

Architectural training on housing



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1 Urban Sector Review

1.1 Basic General Data

Geography and Administration

Bolivia is a landlocked country, south of the equator in the Latin American Continent.

Its favorable location has allow the country to have many different ecological regions. The most important ones are: on the west the high plateau, the mountains and valleys of the Andean range on the central part, and the low lands in the east .

For administrative purpose, the country is divided into nine Departments: Beni, Chuquisaca, Cochabamba, La Paz, Oruro, Pando, Potosi, Santa Cruz y Tarija. Each department has its elected governor. The departments are subdivided in provinces and municipal sections, in total there are 112 provinces and 327 municipalities.

Every five years the president, the vice-president and the parliament representatives are elected, together with the governors of the nine provinces.

Overall education attendance is higher in urban areas than in rural areas; the literacy had increased in the last years to 86% . Child mortality reached 60 per

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1000 new born. Life expectancy during the last decades has risen from 61 to 64 years.

Bolivia, like many other developing countries has experienced a rapid population growth. At the moment, the annual population growth rate is 2.74%, with 3.62% in the urban areas and 1.42% in the rural areas. The 1991 population census resulted the population of the country as being 7.5 million, and it is projected at around 9.9 by 2008, with 62.4% living in urban areas and 37.6% in rural areas. According to the last census (2001) poor inhabitants are 58.6%.

According to the same source the country has four main cities (with more than 500.000 inhabitants): La Paz, El Alto, Cochabamba y Santa Cruz, located along an axis in the central part of the country.

Due to its geographical characteristics Bolivia has a broad range of natural resources: minerals, flora fauna and beautiful landscapes.

The country's economy heavily depends on raw natural materials exports, specially gas and minerals (sink, silver, manganese, gold). Agrarian activities are small but currently they are growing fast due to soya exports mainly to the USA.

1.2 Urban Facts and Figures

Because of its geographical characteristics Bolivia has many different natural environments which on turn have influenced the settlements and housing features. Unlikely what usually happens in the Third World, in Bolivia informal settlements are not generated through vacant land invasions but mostly by the illegal subdivision of land promoted by the owners themselves, as a way to avoid legal and administrative procedures and to evade some responsibilities such as the basic services installation and taxes payments or to develop land not suitable for settlements. This procedure has helped to avoid the formation of slum areas, because the settlements develop in orderly way living enough space for streets and some facilities.

At the same time, many residents lack of legal security of land property which leads people not to invest on their houses improvement because of eviction fear.

Other general feature of housing condition in Bolivia is the lack of services and social facilities, due to the sites' topographic conditions or due to settlements' low densities in the surrounding areas of the cities.

As it has been said some settlements are located on disaster prone areas (floods or landslides mainly), this besides the climate changes during the last years have become an important factor at the loss of housing stock .

According to official data, the main housing problems are related to the quality of houses. Because it is common that inhabitants of different Bolivian regions have good knowledge about traditional building methods and there are still building resources available, only few people is homeless or squatters (spontaneous or "mobile" housing accounts for less than 0.19%). But, on the other hand houses lack of space, number of rooms is not enough to adequately house all the member of the households leading to acute overcrowding. Besides one of the major housing deficiencies is the difficult access to basic services: in the urban territories only 88.6% of the dwellings have access to electricity, 86.5% are connected to water network and only 48.4 % have access to sewer system. Environmental problems are also severe, since only 67.7% of dwellings have access to waste collection system, 32.3% just throws the waste either to empty land, to river or streams, or burns the waste. The situation in the rural areas is much severe.

Compared with other big cities Bolivian cities are relatively small. For instance, the population of the metropolitan region of La Paz and El Alto city (two of the biggest cities of Bolivia) is only 13%.

Even though 67% of the households own their houses many of them do not have documents that guarantee their legal rights.

