Guidelines for Community Planners

Architectural directions to improve community life in urban areas of the Philippines.

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1. Introduction

In the spring of 2010, the Urban Shelter studio from Lunds Tekniska Högskola headed to the Philippines for a four-week study trip focusing on urban shelter and low to middle-income areas[1]. During this trip, the students visited several neighbourhood and communities in order to collect data and analyse their complex reality. The observation made during these visits allowed them to discover the positive and negative points of those communities, and to define basic shaping elements and development factors of a community.

In a country like the Philippines where social conditions are very extreme – 32.9% of the people is below the poverty line[2] – , it is important to have strong communities where inhabitants can provide themselves support. The first goal of this paper is thus to analyse the observations made during the study trip, in order to facilitate the creation and organisation of future or existing communities. This would allow improvements in living conditions and social advancement, and thus reduce distances between social classes, while staying in contact with the rest of the population.

But this task is very wide and in order to succeed, architects and urban planner cannot work on their own; they need coordination with other institutions, like education, social assistance, law enforcement, etc. Thus, it must be clear that the second part will only focus on architectural and urban planning matters – trying to create guidelines that could enhance the community elements analysed earlier – supposing that they would be associated to other institutions' and professions' measures.

The development of this paper will thus first define important elements of a strong community, based on observations and data collected during the study trip introduced earlier. Then, it will present some architectural and urban solutions that could facilitate the development of these elements, illustrated by architectural examples and references.

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1   Architecture in Extreme Environments, Urban Shelter – 2010. Housing Development & Management (HDM), Lund University. Course coordinator: Johnny Åstrand. http://www.hdm.lth.se

2   Source: CIA World Factbook, 2006, https://www.cia.gov/library/publications/the-world-factbook/geos/rp.html

2. Definition of Community

"Traditionally, a community has been defined as a group of interacting people living in a common location. The word is often used to refer to a group that is organized around common values and is attributed with social cohesion within a shared geographical location, generally in social units larger than a household" (Wikipedia, 2010). According to the observations made in the Philippines, these "common values" can be interpreted as the social organisation of the community, and the "geographical location" as its physical organisation, or interaction frame. Then, still according to local observations, two secondary factor of community development are security and comfort. Those elements will be developed in the following points.

2.1. Social organization

The social organization is the way people intact in the community. The most developed it is, the strongest the community becomes. So first, community activities are the root of social interaction; field studies in the Philippines showed that all neighbourhoods with a strong community spirit actually had common activities. For example, democratic councils and meetings in St-Hannibal Christian Community in Pasay City (Sylvia, 2010), local associations in Barangay Damayang Lagi in Quezon City, or gardening activities in Barangay Holy Spirit, Quezon City. All these activities gathered people around common interests, which is the first level of a community.

But this must be supported by shared responsibilities, to include everybody in the community life at the same level, as much in the decision-making process, like in St-Hannibal Christian Community, as in the maintenance issue, which is one of the biggest problem in neighbourhoods in the Philippines. As people were not responsible for common areas, they only took care of their own units. Public spaces became then unusable and buildings more and more deteriorated, which reduced the possibilities of social exchanges. The few visited neighbourhood that had a good maintenance, like the Royal Palm residences from DMCI homes in Taguig City, Philippines, but also in occidental examples like Holma[3] in Malmö,

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3 Holma is a 1970's neighbourhood in Malmö, Sweden, build through the "Million Program". Since the beginning of its renewal, all work was done in cooperation with the residents. Spreading the responsibility and tasks to the residents laid the basis for a positive process of social change. (source: HDM, LTH)

Sweden, had a financial participatory system, coupled to a reward system; the rent includes a part dedicated to cleaning, maintenance and reparation; if it doesn't need to be used, investments in the community assets can be made. The financial participation can also be replaced by actual participation in these processes, as in Holma.

