



GIZ/Foto: Marco Lemus



Urban Development: Opportunities of Sustainable Investments in Mexico

Introduction

The fast growth of the housing market over the last decade or so has brought in an uneven growth of urban areas, affecting the expanse of cities including its infrastructure development due to an increased demand of utility services such as electricity, water facilities, transportation. In order to tackle some of these pressing needs, the Mexican Government has been promoting urban planning and a sustainable environment for housing as a part of the Sustainable Integral Urban Development (Desarollos Urbanos Integrales Sustentables - DUIS) during the last couple of years.

The National Housing Commission in Mexico (CONAVI – Comision Nacional de la Vivienda) welcomed this program as it complimented the National Housing Program (2007-2012). This program has essentially introduced the concept of sustainable housing with an objective to develop and recreate more efficient houses that will generate energy savings and add to the country's GHG mitigation plan.

This concept of sustainable housing was further expanded through DUIS to include other aspects of the urban life that are important for regional development: location of the housing development and access to schools, hospitals, water and waste management, transport and smart exit systems and other facilities which may contribute and add to urban development. It takes into consideration the following aspects:

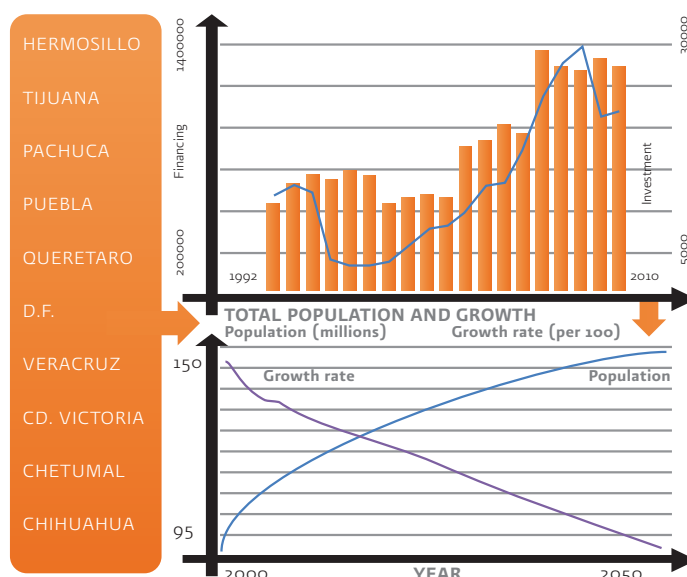
- An efficient and sustainable urban infrastructure;
- The integration of industry and commerce to enable job creation within the region;
- Strategies to facilitate mobility and accessibility;
- The provision of services: education, health, social activities;
- Territorial articulation;
- Environmental protection and rational use of national resources.

The story so far:

To date, there are 5 DUISs certified by GPDUIS (Grupo de Promoción and Evaluación de DUIS). These represent, a) approximately 254,500 houses, b) 1,020,500 beneficiaries, c) 7,470 hectares, and d) an estimated investment of 54,000 million MXN. SHF (Sociedad Hipotecaria Federal) and IDB (Inter American Development Bank) supported the preparation of the Partial Plan for Urban Development, with DUIS criteria, for states. These include, i) ciudad Nah-Uj in the municipalities of Ucu and Mérida, Yucatán (a 3,000 hectare project for 35,000 houses, highlighting respect for the environment and archeological ruins in the zone), and ii) ciudad Vive: 1,000 hectares for 27,000 houses in Tlajomulco, a municipality close to the Metropolis of Guadalajara. Moreover, SHF is working with the Governors of Campeche, Guanajuato, Puebla, Durango, Oaxaca and Aguascalientes to determine where their DUISs will be situated. The housing development sectors that are explored to be addressed under the DUIS program are a) Projects for the use of intra-urban land through the intelligent re-densification of cities, focusing on medium- and small-scale developers, municipal and state governments, and b) Projects to generate serviced land with infrastructure, developers of macro-lots, creating new development hubs under the New Cities and Communities scheme, in which real-estate developers, state and municipal governments can participate.

Overall the DUIS initiative is coordinated by a group of 11 institutions of the federal government: CONAVI, SEDESOL, SEMARNAT, Ministry of Energy, Ministry of Economy, Promexico, SHF, BANOBRAS, FONADIN, INFONAVIT and FOVISSSTE. Frameworks are being developed to seek accountability from, i) State Governors on planning and land-use planning of human settlements, coordinating the private and social sectors, ii) Urban developers, who analyse the suitability of the land for urban use, and iii) Housing developers, who would offer houses with legal security, infrastructure, services, equipment. After a successful pilot phase, the organizational architecture of DUIS is currently under review for the creation of an institutional framework which will enable its continuity.