1.3 Policy

Throughout a fast review of housing policies it can be realized that since the first antecedents in the 1920s, there have been many changes in the policies. At the same there have not been serious analysis about the outcomes of the different policies. In the light of the current housing shortage it is possible to state that most of the policies had not had relevant achievements; a part of the problems could be there has not been analysis or systematic information collection

A quick review about national government's housing policies and projects during the last decades may be summarized as follows:

1974 – 1987

- In 1974 the Bank for Housing was created. It had 51% of State shares and the 49% was private shares. Its objectives were: to finance national programs of housing, urban development and basic sanitation, to incentive the construction industry, the use of new construction technologies. The Bank gave credits with interest rates of 13.5%.
- Until 1987 the bank gave a total amount of US\$ 26.483.000. There is no data about the number of houses built.
- The Bank went bankrupt and was closed in 1987

1987 – 1992

- In 1987 the National Fund for Housing (FONVI) was created, to replace the Housing Councils and the Bank for Housing.
- Aim: elaborate national and regional housing plans and elaborate housing projects for the workers from private and public sectors that contribute to the FONVI
- Until 1992 the annual average of houses financed by FONVI was 1618 and the average cost of each house was USD 7.092

1992 - 1996

- 1992 the Social Housing National Fund FONVIS was created. Due to the administrative inefficiency of the institutions in charge of housing and the economic crisis, the debts were difficult to recover and these problems passed to the new institution.
- Until 1996 11.108 housing units were built, without fulfilling the need of housing estimated in 500.000 units approximately.
- 1997 the national government defined the closing of FONVIS.

1997

- Housing policies went by a major change.
- The aim was not anymore the construction of new houses, but to improve the conditions of existing housing stock.

2006 -

- In July 12 , the Supreme Decree 28794 was issued creating the National Program for Social and Solidarity Housing PVSS as part of the National Policy for Social Housing. The PVSS has two type of actions: on one hand, the so called Qualitative programs related to the improvement of existing housing stock and involved in three sub-programs: Healthy housing (to improve housing to eliminate Chagas diseases; Social and Productive Housing (to enhance housing a for productive activities, and the Improvement and enlargement of houses to less the overcrowding effects. On the other hand the quantitative program has beet set. I is meant to reduce housing deficit for low income population, through credits and allowances for the construction of new houses.

This conditions may have lead to laws, policies and regulations to be part of the problems because their standing points could have been an ideal vision of cities, applying policies and developing projects more suitable for other cities of the world.

The inhabitants' contribution at the solution of housing situation has been considered in only few experiences since housing policies are still being top – down applied.

1.4 Actors and their Roles

Until 1995 in Bolivia only public universities were allowed to exist. Each of the nine provinces had a public university, but only 3 had the career of architecture. From 1995 on a new education law was issued and many private universities were opened. Currently in La Paz province it is possible to find at least 6 private universities teaching architecture.

In Bolivia there is no one University teaching Urban Planning.

2 Organization

UMSA is one of the main public Bolivian universities and the only one of La Paz city; it was founded in 1830. Together with the newly created Universidad Publica de El Alto, are the two public universities of La Paz Province, were it is located.

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UMSA's objective is to prepare human resources that support the province and country's development. Being a public university it is founded by the National Treasure and it has an autonomous regime.

In 1989 UMSA had 33.236 students in 13 faculties. In 2004 this number increase to 70.411, with a growth rate of 112% during the last 16 years.

The FAUA has been created about 75 years ago as part of the UMSA. Currently it has two Departments: one of Architecture and the other of Arts. Currently FAUA is working at the creation of three new Departments: Urban Planning, Design and Music.

The Department of Architecture currently has about 150 professors and more than 3000 students in five year studies. Among the latest changes at the Faculty is the graduation mode change, besides the traditional graduating projects students are able to graduate through thesis and working practice at small municipal governments all over Bolivia.

The Universidad Mayor de San Andrés is part of the Public Universities System composed by 9 universities in Bolivia, one in each Department or Province.

3 Urban Problem

Unlikely what is frequently in the Third World, in Bolivia informal settlements are not generated through vacant land invasions but mostly by the illegal subdivision of land promoted by the owners themselves, as a way to avoid legal and administrative procedures and to evade some responsibilities such as the installation of basic services and taxes payments or to develop land not suitable for settlements. This procedure has helped to avoid the formation of slum areas, because the settlements develop in orderly way living enough space for streets and some facilities.