Then, the employment issue is very important in a community, to insure income to its inhabitants, but also to increase social interaction. A local economic system, with small businesses – featuring full-time jobs as craftsmanship, convenience stores, food catering, etc. – will allow people to meet and share their knowledge, while generating income in the community. This example of a bakery in the Habitat for Humanity neighbourhood in Baseco, Manila, situated on the ground floor of a two-storey unit, showed that its owners' main social exchanges with the rest of their community members were through this commercial activity (Naty, 2010). On the other hand, communities without any commercial activity, like the previously introduced Royal Palm residences, are totally empty during working hours, and social interaction only becomes possible when people are back home.

Another part of the employment issue is the access to more important jobs, which can't take place inside the community. Members of communities situated far from the city centre, like Southville 3 or Kasiglahan Village II in Metro Manila, declared being either spending the whole week at their work place (Helen, 2010), or needed their own vehicle in order to be able to spend time at home (Miranda, 2010), the commuting system being too complicated and slow. This proves the importance of a good accessibility to the rest of the city, through involvement or improvements of public transportation.

2.2. Interaction setting

As it was said in the previous point, maintenance of public spaces and facilities is very important for social exchanges, because the physical environment of a community and its quality influence the way people are going to interact. Thus, this point introduces elements or concepts from the built environment that are influential in the development of a community.

First, the basic elements of social exchanges are community spaces, where most of the community life takes place. They are mainly outdoor as observed in the Philippines, but might also be indoor, depending on the climate. This is the place where every part of the community

can spend time and share experiences with the other members, like in St-Hannibal Christian Community's central courtyard, where all kinds of activities take place, from kids playing under surveillance of adults, to community meetings (Sylvia, 2010). Community spaces are thus the root of social interaction and must be accessible for everyone.

They also need to be placed in dedicated spaces to be fully efficient, opposed to the organization of row-houses communities where the only public space is the street, as observed in Kasiglahan Village II. This mixture between street and public spaces brings up two problems: the issue of security for its users, and the absence – or remoteness in the example of Kasiglahan Village II – of official public spaces where the whole community can gather. In the case of a row house neighbourhood, most people only interact with their direct neighbours (Helen, 2010), and not with the entire community.

But some public open space will not be enough for the entire community life. It was said earlier that the improvement of the quality of a community will need support from different organisation or institutions, and also that some community activities – like sports, artistic activities, etc. – will take place in the neighbourhood. In that case, a community needs its own specific facilities, in order to keep proximity with those activities, and once again, allow access to everyone. Most communities visited in the Philippines had their own (covered) sports field, which was easily transformed into a meeting hall or an emergency shelter as observed in Smokey Mountain Housing Development, Manila, but also had a building dedicated to management offices, conferences rooms, or religious matters. Public open spaces are important for social interaction, but these specific activities or support are also necessary to a community, thus those community facilities become a central point in its organization.

The last points had a common factor: proximity. It appears that a key element of communities is its physical density, which is confirmed by the International Institute for Environment and Development (IIED) and the United Nations Population Fund (UNFPA) when they affirm that "historically, urban success has been rooted in high densities: the concentration of many people in small areas. Bringing people and their economic activities into close proximity with each other can be economically and even socially liberating." (IIED and UNFPA, 2010) Thus, high density must be part of the physical organization of a community in order for it to be effective.

Finally, observations in the Philippines showed the importance of diversity in the community; diversity of age, size of the family, income, professional activity, etc. are key elements of the development of the community, as each category of household brings different contributions to the community. In the setting of a community, diversity can be observed through two models: either the possibility of extension, or the opportunity of choosing different sizes of units. Extension will allow people to modify their unit as their needs evolve, like building a porch to gain space (Guevarra, 2010), but it isn't available in every kind of neighbourhood. Those that don't allow it offer different sizes of units in order to meet any need of its population. For example, two-storey units are used to combine housing and commercial activity in Habitat for Humanity Baseco (Naty, 2010), or bigger units are available for higher income or bigger families in Royal Palm residences. Once again, all those points are advantages in the development of a community, thus it should be as diversified as possible.

2.3. Security and comfort

The welfare of a community and the use of its facilities depends of two factors: security and comfort (mostly regarding to the climate). Without any special attention to these elements, a community's social organization and interaction setting might be partly or totally inefficient, as showed in the following paragraphs.

