•							•		200	200	600	7,100	7,100
7											•								300		300	7,400	7,400
8			•							•								•	300	100	400	7,800	7,800
9										•									2,000		2,000	9,800	9,800
10										•									1,000		1,000	10,800	10,800

FIGURE 1
The incremental housing construction process

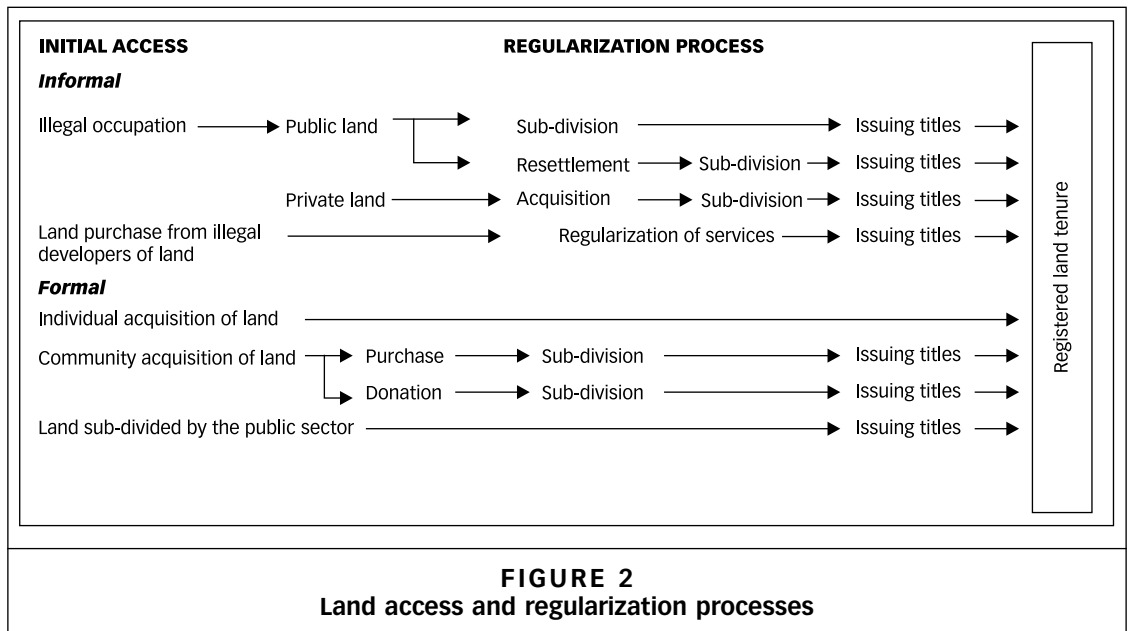


FIGURE 2
Land access and regularization processes

of serviced land by a public agency, usually the local government and, at times, regional or national governments. A less common, yet more sustainable solution is the purchase and sub-division of land by the incremental builders, organized either as cooperatives or groups. In financing the incremental housing construction process, the value of the land represents a significant proportion of the total cost of the home's nucleus, thus access to low-cost land is essential in making the overall process viable. Land pricing is determined mainly by two factors: location and development potential. The first factor is a result of city growth and is primarily influenced by the construction of trunk infrastructure, which increases the supply of serviced land. The second factor is determined by land use and building standards. In general, the lowest-cost land is located on the periphery of cities, in zones lacking infrastructure and positive environmental attributes; this is why private developers (legal or illegal) who supply land to low-income families are responsible for the extensive sub-division of land on the periphery, although some public entities also perform this function. The only circumstances in which the incremental housing process takes place in central locations is when it begins with the illegal occupation of available land, as the beneficiaries do not pay the actual cost of the land.

Government intervention is the only way to stimulate the supply of low-cost land to meet the needs of all poor families and promote the most effective use of available land. One type of intervention involves the extraction of land from real estate developers, an approach that is generally used to obtain land for public facilities and, in some countries, to prevent the expulsion of low-income households from higher-income residential areas. Such an intervention is less effective in countries with a high percentage of low-income households that would require large, unsustainable extractions of land to supply their needs. Still, forcing private real estate companies to provide a fixed number of affordable land plots

as a condition for being granted commercial land sub-division permits is, when used with care, a valuable mechanism for facilitating land access for low-income households. Given that this mechanism is a form of tax on private investments, it is most feasible in areas where land and sub-division taxes are low, which is the case in most Latin American and Caribbean cities. Another promising intervention is a variant of land readjustment, in which the government (generally local) coordinates with land owners in areas programmed for urban expansion by the municipalities supplying infrastructure in these areas, and then sharing in the capital gains by retaining part of the land and designating it for social uses.