Expanding Mexican cities with an increasing demand for urban services



The Mexican housing market is observed to be on a continuous and fast paced growth. Figures (1) suggest that by the third decade of this century, there will be ~ 40 million homes in Mexico, and on an average ~0.6 million will be constructed and financed every year. In the next 30 years, 35 percent more houses than those currently existing in Mexico will be constructed suggesting that urban areas will consume nearly 50% of the country's energy resources. Of the nearly 500,000 sustainable houses have been built to date in Mexico has mitigated 1 to 1.5 tons of CO₂e per house. Figure 1 also shows how in the past 30 yrs, Many urban areas in Mexico have spread out many times over a vast territory while their population increase has been much smaller in comparison. There is a mean demographic growth over its initial period studied – "size against the cities" spread in comparison to its original area over the same time frame of two to seven times.

Emission reduction is an inherent outcome of any sustainable development. Given the proposition of new mechanisms under the UNFCCC, Nationally Appropriate Mitigation Action (NAMA) is seen as an opportunity to promote mitigation activities while sustaining and growing the economy. Through the framework of NAMAs, development aid, grants and funds could be channelized for mitigation actions that will boost sustainable development and economic growth.

Issues and barriers:

The \$ billion issue is - can this growth be sustained given the massive need for infrastructure services within the urban region. Given the scale of demand (Figures 1), the three important issues/barriers that need to be addressed are:

- Expanded cities are not fully habitable and sustainable because Urban Services and existing infrastructure are limited and not efficient
- Housing and project developers are spending 20% of their cash to buy land and hence the expanding city regions are not cost competitive, hence financially unattractive
- Closer involvement of local authorities is not seen as there is no structure to encourage public-private partnerships

Apart from these three issues, there are three additional questions that is much linked to the above barriers. They are:

- How can private sector finance be leveraged at least cost to government and the inhabitants?
- How can Urban Development Programs extract the highest performance on the services that matter – the built environment, water, waste, public lighting, public transport, etc.

c) How can the full range of policy goals be integrated into each of the services, to maximise the co-benefits and avoid perverse incentives?

The Tripartite Solution

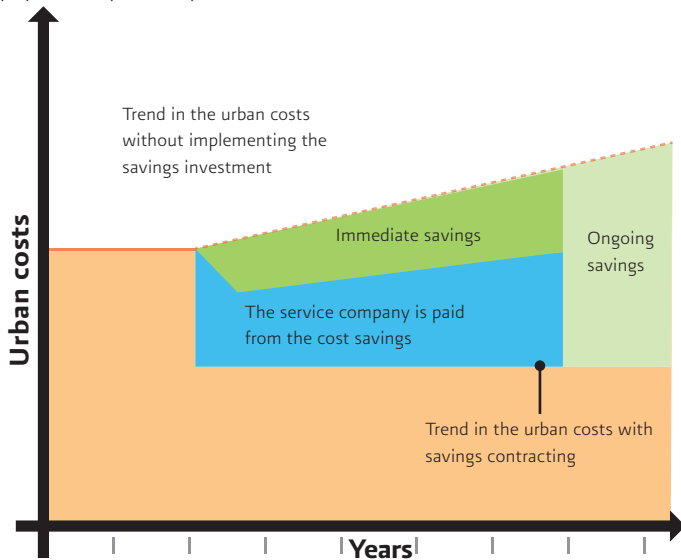
Every growth scenario comes with its own challenges and issues. There is no one silver bullet. Mexican Government envisages a tripartite solution, which could be conceptualised under the broad umbrella of USCO (Urban Service Company). USCO will embed the DUIS program and embrace the most appropriate Urban NAMA for a successful urban development.

What is an USCO? To best explain the concept of Urban Service Company (USCO), we start with the innovative model of Energy Service Companies (ESCOs).

ESCOs are based in performance driven contracts under which the company will provide the installation of energy efficient devices and guarantee energy savings for the consumer. The ESCO pays for the upfront capital cost, overcoming that important barrier. The ESCO itself achieves its return on investment through the monetary savings made by the equipment it has installed, which create savings: part of the savings is used to pay the ESCO and the remainder is kept by the consumer.