First, the security issue is very important; in several neighbourhood, people are complaining about unsafe conditions, in several fields of danger. One complain was about the lack of visual contact between the housing units and the community spaces (Guillermo, 2010); it was thus impossible to keep a look at the children and to control who was in the area. This was also linked to the presence of unknown people in the community spaces, which was creating an insecure atmosphere in the neighbourhood (Guillermo, 2010).

The living environment can also be a source of dangers; as mentioned earlier, the absence of defined public spaces brings people on the street, and another complain was concerning the presence of vehicles where children are playing (Miranda, 2010). Then, bad sanitary conditions are also a danger for communities; unhealthy, polluted environment is a factor for sanitary problems, as observed in Barangay Damayang Lagi. And as the risk of natural disaster has increased in the last decades (UN-Habitat 2007:17), it has become a serious threat,

mostly in highly-exposed countries like the Philippines. Thus a protection plan must definitely be part of the development of a community.

Then, the climatic comfort issue must be considered while planning and building the community facilities, mostly in the common outdoor spaces. Several examples showed public places not used as planned or even not used at all, as they weren't adapted to the local climate, mostly lacking solar protection during the warm season, but also against rain in the humid season. For example, a playground in Gawad Kalinga Baseco seemed totally unused (see fig. 1), as it didn't feature any solar or heat protection, or inhabitants were complaining about the lack of shade in their community spaces (Helen, 2010).

Fig. 1: unused playground in Gawad Kalinga Baseco. Credits: Matthieu Delacrétaz

3. Guidelines for Architects and Urban Planners

In the previous chapter, important elements of a strong community have been defined according to observations in the Philippines. This chapter will introduce architectural and urban solutions that could facilitate the development of these elements, through architectural examples.

3.1. Urban planning

The first scale of the development is the urban planning; depending on the size of the area which will welcome the community, it can be divided in smaller blocs, in order to create

smaller communities inside a big neighbourhood. In that urbanism perspective, the work of Charles Correa is particularly interesting. "Charles Correa [born in 1930 in India] is an Indian architect, planner and activist. He studied architecture at the University of Michigan and at Massachusetts Institute of Technology after which he established a private practice in Bombay in 1958. His work in India is an adaptation of Modernism to a non-western culture. [...] His land-use planning and community projects continually try to go beyond typical solutions to third world problems." (Wikipedia, 2010)

Most of his projects feature a bloc organisation, with courtyards as central semi-private spaces, surrounded by a distribution system organised into a specific hierarchy. Some of them also includes a central town centre for community organisation and activities. Thus, this layout creates safe community spaces within a high-density area. For example in the Titan Township project (Correa, 1992) (see fig. 2) in Bangalore, India, "the basic planning unit is the back-garden […]. This not only provides special amenities and security to the families who live there, but gives a special identity to the neighbourhood." (Correa, 2000) Or the Previ Housing project (Correa, 1969), in Lima, Peru, which features two different public spaces, linked to each unit: the community spine (or space), and the access road (see fig. 3-4), both separated by buildings to insure security and quietness in the community space.

