

# UPYA

sustainable, repeatable,  
resilient housing model  
for Pacho and his family





Pacho bought a lot 15 years ago in Cartagena. He and his family are indigenous (Zenu) displaced people. Due to extreme poverty, they built the little shack where their 7 member family has been raised. The effects of climate change now cause periodic floods where the shack stands, leaving them homeless 2 times a year. Pacho's shack is one of 30.000 and rising, houses in the same situation. Help us teach Pacho and his community how to build a sustainable, repeatable, and resilient housing model.



## Urban Cartagena



# WHY?

Red areas are under flooding risk according to municipality's MIDAS V.3.

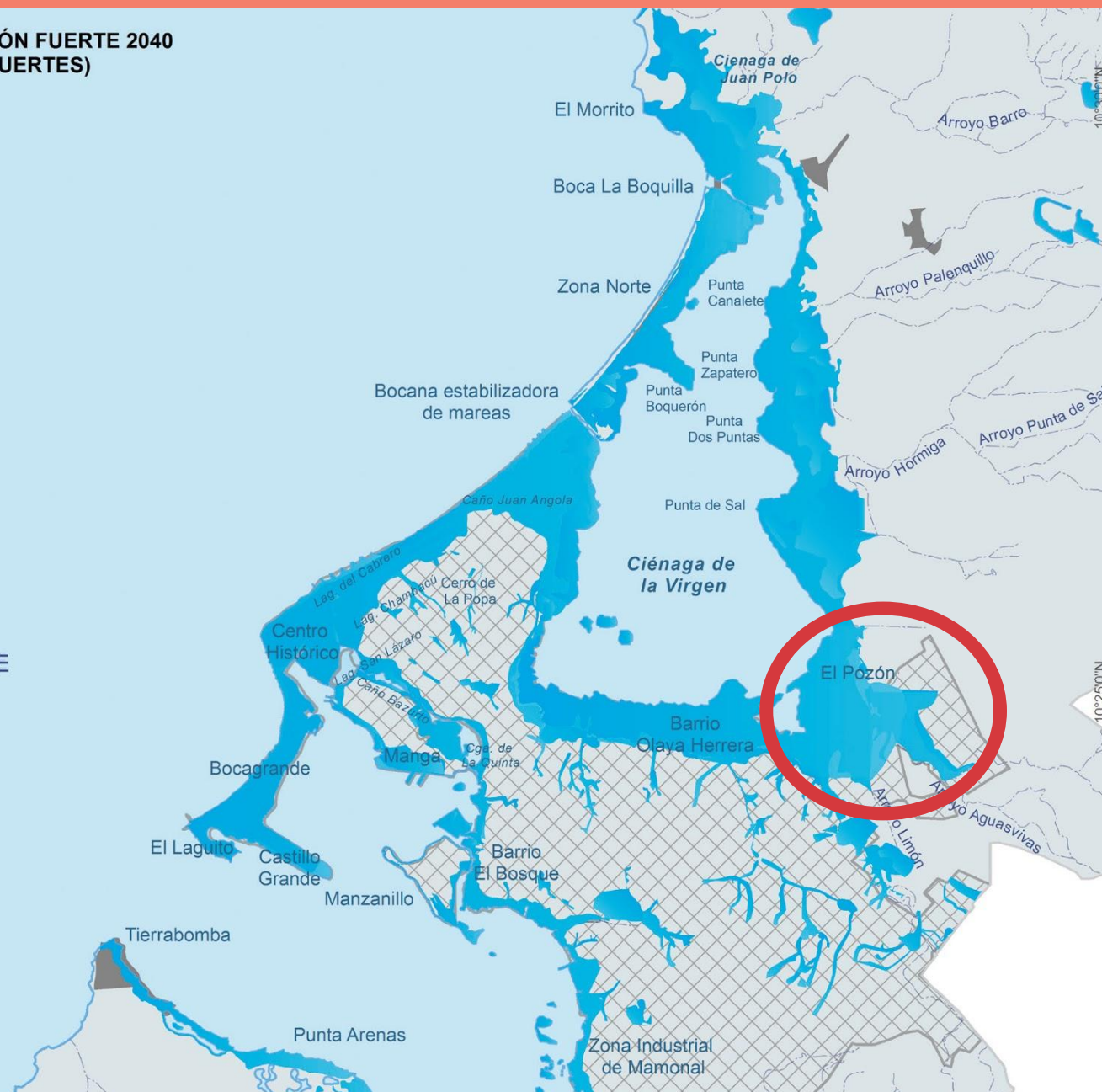
Pacho's house is in "El Pozón" area, marked in green. One of the more poor areas in urban Cartagena.