For example, a hospital agrees with a service company to upgrade its boilers. They create an ESCO, which pays for and installs the new efficient boilers, and maintains them to ensure their performance. The ESCO is paid from 70% of the saving in the energy bill for ten years, earning its return on investment provided it achieves its performance standard. The remainder of the savings in those ten years, being 30%, and all the savings after then, are kept by the hospital. Thereby, the upfront capital expenditure barrier is overcome; investment comes from the private sector; the ESCO is incentivised to perform as its payment depends on a high level of performance; the hospital benefits from the savings; the environment also benefits from the savings.

USCO expands on this concept to bring in other services, for example: water and waste collection. It also expands it from one building to the whole DUIS. The selected service companies guarantee a high level of performance and they are paid in accordance with delivering on that guarantee. This will ensure that the consumer gets the best service and pays a competitive price.

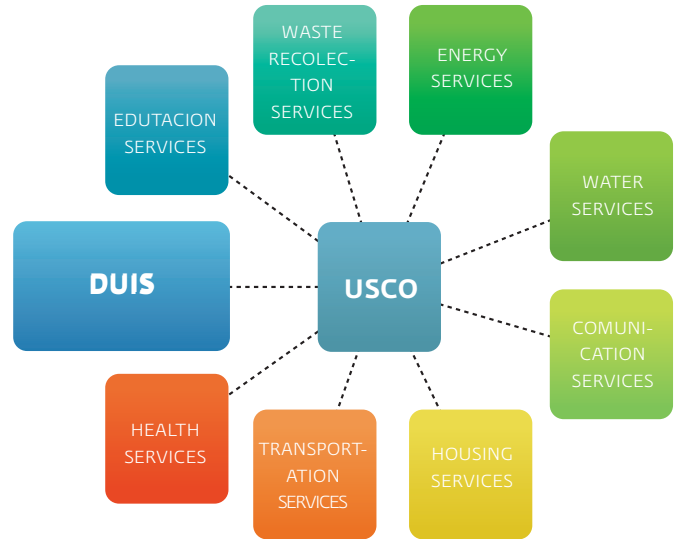


DUIS is characterized as an urban development strategy which integrates different aspects of the urban life. As a multidimensional project, it incorporates the provision of different services which are necessary in urban development: sustainable housing construction services, water services, waste collection, educational services, health services and etc.

To some extent, DUIS can be compared to a procurement hub which subcontracts service companies for the provision of the

services needed. It is the platform on which the different elements of a sustainable regional development strategy come together. The inclusion of performance driven companies could increase efficiency of the services provision and create a healthy competitive environment.