But this example doesn't specially include commercial activities or specific social interaction places. In that direction, another example of contemporary urban planning can be introduced: in the city of Malmö, Sweden, the old industrial area of Norra Sorgenfri is under study in order to upgrade it into "a plan for mixed urban development with elements of low-impact businesses." (Malmö City Planning Office, 2007) There, "the interaction between [...] private and public spaces is very important to the planning of this area. […] Places accessible to the public shall face the street while within the blocs, residents shall be able to find peace and a more familiar as well as private atmosphere." (Malmö City Planning Office, 2007) In a more specific way, in Norra Sorgenfri, one of the success factors for the area's development is making its ground floor public (Malmö City Planning Office, 2008), in other word extending the public spaces into the buildings by including commercial or public activities on the building's ground floor (see fig. 5).
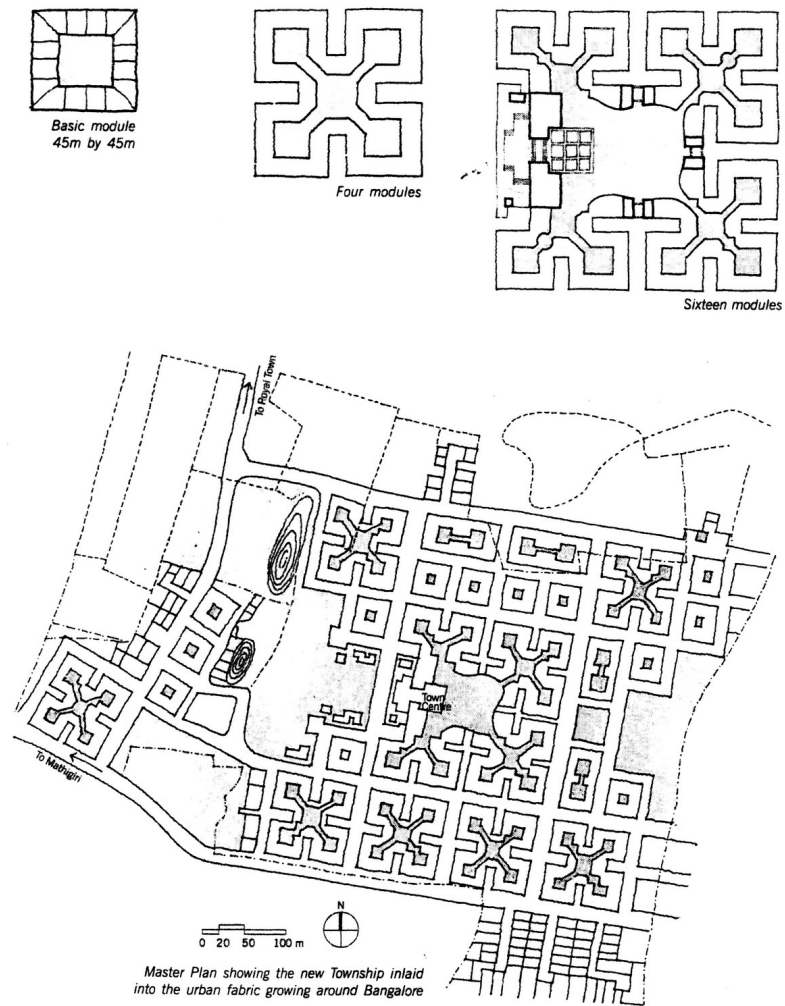
Basic module
45m by 45m

Four modules

Sixteen modules

Master Plan showing the new Township inlaid
into the urban fabric growing around Bangalore

Fig. 2: Master plan of the Titan Township project, featuring division in blocs,
central courtyards, town centre. (Correa, 2000:53)