Interventions that promote the use of available land for low-income groups are controversial, and their execution requires a high degree of consensus among the involved actors as well as advanced legislation and city-planning institutions to administer the relatively complex actions needed to put them into place. These conditions are rarely met in Latin America and the Caribbean, and thus those responsible for the design and implementation of such policies and programmes must resort to direct public interventions to purchase and sub-divide land. If the given city cannot benefit from the betterment through capital gains taxes or betterment levies to finance these interventions, the public sector ends up paying higher prices for the land, as its value increases along with the public investments that accompany the expansion of the city.

The simplification of land sub-division regulations can be a powerful public sector tool in facilitating the supply of land at affordable prices.⁽¹⁰⁾ Nevertheless, there must be limits to reducing the standards in order to protect the rights of beneficiaries, ensuring they have access to minimum urban services and are protected from unhealthy conditions within the sub-divisions.

Construction of a basic housing nucleus. From a household's point of view, the primary function of a home is to provide protection against the cold, rain, sun and wind, and reaching these standards is the first priority after accessing the land. One of the key causes of the failure of sites-and-services programmes is the fact that many beneficiaries cannot move to serviced lots because of a lack of resources to build a basic shelter. Many households share homes with their extended families and have nothing to transfer to the new site; others, with precarious homes in shared lots, are not satisfied with being moved to peripheral lots that offer little improvement over their existing living situations.

The most efficient approach, the integrated provision of serviced land and a basic housing nucleus, is a challenge for the promoters of programmes supporting incremental housing construction. The integrated solution, although more expensive initially and requiring complex coordination among different actors, allows households to take advantage of the housing solution from the beginning, avoiding the long period of self-help construction of the nucleus, a period in which they do not receive benefits.

Programmes that use public agencies to turn undeveloped land into residential sub-divisions with infrastructure and directly provide the housing nuclei, face problems similar to those besieging the public production of finished houses in the past. Alternatively, incremental housing programmes can stimulate private parties, such as coops or ad hoc community groups, to coordinate the integration of different phases of land and housing nucleus production, supporting such programmes

10. Farvacque, C and P McAuslan (1992), "Reforming urban land policies and institutions in developing countries", UMP5, World Bank, Washington DC, accessible at <http://www.unhabitat.org/programmes/ump/documents/UMP5.pdf>.

through direct subsidies and micro credit for needy households. This approach is more viable in countries with strong community organizations and well-developed social capital.

The problems of coordination and costs can be reduced through the use of technologies that are more attuned to the incremental construction process. The incremental improvement of sanitary systems (such as individual solutions that later connect to communal or general sewage networks) can lower the initial cost of the integrated access to land and the housing nucleus and allow beneficiaries to make a contribution in the improvement phases. Nevertheless, public utilities and sanitary authorities must be supportive to ensure that these solutions run efficiently during the different phases of the incremental construction process. However, the high density of land occupation, which compensates for the high cost of land, limits the options for the incremental provision of these services, forcing the promoter to use more conventional solutions.

Similarly, the materials and technology used in constructing the homes have a significant impact on the viability and costs of the incremental process. The widespread preference of incremental builders for brick or cement masonry blocks is the result of their low cost and the ease of construction using such materials. Nevertheless, local factors determine the selection of materials, and other technologies – such as wood or *quincha* panels – may be appropriate.

Finally, the design of the basic housing nucleus determines its expansion options in terms of size and quality. There are significant differences in the comfort and quality of the finished houses depending on whether the process is handled entirely by the beneficiaries or with some technical assistance. In self-help building programmes, technical assistance is crucial in the initial phase, when the location of the core house defines the overall use options of the lot, and when its design and technical characteristics define its growth potential and the ease of extension and upgrading in later phases. Delivering the technical cooperation required to support the self-builders during these phases requires good communication between the beneficiaries and the support network. This is why these activities are carried out most efficiently at the local level or when assigned to civil society organizations.