At the same time, many residents lack of legal security of land property which leads household not to invest on their houses improvement because of the eviction fear, or because they do not have document to get loans.

Other feature of the general housing condition in Bolivia is the lack of services and social facilities, due to the sites' topographic conditions or due to settlements' low densities in the surrounding areas of the cities.

As it has been said some settlements are located on disaster prone areas (floods or landslides mainly), this besides the climate changes during the last years have become an important factor at the loss of housing stock .

Also, laws and regulations may be part of the problems because their standing points are ideal vision of cities, settlements and housing more suitable for cities of the developed world. Housing standards in some cities are inexistent and in others they are too high that lead to a big number of houses built illegally. In the same way, housing standard cover only the use of the plots (i.e. the ratio of the covered space and the construction area) ignoring aspects such as the quality and safety of buildings).

The inhabitants' contribution at the solution of housing situation has been considered in only few experiences, the housing policies and projects are still being applied up – bottom, even though as result of community participation the use of financial resources had been optimized.

Correspondingly to professionals from different countries who deal and decide about Housing, Bolivian architects involved in Housing issues mainly learn about these by working. Taking on account that there is a continuous change of professionals and technicians of the public sector it is difficult that a project of policy can be implemented since housing projects hardly can be completed in a period of 5 years (before a new governments is installed)

Even though the Universidad Mayor de San Andres is a public university, new and future architects are not trained to adequately respond to the current social conditions of Bolivia, specially social housing.

Both professors and students find more appealing to work at non social projects or projects where they feel they have more freedom to be “creative” which means to design glamorous architectonic objects.

Although there is a great need of work to do in relation to urban problems and the evident need of most of the population, as it happens in many other architectural schools it is common that professors and students very seldom devote attention to urban problems and social housing issues.

Paradoxically, the type of work that recently graduated students will find is not related to this type of training.

On the other hand, an example of the UMSA's Department of Architecture latest effort to support both students and lecturers to be involved in research as part of the academic activities. Also other graduation methods are encouraged; usually the only one manner to graduate was through the graduating project by which a bigger "academic" (unrealistic) project was developed; realizing the necessity to match academic work with technical needs of small municipalities the FAUA's authorities have been supporting the graduation of students after completing a one year technical service in small (mainly rural) municipalities.

These changes show the willingness of FAUA's authorities to built an institution that serves better to the country.

Weak training in urban issues may little contribute to solve the situation of urban population. Among the problems than can be brought about it is possible to name the following ones:

- To ignore the need of multidisciplinary approach since urban planning should have a holistic approach due to the many issues involved in the city problems.
- To repeat mistakes by ignoring previous failed policies and projects.
- To ignore that wrongly designed policies, law and regulations may be part of the problems, not considering that some of them stand on idealistic vision of the cities.
- To ignore the need of taking into consideration vulnerability and disasters as an important factor in urban planning
- To disregard community participation as one of the main aspect in design, leading to top down approach in planning
- Not to take advantage of research as a way to contribute to better understand the urban problems and to propose possible solutions
- To ignore new issues, concepts and ideas to support the solution of urban problems such as "symbiotic design"¹ or "urban agriculture"²
- Overlooking aspects such as the needs of different people according to the

¹ Symbiotic cities are those that promote holistic and sustainable urban development, through technological potential to save natural resources

² An strategy for local economical development, poverty alleviation, and social inclusion for low income families living in and around the city, for enhancing food security and income generation among others.

gender and generation differences and needs of disabled persons.

4 Proposal for Change and Improvement

Thinking about the competences required from architects, it becomes crucial architects are trained to see urban problems in the light of the need of interdisciplinary approach.

Urban problems are complex by nature. They embrace physical issues as much as intangible ones; thus architects should be capable to understand and undertake the nature of the urban problems.

Good urban proposals would be those that consider a holistic approach to the urban problems.