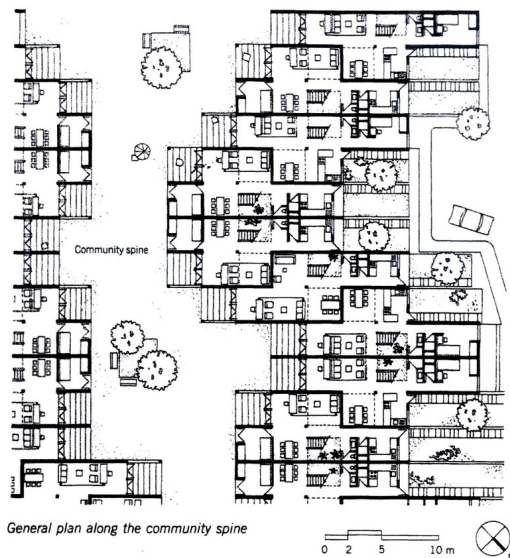General plan along the community spine

Fig. 3: plan of the central community spine in
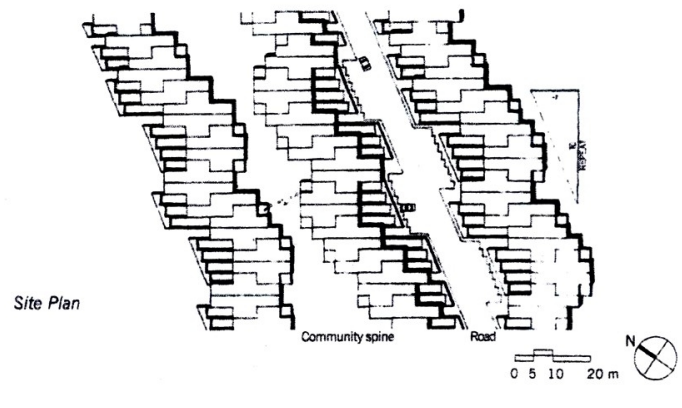Previ Housing project (Correa 2000:26).

Site Plan

Fig. 4: relations between access road, houses and com-
munity space in Previ Housing project (Correa 2000:28).

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Fig.5: a semi-public and unique square within one of Norra Sorgenfri's blocs. (Malmö City Planning Office, 2007:14)

3.2. Climate comfort

As seen earlier, the climate comfort must be well considered in order to have an adapted use of buildings and public outdoor spaces. In the Philippines' warm and humid climate, the main issues are ventilation, sun protection, and also storm-water management, to avoid flooding during the rainy season. In a study about design guidelines on the use of natural lighting and natural ventilation in housing in Sri Lanka – which climate is similar to the Philippines' – architect Samantha Kaushali Ramadasa from State Engineering Corporation of Sri Lanka presents solutions to improve ventilation and solar protection in urban and housing plan level. There are some results of her studies:

In an urban scale:

- Reducing space between buildings causes shadow and dark places within the buildings. In new subdivisions, the spacing of buildings should be carefully considered to avoid obstruction of the wind.

- Use of vegetation: trees produce shade, filter the sunlight, reduce air temperature and reduce glare from bright overcast skies.

- Use of shading devices: in city planning, care to be taken to protect pedestrian walkways from sun and rain to create more pleasant climatic condition for the urban pedestrian. The easiest way is to provide buildings with overhanging roofs, or colonnades in which the ground floor is set back from the edge of the road, with the upper stories jutting out supported by pillars. Such details inevitably important to reduce the thermal load on pedestrians.

In a housing scale:

- Orientation of spaces considering sun path and wind direction: orienting the long axis of the house to east-west but considering the wind direction. The north south walls open to sun can be shaded by eaves.

- Plan: non-deep plans to be designed to gain equal lighting and ventilation to every part of the house. It is difficult to distribute fresh air to all portions of a very wide building using natural ventilation. The maximum width that one could expect to ventilate naturally is estimated as 33 ft (10 m). Consequently, buildings that rely on natural ventilation often have an articulated floor plan. Also by placing windows opposite to each other cross-ventilation could be facilitated.

- Open-plan designs with minimum walls and high ceilings, to maximise air movement and encourage heat evacuation.

- Placing of spaces towards to the periphery of the house for easy gain of natural lighting.

- Ventilation of the roof space: high roof angle with double height spaces will facilitate evacuation of hot air inside. A ridge vent is an opening at the highest point in the roof that offers a good outlet for hot air and wind-induced ventilation. This opening should be free of obstructions to allow air to freely flow out of the building.

- Use of vernacular courtyard concept to gain natural lighting and ventilation inside. The use of overhangs like verandahs, canopies and eaves will shade the walls and windows.

(Ramadasa, 2009)

3.3. Building organization

Correa's projects previously introduced were all low-rise projects. It is one of the solutions to community organization, as are middle and high rise designs. This choice actually depends on several factors, like the targeted density, the size of the available area or technical issues. The following extract of an article from Lora Nicolaou, director of urban strategies at DEGW, in response to UK government's Sustainable Communities Plan[4], shows that low-rise high-density are not the only solution for community developments.