Other measures that help the incremental housing construction process include the design and dissemination of pre-approved, rationalized housing prototypes, with plans, technical specifications, lists of materials and instructions for execution. Also helpful is support to beneficiaries in securing the supervision and certification of the houses by the municipalities, which, in many countries, is a necessary condition to registering house ownership. The industrial provision of pre-assembled components such as doors and window frames, water systems for bathrooms and kitchens, and panels with built-in, modular coordinated closets (similar to pre-fabricated kitchen accessories) would reduce the need to use specialized labour, as well as shorten the overall time frame of the process. The private sector lacks the incentive to develop such product designs as they can easily be copied; consequently, public programmes that support incremental housing must finance the research, development and dissemination of these designs to ensure the generalized use of innovative products in the market, and must coordinate with universities and research centres to develop prototypes.

11. MacDonald, J (1987), "Vivienda progresiva", Corporación de Promoción Universitaria, Santiago, Chile.

12. Greene, M, C de la Lastra and L Durán (1990), "El proceso constructivo en lotes con servicios", Corporación de Promoción Universitaria, Santiago, Chile.

Incremental improvement of the houses. Available evidence indicates that immediately after taking possession of a basic house nucleus, beneficiaries expand it using the precarious materials of their previous dwelling or other, generally recycled, materials that are easy to install.⁽¹¹⁾ During this phase, the families expand the house with little consideration for quality, in order to solve the urgent need to lodge all household members. This allows them to make use of the basic nucleus while they accumulate savings, materials, tools and technical skills or skilled labour to begin the improvement phase of the home. During this period, in which the households get limited services from the house, there is a misalignment of interests. While the public sector favours access to sanitation services as the most crucial need, the beneficiaries mostly value maximum protection against the elements (relative to their previous situation of squatting on illegal land that might be overly susceptible to natural risks) and some privacy (relative to their previously overcrowded circumstances).

Unfortunately, there are homes that have never been upgraded from this original state.⁽¹²⁾ There are multiple causes for this, such as a lack of resources for acquiring building materials and manual labour, the advanced stage of the beneficiaries' family cycle, or uncertainty with regards to land tenure. One parent households, especially those led by women, face greater problems in consolidating and expanding the homes than families with two partners involved; therefore incremental housing programmes should develop specific interventions for these families.

The longest phase of the process involves improving the quality of the homes once the nucleus is in place and the initial expansion has been carried out. During this phase, more complex construction operations are needed, often requiring technical skills that self-builders do not have. Some communities coordinate efforts and resources from individual households to hire specialized contractors to complete the most difficult operations, particularly the foundations, roofs and electrical and sanitary systems.

Organized access to construction materials has proved to be an effective method of supporting incremental builders. Options range from the establishment of building materials banks, managed by programme promoters, to agreements with local retailers to monitor the prices and quality of the materials acquired by beneficiaries. The development of the construction materials industry is a vital area of public policy in satisfying the needs of the self-help builders and improving the efficiency of incremental construction. In Latin America, there is a general lack of assembled or semi-assembled components to facilitate this process. Small and medium size semi-artisan companies could develop such components using simple machinery; consequently, such development could also be beneficial in boosting local employment opportunities.

If beneficiaries have building skills or access to qualified labour, at least in the most critical phases, the finished homes are comparable to formal housing in terms of quality. However, most incremental builders have limited abilities, which leads to poor quality of construction, not only in design but also in the use of building materials. The houses often fail to reach adequate levels of light, ventilation and privacy; therefore, sustained technical support is critical during this stage.

Microcredit for home improvement and expansion is a powerful tool to accelerate the incremental construction process and enhance the overall housing quality. This tool can be adapted to different levels of

income and methods of accessing housing, yet it is often expensive and difficult to expand, which explains its limited development in Latin America.⁽¹³⁾ Thus, it is important to encourage intermediary financial institutions to specialize in microcredit, a service that most general and mortgage banks do not offer. Such specialization can be facilitated through two incremental mechanisms: expanding the use of revolving loans with low monthly payments, whose timely service guarantees low-income households access to new, bigger loans; and developing non-mortgage guarantee systems for loans, similar to loans with mutual guarantees from all participants within a community. The use of mutual guarantees by the beneficiaries can be promoted by linking the issuance of public subsidies to their participation in a mutual guarantee system.⁽¹⁴⁾

Other factors that positively influence microcredit operations are:

- the encouragement of a culture of regular savings among beneficiary families;⁽¹⁵⁾
- the geographic and cultural proximity of the loan approval and collection institutions;
- loan modalities adjusted to the type of income of the borrowers;
- the development of trust; and
- the support of socially, culturally and politically favourable environments.