Since long before the poorest areas of the cities have been the most vulnerable ones. Now, more than ever deprived urban areas are more threatened by the increasing consequences of climate changes. An important part of understanding and designing human settlements (specially urban ones) is this factor. As it is the need to consider social participation at the designing process; for already many decades it has been realized the need of bottom up approaches for delineating policies and projects.

Among other aspects to consider at design, financial resources for project implementation are important.

Academic activities engaged in real problems should be the base of training activities. Real problems means to work for instance:

- with the inhabitants (specially the poor ones that are the majority)
- thinking of cultural and social specificity of the people
- taking on account the costs and financial needs to built a project
- been aware of the need of sustainable development and environmental issues when designing
- having in mind the close link between architecture and urban planning.
- thinking of issues such as transport and mobility and urban waste management systems
- with sensitivity to the needs according gender and generation differences.

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- realizing the role of politics
- being conscious about the importance of urban and architectural heritage
- anticipating and planning for potential hazards

The problems that most of the Bolivian population requires that the students know about the contemporary world architecture, but understanding that the execution and proposal of such type of projects are product of specific conditions of development: technological, economical, among others.

It is necessary to change the concept of creativity: from believing creativity is based on freedom to design (without any constraint) to thinking about creativity as a challenge to create good responses to urban problems and housing need among others.

It is also necessary that professors and students realize the real needs of most of the Bolivian population

As result of these it would be possible that the FAUA prepares architects who are:

- concerned with urban issues situation
- interested in searching for solutions to improve the current situation of the poor urban inhabitant living conditions
- willing to work together with communities

5 Personal Action Plan

As professor it is important to be aware that some task may need not only my participation but that a bigger part of the Faculty became involved

Short term personal activities - 2009:

- To inform and discuss the contents of training and lessons with the Faculty's authorities. They are interested at improving the Faculty's quality and are open to contributions in this duty.
- To Develop the interest of students, professors and Faculty's authorities in urban and housing issues. Currently Bolivia is undergoing into structural changes such it is the amendment of the country's Constitution; the Department as an academic institution should be involved is discussing about the changes needed to be done in the urban and housing field. Although, it is important to be

aware that professors and students find more appealing to be involved in other type of task and projects. Thus it is important to find a way to call their attention to the above mentioned issues.

- To prepare sessions to present to the Department of architecture (professors and students) about the main topics talked at the WUF4. Although it be difficult and complex to undertake this duty due to the to the broad range of issues discussed during the WUF 4 and the course, it is going to be necessary to select and sets according to priority certain topics, mainly those that are more important (i.e. sustainable development).
- identify the professors and students interested and/or currently working at social urban and housing issues.
- To keep in touch with colleagues from the course and also with those who we met at the WUF 4 that may contribute to impel the Urban Planning Career
- To review and adjust the contents of the course I teach in order to integrate the issues learned at the WUF course and that are appropriated for my country.
- Find out what changes may be done to the Department of Architecture's curriculum
- To analyze the issues talked about during the WUF and the course, to include the most relevant ones to the proposal for the content for the new Urban Planning Career.
- To identify the urban or rural areas where to work academic projects but that permit to work with people, taking on account real problems and real conditions.
- To look for support for the creation of specialized courses related to sustainable urban planning and housing, that in the long term would lead to the Career of Architecture or to postgraduate courses.
- To establish linkages with public or private bodies searching for opportunities for stages for students, so they can practice dealing with real needs and problems.

Long term activities (2009 – 2014)

- To continue stimulating research on housing and urban topics.

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- To search for financial support for UMSA´s academic staff to follow up in a way to keep updated with the relevant proposals and agreement of the coming WUF activities.
- To encourage students to participate en international events (specially contests) related to social housing and sustainable urban issues.
- To look for academic networks where the Department of Architecture may participate and may find support to improve its research capacity and its involvement with urban issues.
- To set a process of monitoring the inclusion of urban planning and housing issues through post graduate courses or through the new urban planning career.

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In short:

UMSA: Universidad Mayor de San Andres

FAUA: Facultad de Arquitectura, Urbanismo y Artes (Faculty of Architecture, Urban Planning and Arts)