



# Press Release

September 2015

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Team: MIHOUSE  
Multi Intelligent House Using Solar Energy  
Universidad de San Buenaventura Cali  
Universidad Autónoma de Occidente



## SUSTAINABLE HOUSES FOR SUSTAINABLE PEOPLE – SOCIAL AWARENESS

**MIHOUSE** is the sustainable housing solution to deteriorated neighborhoods existing in numerous tropical cities around the world. **MIHOUSE** departs from a housing unit designed for a family, which can be replicated in a large scale neighborhood project in order to be inhabited by a community. This urban-architectural project is provided with innovative technology, infrastructure facilities, economic viability and the conditions to develop the social capital of its inhabitants. These characteristics make **MIHOUSE** the perfect setting for a sustainable society.

If we take a look to the main issues that deteriorate our planet’s natural resources and ecosystems, we can list: the exponential annual population growth, poor urban planning, an imbalance in the distribution of wealth, lack of education, malnutrition, pollution and waste, inefficient buildings, a human ecological footprint that exceeds the carrying capacity of the earth, among others.

*MIHOUSE has taken into consideration all these characteristics in order to respond to the increasing need of an economic and social development, allied with initiatives to diminish environmental impact, especially in growing cities in tropical countries. In this way, the MIHOUSE project proposes the renovation and densification of old deteriorated neighborhoods instead of using new land areas in the urban limits to respond to the growing urban population.*



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It is to highlight that the specific urban area where **MIHOUSE** is proposed, corresponds to a socioeconomic strata level 2, which means that the household income averages 2.3 monthly minimum wages (around \$1'439.855 Colombian pesos -COP- or \$454 USD). According to the “Estudio Plan Estratégico de Vivienda para la ciudad de Cali”, done by Camacol and the “Empresa Municipal de Renovación Urbana EMRU”, around 6.731 households in this strata and with this income level have the possibility to buy a house up to 60 million COP or \$18.915 USD. However, the city is not able to offer enough houses to supply this demand.



As for the social characteristics, the figures show that 37.3% of household heads in stratum 2 is devoted to the informal self-employment, while 31.7% are construction workers / employees, 14.5% are retired, 11.2% is engaged in household chores, while the remaining percentage are employers, unemployed and students. Likewise, only 41.9% reached high school and 5.6% reaches technical studies. Based on these reasons, **MIHOUSE** is presented as the proposal that helps to counteract the housing shortage and that makes available favorable social and economic solutions that come together to provide potential buyers with more sustainable ways of life. Therefore, we can say that **MIHOUSE** is a sustainable house for sustainable people due to the following facts:

- Each house is architectonically designed to be flexible, which means that the family that inhabits it will be able to modify it according to its cultural background without investing a lot of money. It also means that the internal spaces are resilient to changes in time, weather if the family inhabiting it is composed by a single couple or a couple with children or living with the extended family. This flexibility allows the habitat appropriation and having more dynamic personal and productive relations thanks to internal and external spaces that relate productive aspects (in orchards and productive gardens in scale), with spaces of permanence and with terraces for socializing. This is complemented by the bioclimatic conditions of the house, which provides ventilation and a climatic comfort that is related to a more energy efficient house.
- The constructed space will have communal areas destined to educational purposes in order to increase people’s knowledge on topics that will promote self-employment. In these areas, courses about recycling, the generation of organic products and byproducts, how to make the maintenance of gardens, orchards and the infrastructure, how to start a home business, among others, are meant to be offered. This will help shape the neighborhood, which is an inescapable part of our culture, and will potentiate the concept of community and cooperation. These activities will also be beneficial to unemployed people, for those who couldn’t access educational programs and for those how are retired.



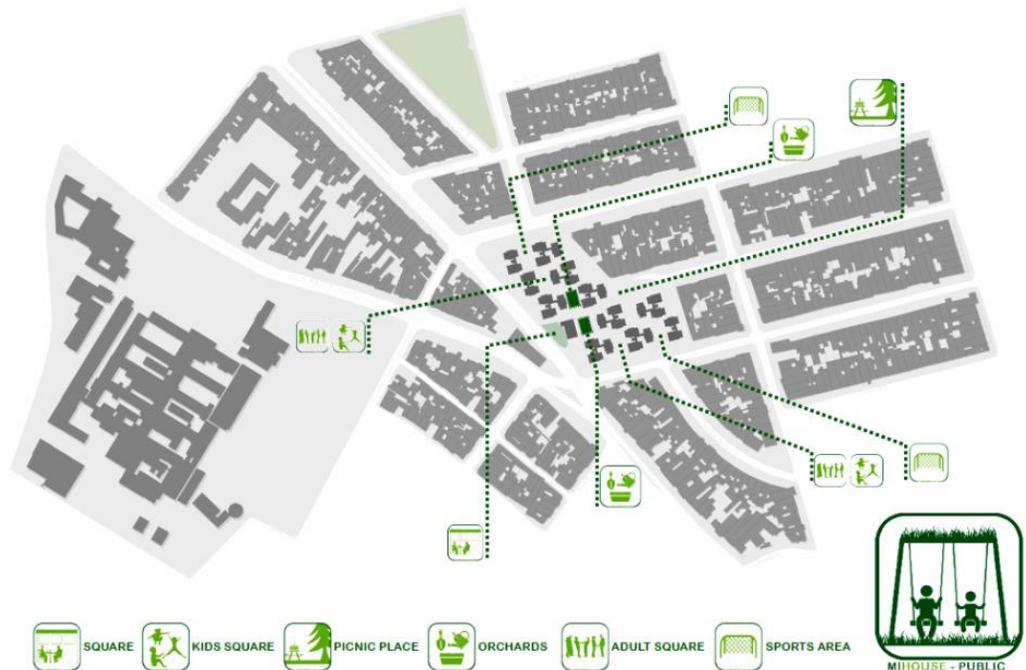


MIHOUSE allows families to have their own urban gardens, which reduces the dependency on products brought from far distances and reduce CO2 emissions caused by transportation.