Teaching beneficiary families to save does not necessarily guarantee loan repayments; they also need to feel secure in mobilizing the resources around a clearly identified project.

Several countries use methods based on collective and participatory action, which allows for the implementation of mutual or cooperative credit structures adapted to the particular social and economic conditions and to the incremental strategy of access to housing. The social guarantee, which replaces or is paired with the mortgage guarantee, and which guarantees a repayment schedule, functions better than a classic banking guarantee. Loan administration by institutions that understand the needs of the beneficiaries allows the system to adapt to the modalities of repayments based on income level, and to grant loans based on their specific needs, such as lower payments, simple interest, adjustable duration, flexibility in the repayment period and disbursement of resources according to progress in the construction process.

III. INCREMENTAL CONSTRUCTION IN GOVERNMENT PROGRAMMES

Incorporating into housing policies programmes that support incremental home builders can help cities or countries reach the goal of providing all households with suitable houses. This is facilitated when governments and communities value the ways in which the majority of the population build and improve their homes. They must accept the fact that although the rapid construction of incomplete solutions only provides a portion of the services provided by finished homes, it solves the households' urgent need for minimum shelter.

The main advantage of incremental construction is that it adjusts the home building process to the savings capacity of the household. Mobilizing household savings helps to increase the volume of resources

13. McLeod, R and D Mitlin (1993), "The search for sustainable funding systems for community initiatives", *Environment & Urbanization* Vol 5, No 1, April, pages 26–37.

14. See Stein, A and L Castillo (2005), "Innovative financing for low-income housing improvement: lessons from programmes in Central America", *Environment & Urbanization* Vol 17, No 1, April, pages 47–67.

15. The potential for mobilizing the savings of low-income households to the housing sector is evident in Chile where, between 1989 and 1999, the number of savings accounts for housing jumped from 440,000 to 1.5 million (a 225 per cent increase) and total savings increased 125 per cent from US\$ 315,000 million to US\$ 710,000 million.

coming into the sector and allows families to satisfy their housing needs on their own. However, there is an overwhelming number of households in Latin America and the Caribbean that lack the resources to obtain the land and build the initial nucleus – indispensable conditions for initiating the incremental construction process. However, many governments in the region are willing to subsidize these households to assist them in acquiring a plot of land with a basic housing nucleus. Such subsidies respond to equity concerns and are part of income redistribution policies oriented to mitigate the effects of the unequal distribution of income and wealth. The “merit good” nature of housing, stemming mostly from the improvements in health and productivity observable in households occupying good houses, further justifies this approach.

The need for subsidies, better financed by the central level of government, creates operational complications for programmes supporting incremental housing construction, in particular, the need to coordinate two tiers of government that do not always work in harmony, namely the central government’s ministers for housing and social development, and the municipalities. Furthermore, the goods and services that support the incremental construction process need to be delivered at the community level, often requiring the participation of civil society organizations, thus further complicating the implementation process.

The following topics are worth highlighting with respect to the implementation of national programmes that support incremental housing through an enabling approach to housing policies.

a. Diversifying the housing programmes

To support incremental home builders it is necessary to add new programmes to the existing public housing and urban development programmes and interventions. On the one hand, priority must be given to solving the problems of the existing housing stock; and on the other hand, the capacity of households and communities to find housing solutions on their own must be developed. To take advantage of the double opportunity offered by incremental housing construction, that is expand the number of housing solutions and improve the flow of services provided by the existing housing stock with minimal public investment, it is necessary to intervene in several housing markets and design specific public programmes to directly support incremental builders. Some of these interventions coincide with those required to promote new housing construction by the private sector, while others are specifically geared to support incremental building and improvements.

In Table 1, public support programmes for low-income housing with and without incremental housing components are compared, making evident the increased complexity that this approach adds to housing policies and programmes. The major differences between the two models are the need to promote microcredit for housing, the focus on creating local programmes of technical assistance with sufficient coverage and stability, and a greater concentration on improving the construction materials industry to better satisfy the needs of incremental builders.