> More flexible high-rise options could meet a number of the objectives of the Sustainable Communities Plan. Space released at ground-floor level would allow for more generous outdoor activities and services, soft landscaping, more privacy across buildings, or just more "space".
>
> Taller buildings can also create outdoor space at upper levels for community use or, more importantly, private spaces that would encourage new forms of family housing. At the same time, space between buildings and the separation between the ground and upper floors can reduce conflict between various uses — residential, work, leisure and retail.
>
> Finally, higher buildings bring economic advantages, that, combined with additional city infrastructure, can support affordable housing, better services, and frameworks for long-term management and maintenance. (Nicolaou, 2005)

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4   The [UK] Deputy Prime Minister launched the Communities Plan (Sustainable Communities: Building for the future) on 5 February 2003. The Plan set out a long-term programme of action for delivering sustainable communities in both urban and rural areas. It aims to tackle housing supply issues in the South East [of the UK], low demand in other parts of the country, and the quality of our public spaces. (source: http://www.communities.gov.uk/communities/sustainablecommunities/sustainablecommunities/, 05.05.2010)

This shows that high-rise buildings can be a solution in community development, but also introduces the concept of flexible buildings, that can be extended to any kind of building type. Flexibility – through its structure, unit sizes, etc. – allows diversity in the building, which is a factor of community development, as seen in the previous chapter.

Regardless to the type of buildings in the community, their relation to public spaces is also an important factor of social interaction, security and comfort. Distribution systems represent the link between public and private spaces, thus must be well-situated in the building. In Correa's Low-Income Housing project (Correa, 1992) (see fig. 6) in Kuala Lumpur, Malaysia, "front doors and stair cases come directly off community [plazas], thus reinforcing the social interaction of the families living there." (Correa, 2000) In a more general way, the distribution system should be the central piece of a continuous and linear path between public and private space.
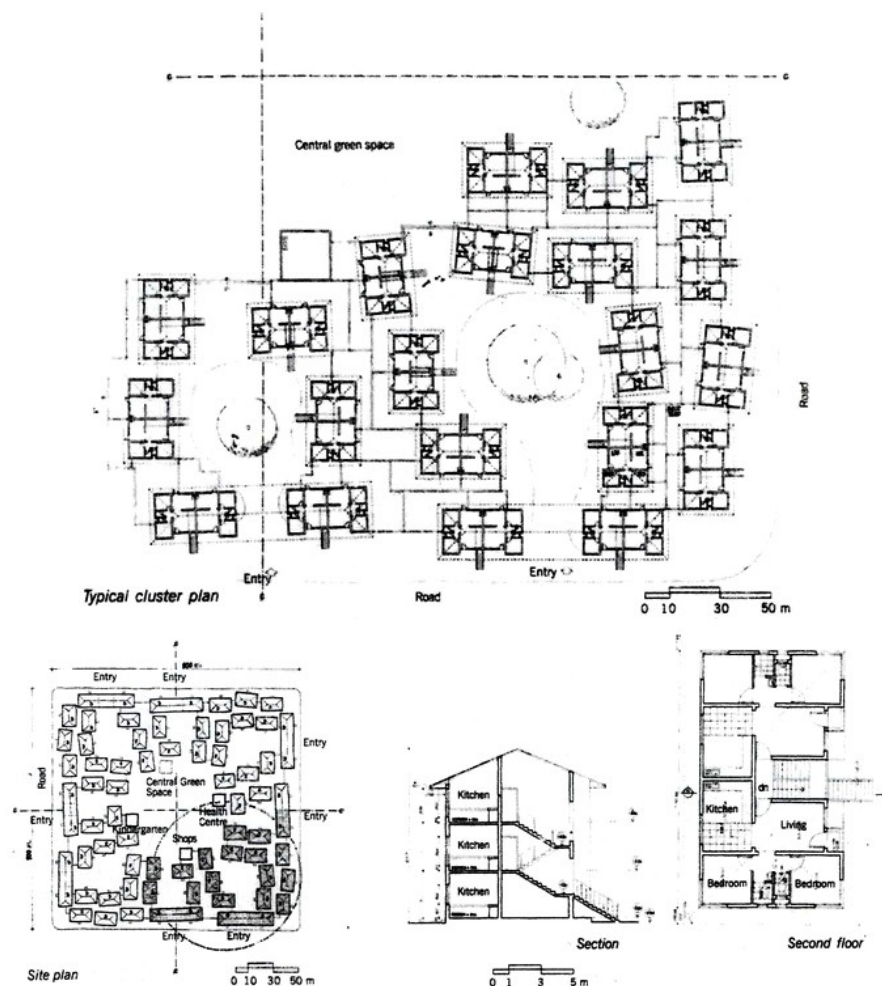