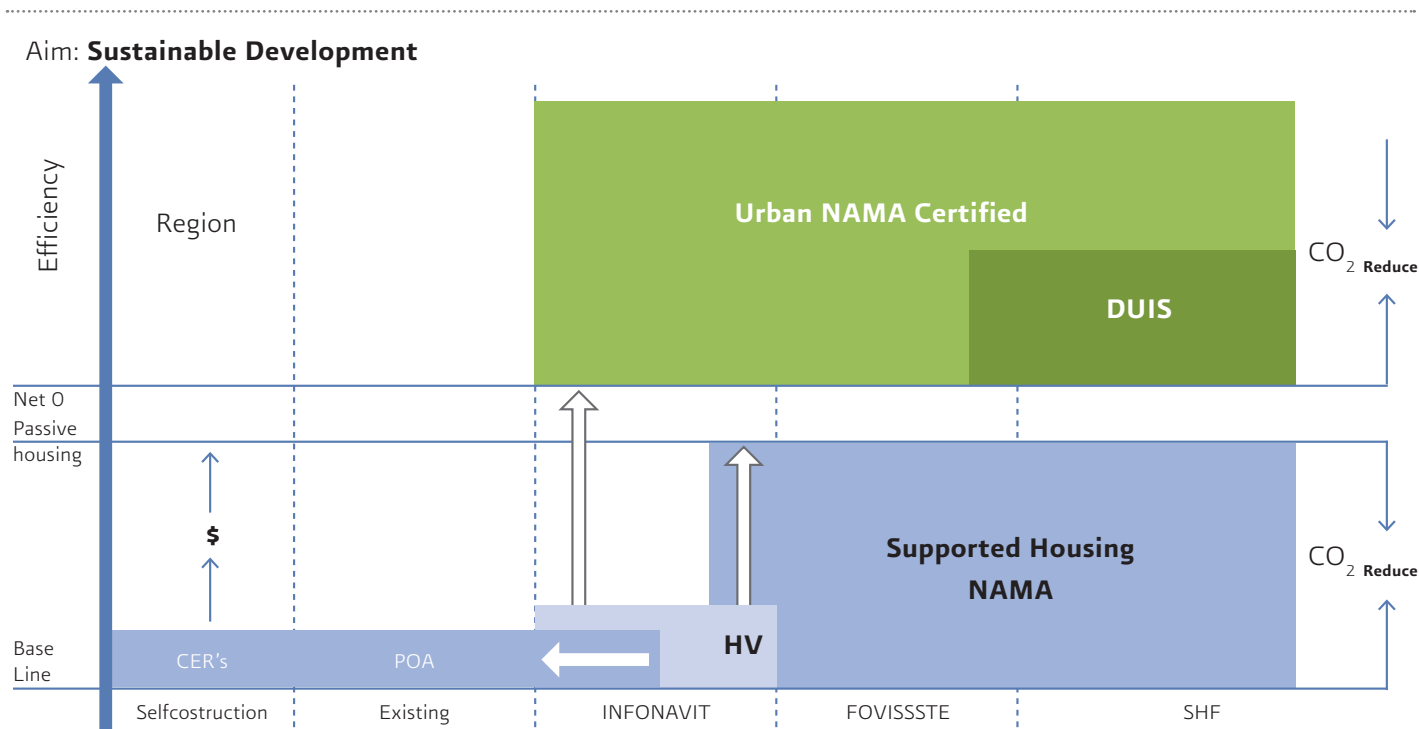
A regional urban development strategy such as DUIS provides the vehicle to integrate several service companies from different sectors: housing service companies, water service companies, waste collection service companies, educational service companies, health services companies, etc. The figure below illustrates the USCO concept:



The different service companies would be managed and report performance through the USCO. The financial resources can also be channelled through the USCO to the service companies based on their performance evaluation. Performance checks would be conducted every month and compared to the guaranteed performance. Payment to the different companies would be allocated according to their performance achievement. This framework provides an economical and sustainable case for the management of the DUIS development. CONAVI has worked with Thomson Reuters Point Carbon to design the concept of an Urban Service Company (USCO) that will create frameworks for leveraging capital through public-private partnerships and club multiple services under one roof. The following section will briefly highlight the USCO concept and how an Urban NAMA could be a stepping stone to promote DUIS program.

Urban NAMAs: What is possible?

Under the NAMA umbrella, there are three different ways in which the international support can take place. This is dependent on the NAMA which will be developed by Mexico. Unilateral NAMAs are mitigation actions taken domestically and implemented unilaterally. Supported NAMAs are actions taken by developing countries supported by finance, technology and capacity building from developed countries. And credited NAMAs are partially or fully financed by the revenue accrued from the sales of carbon offsets generated by the mitigation actions. Unilateral NAMAs don't offer the opportunity of participation from the international community as they are seen as developing countries' sovereign effort to reduce emissions. However, the two other NAMA types (supported and credited NAMAs) represent an opportunity to channel investments to reduce emissions where they are cheaper, in the developing countries. Urban NAMA to enhance and support the DUIS program is envisaged as supported and credited NAMAs (Figure 4)



Advantages of USCO

The USCO concept provides a dynamic platform and powerful financial logic to DUIS, enabling the efficient allocation of government resources, and the leveraging of private sector capital through public-private partnerships (PPPs) in an innovative framework. Through these partnerships, local governments can decentralize the provision of services and at the same time control the performance of different providers.

Selection and management of efficient urban services through USCO supports the development of an Urban NAMA by identifying the most appropriate emission reduction activity across the selected region for urban development. It is also envisaged to support project implementation by creating financing flow and technology transfer through grants, development funds, and emission credits, etc in addition to capacity building.

Furthermore, it enables local governments to integrate policy objectives (such as CO₂ emission reductions) into the contractual arrangements made with the service providers. For example: the waste collection company would have a mandate to recover maximum energy from the municipal solid waste, reducing costs for the USCO and preserving the environment. Excess power could be exported to the local grid to support the DUIS as a whole, and so on. This model provides an effective framework to incentivize environmental and operational best practice by the companies that provide services to the local authority.

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