The topics relating to the operation of land markets are similar in programmes supporting the construction of new, finished housing and

TABLE 1
Housing programmes with and without incremental housing components

	Traditional programmes for housing sector development	Expanded programmes incorporating incremental housing
Land access	<ul style="list-style-type: none"> • Reform of land use and sub-division regulations • Other measures to promote low-cost residential land sub-divisions 	<ul style="list-style-type: none"> • Reform of land use and sub-division regulations • Other measures to promote low-cost residential land sub-divisions • Promote organizations of the civil society to facilitate access to land by low-income households • Legalize existing settlements
Public support	<ul style="list-style-type: none"> • One-off direct subsidies for low-income households to purchase new or used houses • Settlement upgrading programmes 	<ul style="list-style-type: none"> • One-off direct subsidies for low-income households to purchase new or used houses • Settlement upgrading programmes • Support to incremental housing • Land + basic nucleus + microcredit + technical assistance
Financing	<ul style="list-style-type: none"> • Mortgage financing for new or used finished houses • Mortgage origination • Re-discount facilities • Securitization 	<ul style="list-style-type: none"> • Mortgage financing for new or used finished houses • Mortgage origination • Re-discount facilities • Securitization • Lending for residential land acquisition • Microcredit for housing
Building industry	<ul style="list-style-type: none"> • Improving the efficiency of the building materials industry • Improving the efficiency of the real estate development industry 	<ul style="list-style-type: none"> • Improving the efficiency of the building materials industry • Improving the efficiency of the real estate development industry • Development of new construction materials, tools and pre-assembled components • Improvement of the construction materials distribution channels

in those supporting incremental housing construction. In both cases, the goal is to expand the supply of affordable land for low-income households. This entails crucial public intervention in the markedly imperfect land markets that systematically fail to attain a socially optimal equilibrium. Such interventions should help mitigate the speculative increase of residential land prices and capture part of these socially generated price increases for the public sector to use in financing policies for supporting low-income groups. The implementation of such measures is an urban development concern, highlighting the need to harmonize housing and urban policies.

The reform of land sub-division regulations that encourage incremental construction of urban infrastructure is of particular interest in expanding the supply of residential land for low-income families. Such reform requires coordinated action with the utility companies responsible for the expansion of the networks, many of which are in private hands in Latin America. It also requires acceptance by the sanitary and urban authorities of land sub-divisions that fail to comply fully with existing norms. Finally, enabling the incremental construction of houses requires

additional measures, in particular to facilitate residential land access to organized groups. The necessary enabling measures include:

- organizing the demand, whether through cooperatives or organizations of the civil society;
- offering loans guaranteed by land owned by the community;
- granting group subsidies;
- supporting the execution of basic infrastructure; and
- the sub-division of land into individual lots registered in the name of the beneficiaries.

These measures can be implemented either by local or regional public institutions, or by organizations of the civil society acting as agents of public entities.

b. Technical assistance for incremental home builders

Making certain that incrementally built housing meets minimum standards of safety and quality is not only beneficial to the occupants but also represents a public concern, which justifies the participation of public agents in attaining these objectives. The need to maintain close contact with the community in executing activities in support of the incremental home builders throughout the critical phases of the construction process makes it appropriate for local governments to take responsibility for technical assistance. Although this is seemingly a public duty, these activities are executed more efficiently when delegated to private or specialized civil society organizations under government supervision, by local governments when fully capable, or through a collaboration of local and regional or national governments when necessary.

Methods of providing technical assistance to a beneficiary or specific community vary according to the particular phases of the incremental construction process where they are needed. In the initial phases of self-help construction of the house nucleus, there is considerable need for sustained technical assistance to ensure the adequate construction of the foundations and to coordinate the provision of specialized labour in building the bathrooms and kitchens. In later phases, the technical assistance needs are less intense, and can be provided in a more centralized way by assisting self-help builders in preparing the house expansion plans, the lists of tools and materials, the technical brief for the improvements, the final certification and the registration of the finished home. The responsibility for financing the technical assistance can be shared between the local government and the beneficiaries. This helps regulate the demand: while beneficiaries pay for the consultations they are not discouraged in making them as the substantial government subsidies ensure that the assistance remains affordable.