- **MIHOUSE** motivates the use of bicycles and promotes walking, avoiding the use of cars at the interior of the urban proposal. This helps in the reduction of CO2 emissions to the environment, allows the protection of pedestrians and the enjoyment of public spaces. It also prevents obesity by promoting exercising and generates spaces that are articulated with nature allowing an environmentally friendly recreation.
- **MIHOUSE** allows families to have their own urban gardens, which reduces the dependency on products brought from far distances and reduce CO2 emissions caused by transportation. By growing their own vegetables, species and fruits, the families will be able to designate their income to satisfy other needs and will be able to sale the surplus production of their gardens to their neighbors at specific areas in the urban proposal. In this way, every household will have an economic inclusion that will decrease unemployment, will have an additional income, and will prevent malnutrition.



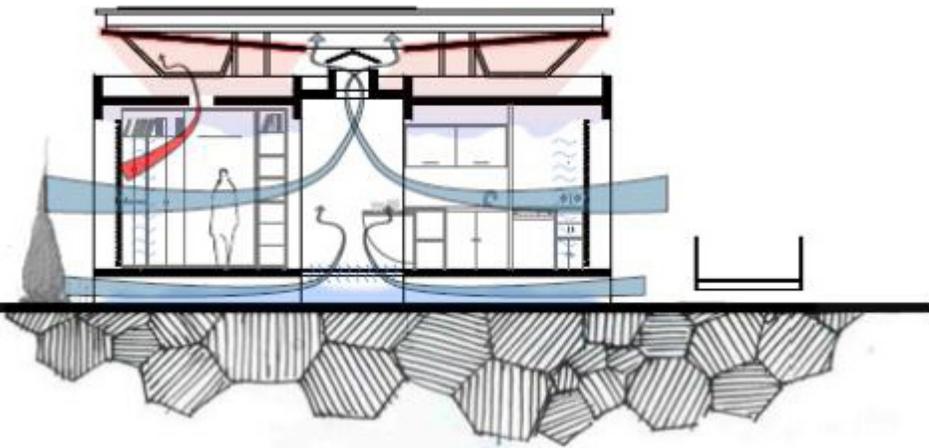
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- The people that will benefit at a **MIHOUSE** home will learn how to use wisely the drinking water, how to reuse rain water, and how the construction system works in order to reuse used water. They are also going to be able to separate organic and inorganic waste, will be more effective when it comes to recycling and will be able to compost and reuse organic waste, putting in practice simple environmental principles of having circular processes and reusing nutrients.



- The **MIHOUSE** habitat is designed departing from the environmental tropical conditions which are determining for the synergy between comfort and the total efficiency of environmental factors. The incidences in the population will be visible because by having less impact of the radiation due to its design and location, the environment will be fresher and healthier. The thermal behavior of the house will be optimized by crossed ventilation and by the use of materials culturally rooted.



- **MIHOUSE** tries to depend on solar energy in order to copy nature. In this way, the inhabiting families will be more sensitive to learn about new technologies, will be guided to reduce their energy consumption, to use improved and more efficient appliances, and will be more aware of daily routines that can help reduce unnecessary energy losses.
- The creation of the **MIHOUSE** project has fostered the awareness of taking care of the environment and of the responsibility in the consumption of the natural resources among the team members uncharged of thinking the **MIHOUSE** proposal. These have been transmitted to sponsoring companies and to the society, mostly through the team's testimonials and actions, and through **MIHOUSE**'s social networks, which have supported the progress of the proposal (since its conception as idea, its design, structural and budget calculations, and in a near future during the dynamics of its inhabitants in the constructed space). Therefore, the project enriches the social capital through its own developing phases, educating it with a citizen culture where all the individuals are conscious of themselves, of the community, of the consciousness and compromise with taking care of the private and collective environment, and of the values that constitute sustainability.



MIHOUSE's urban model

# Why do you think MIHOUSE is a sustainable house for sustainable people?

*Nicolás Noreña Leal.*

Decathlete from the water and solid waste group

“Because the **MIHOUSE** project in addition of providing a sustainable component in relation to the environment in terms of the reuse of water, the use of alternative energies and the use of ecological materials, has the socioeconomic condition of being able to generate income to its inhabitants. In this way an environmental, social and economic harmony is produced to coexist in time”.

*Isabella Tello Gómez.*

Decathlete from the water and solid waste group

“Because it demonstrates economic benefits (such as the income from selling the fertilizers coming from the generated solid waste), environmental benefits (due to the fact that the used water can be reused), and social benefits, that generates a harmony between the people in each house and the surrounding environment, which creates a pleasant coexistence not only between them but also between all the people inhabiting the urban complex.”



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