Fig. 6: plans and section showing the orientation of the distribution systems in Correa's
Low-Income Housing project in Kuala Lumpur, Malaysia. (Correa, 2000:67)

Finally, a last point of building planning that can improve the quality of community life is garden roofs. High density and convenient area of public spaces are difficult to combine, thus it might be interesting to add public spaces in usually unused spaces, like rooftops. This allows diversity in community spaces, but also widens the range of privacy levels; a garden on the roof of a building could be reserved to its residents, for example.

According to Riaz Hasan, accessories product manager for Firestone Building Products, a global roofing company, "Rooftop gardens provide building owners with additional usable square footage. This is especially important when space is limited in cities. Multi-tiered buildings with vegetative roofing offer occupants and viewers aesthetic beauty in an urban environment." (Hazan, 2009)

There are three varieties of garden roofs: intensive, semi-intensive and extensive systems. We will focus on the intensive solution, which basically can become as furnished as a real park. "Intensive systems can require 10 inches [25 cm] or more of soil and growth medium. These systems are usually directly applied over the entire roof deck and consist of many layers: root barriers, water retention liners, complex irrigation systems, soil, fabric and vegetation. These systems can accommodate full gardens with trees, shrubs and other voluminous plants, and require irrigation and the ability to hold a large reservoir." (Hazan, 2009)

But providing additional usable areas is not the only quality of garden roofs; "Some important green benefits of garden roof systems are energy savings, reducing noise filtration, filtering storm-water run-off and bettering the surrounding environment. Garden roofs act as insulation to help lower building temperatures in the warmer months by providing natural shade, and they increase heat retention in the colder months." (Hazan, 2009)

3.4. Security

As mentioned earlier, a community can't work in an unsafe environment. It concerns mainly natural disaster and criminal issues. In order to secure an area or a building from natural disasters, "there is much to learn from vernacular building design and practices." (UN-Habitat, 2007:208) For example, "reports from earthquakes in the Himalayas […] have shown vernacular housing to be the most resistant to earthquake damage." (UN-Habitat, 2007:208)

Then, it is also possible to reduce the criminal criminal risk trough a specific urban planning. The Bradford Unitary Development Plan, started in October 2005, was designed to ensure a safe and secure environment and reduce the opportunities for crime through the design process. Developers were thus expected to think about the following issues:

- natural surveillance of public and semi-private spaces, especially in relation to entrances to developments, paths, play spaces, open spaces and car parks;
- defensible space, which should be created with the clear definition, differentiation and robust separation of public, private and semi-private space so that all spaces are clearly defined and adequately protected in terms of use and ownership;
- lighting of the development and, in particular, of streets and paths;
- landscaping and planting, especially to avoid the creation of hiding places and dark or secluded areas.
  (Kitchen, 2007)

4. Conclusion

After studying low and middle-income communities in the Philippines, it was possible to gather all their positive elements in order to draw up the theoretical profile of a community that will be able to prosper in today's society. A few of these factors have urban and architectural basis, thus researching in existing or planned urban projects allowed the setting of guidelines that would make the build environment the most community-friendly as possible.

But as said in the introduction, architectural solution are not enough to improve the quality of life in a community. Its members also need training, education and motivation to be efficiently part of it. Rules must also be set, respected and enforced by the whole community to keep an equal situation for everyone. Finally, in a poor country like the Philippines, policies must be decided at the government level in order to favour these low or middle-income people, to allow social advancement and reduce distances between social classes.

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