c. Coordinating multiple actors

The coordination in time and space of such a varied set of inputs, including subsidies, microcredit, building materials and technical assistance, is the main challenge in facilitating the consolidation, extension and improvement phases of the incremental construction process. This challenge must be faced in situ and in direct contact with the beneficiaries. This is

a process that can extend for long periods, or at least until most of the beneficiaries attain a satisfactory level of consolidation of their homes. An analysis of the comparative advantages of the multiple actors involved in the incremental construction process indicates that local governments are better equipped to promote this coordination, whether through a municipal service or delegated agents, such as specialized organizations of the civil society.

The various actors involved in the incremental housing process (Table 2) do not always act in a coordinated manner, despite their complementary interests and capacities. In some cases, as with the lack of interest of the building materials industry in designing and producing materials suitable for incremental house construction, there is a lack of awareness of the magnitude of the demand and its market potential. In other cases, as in the slow and difficult adoption of microcredit by financial institutions, this lack of cooperation is the result of inadequate regulatory environments and the availability of more lucrative or less complex business investment alternatives. An enabling environment for incremental housing construction requires improved coordination of the actors, to take advantage of the synergies that exist among their individual actions and to avoid the duplication of efforts and contradictory interventions.

Some actors take part in several dimensions of the process; municipalities often facilitate access to land for residential use through land use and sub-division regulations, or through municipal land donations and subsidies, as well as providing technical assistance to households in the incremental construction process. Some actors, such as the suppliers of materials, interact directly with incremental builders, whereas others, such as the central governments, have an indirect relationship, for instance by creating a regulatory environment favourable to the expansion of microcredit for housing. Interaction between the actors and the incremental builders varies in its degree of formality, ranging from informal family relations or friendships with those who provide the manual labour when the construction is undertaken with community assistance, to very formal relationships, when purchase/sale agreements for the land lead to the legal registration of their ownership rights.

Optimizing these various relationships creates a complex policy problem. An enabling approach that promotes the active participation of each actor can facilitate the flow of inputs required in the incremental housing process, such as land, microfinancing, building materials, labour and technical assistance. The enabling approach must ensure that all inputs are available as needed and that the synergies that exist among the interventions of all actors are optimized.

IV. FINAL REMARKS

Few central governments in Latin American and Caribbean have incorporated the incremental housing process into public housing programmes. The Incremental Housing Programme (PVP), inaugurated in Chile in 1993 and modified in 2002,⁽¹⁶⁾ and the National Fund for Popular Housing of Mexico, (FONHAPO),⁽¹⁷⁾ are two outstanding examples of national efforts in support of incremental housing. Local governments or organizations of

16. Greene, M (2004), "Incremental housing in Chile 1990–2002", Technical Notes, Inter-American Development Bank, Department of Sustainable Development, Washington DC.

17. For more information, see <http://www.fonhapo.gob.mx>.

TABLE 2
Actors in the incremental building process

Type	Actor	Activities
Individuals	<ul style="list-style-type: none"> Households Family and friends 	<ul style="list-style-type: none"> Use the houses Expand houses through self-help Repay microcredits and loans for land and building materials Assist with labour for the construction process Provide financing
Community	<ul style="list-style-type: none"> Community organizations Civil society organizations 	<ul style="list-style-type: none"> Supply labour for incremental construction through community help Organize the demand for land purchase, building materials and access to microcredit Represent households' interests with government agencies Manage building materials banks Support community organizations Provide technical assistance to incremental builders Manage building materials banks
Private sector	<ul style="list-style-type: none"> Developers Building materials retailers Financial institutions Small construction companies Construction industry 	<ul style="list-style-type: none"> Supply land for residential uses Sell building materials Provide loans for purchasing building materials Lend to households Execute complex operations under individual or community contracts Produce building materials Develop new materials
Universities	<ul style="list-style-type: none"> Universities and research centres 	<ul style="list-style-type: none"> Undertake social, architectural, urban and engineering studies on incremental housing construction
Public sector	<ul style="list-style-type: none"> Municipalities Central government International technical cooperation organizations Multilateral development banks 	<ul style="list-style-type: none"> Provide technical assistance Facilitate the supply of land for residential uses Supervise compliance with land use and building regulations Provide health, education and social services to households Manage sanitation services (directly or through concessions) Define the regulatory framework for the housing and financial sectors Provide financing to municipalities to improve infrastructure and urban services Provide direct subsidies to low-income households Study and disseminate good practices in incremental house building Undertake comparative housing sector studies Provide loans to finance public programmes in support of incremental housing construction Provide technical assistance for the reform and development of the housing sector Provide technical assistance and resources for the development of microcredit for housing

civil society, acting independently or with some official support or international cooperation, sponsor most existing programmes, an indication of the obvious local character of most required interventions. A key challenge is the establishment of efficient channels to transfer financial and technical assistance resources from national governments, which have the financial resources to finance essentially non-reimbursable expenditures, to the local implementors within the communities, who have the knowledge and contacts to efficiently use the resources.

The inclusion of incremental housing programmes as an integral part of national housing policies requires an expanded spectrum of public concerns in housing. Informal incremental processes must be supported along with the formal production processes and be balanced with the need to improve the quality of the existing housing stock. Within this second sphere of public concern, attention must be given to assisting households in upgrading and expanding their homes, as well as to the improvement of informal neighbourhoods as a whole. The focus on expanding the production of new houses and solving the considerable problem of irregular settlements has dominated sector policies and actions, overlooking the importance of the incremental housing process in providing shelter to the vast population in need, as well as in mobilizing the resources of households and communities.

This lack of interest is explained in part by the fact that, from a statistical point of view, those households involved in the incremental construction process have already solved their housing needs, albeit in an incomplete way and by receiving only part of the housing services provided by a complete home. Yet, this does not take into account the problems faced by incremental builders and beneficiaries during the long periods of construction that amount to a fully fledged housing problem. Significant obstacles arise in the evaluation of this problem, as the detailed information needed is not regularly gathered by national or local statistical systems, but can only be obtained through laborious and slow field studies. Still, these obstacles should not prevent a better understanding of this form of housing production.

Increasing attention to incremental housing problems within public housing policies, and the implementation of reforms and public programmes that facilitate incremental construction activities are crucial steps in the modernization of these sector policies. Incremental housing construction is a widespread practice in Latin America and the Caribbean, as households of all income levels expand and improve their homes throughout the family life cycle to adjust them to their changing needs, increase their market value, or accommodate productive or recreational activities. In one form or another, all households are incremental builders; therefore, the lack of support from the public organizations is surprising, considering their capacity to mobilize private resources in order to attain these principally public objectives. The opportunity to improve the quality and efficiency of the incremental housing process with reduced public resources, but leveraging the resources spontaneously mobilized by households and communities, makes this process an urgent public policy concern. Efficient incremental housing programmes can have a significantly positive impact on the quality of life of the population.

The vision of housing policies that facilitate all forms of housing production – from finished houses financed with the beneficiaries' own resources or mortgages to the incremental construction undertaken

by low-income households with precarious construction materials on illegally occupied land – is no utopia but, rather, a necessity for providing all households with adequate shelter – a public objective. Adopting this vision, nevertheless, requires a political consensus on the overall impact that incremental housing has on the well-being of the beneficiary families and the scale of its contribution to the larger housing problem. This agreement will help formulate and finance effective reforms and public programmes, which enable the production of incremental housing construction in a similar way that countries have facilitated new home construction or supported the inhabitants of irregular neighbourhoods to obtain land tenure and improved access to basic infrastructure. Although complex, the inclusion of these reforms and programmes does not go beyond the capacity of the governments of the region; nevertheless, many local governments are weak and incapable of fulfilling their central role in enabling the incremental housing process. The subsidiary support of regional, state or national governments is needed in order to advance the implementation of effective interventions.

The political consensus mentioned above is crucial in executing the urban and financial regulatory reforms required to ensure an efficient, accessible incremental housing process. These reforms intersect with the scope of other social and economic development activities within communities, and affect the interests of many agents, particularly in the urban realm. Developing consensus in these spheres of public policy can be a long and complex, yet indispensable, process. Experience shows that unless reforms are introduced in these spheres of public action, programmes in support of incremental housing will have only partial impact, and will eventually fall short due to the unrelenting increase in land prices and the lack of sufficient credit.

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