**ESCENARIO DE INUNDACIÓN FUERTE 2040  
(ANM + LLUVIAS FUERTES)**

-  Inundación
-  Límite área urbana
-  Centros poblados
-  Cuerpos de agua
-  Ríos

MAR CARIBE



# 2040 SCENARIO

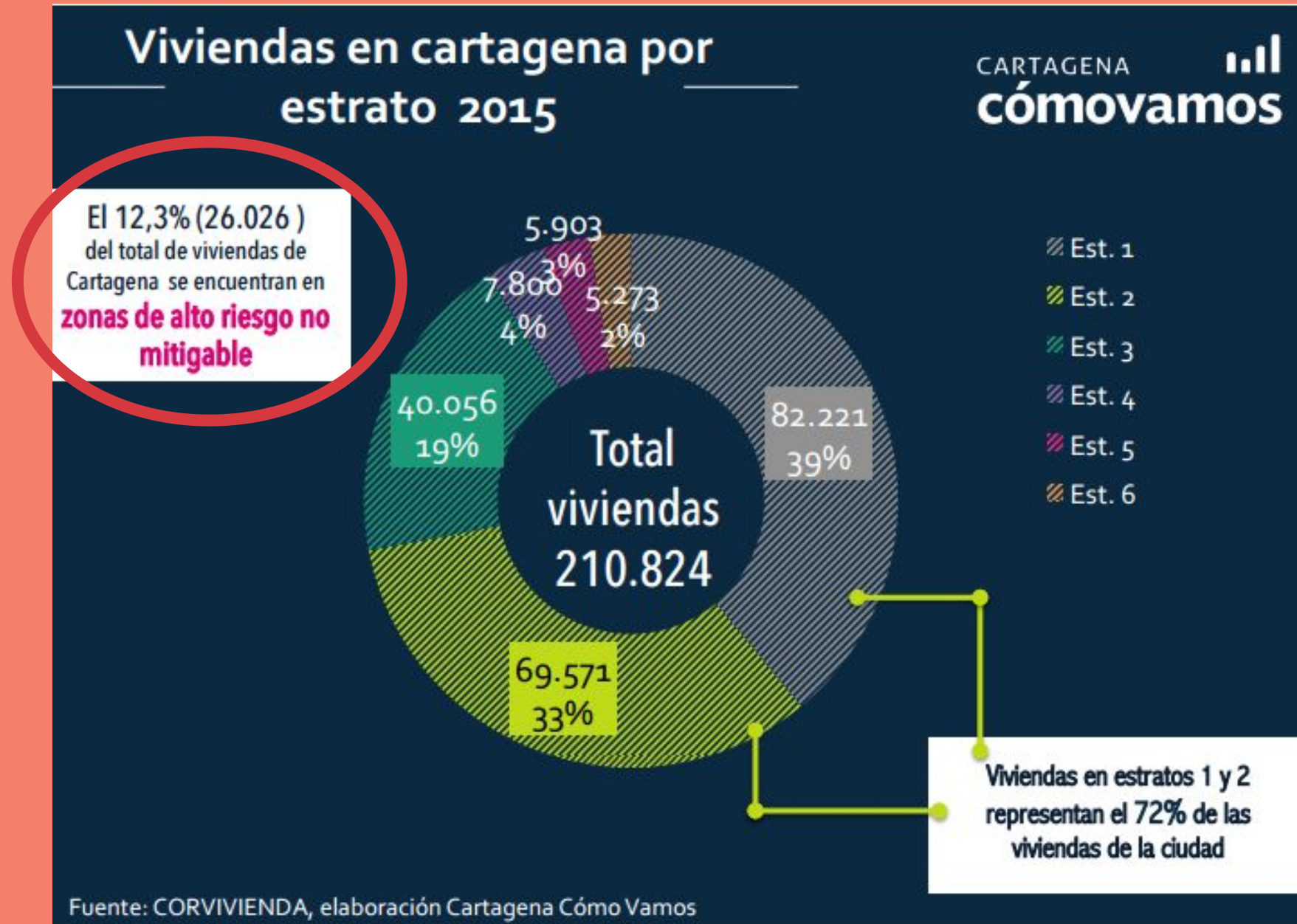
All the blue areas are going to suffer from floodings by 2040.

This scenario includes historical areas and high income neighborhoods. Pachos family will must probably get to this scenario before 2040.

# QUALITY OF DWELLING

12,3% (26.026) of the total dwellings in Cartagena are placed in areas where risk mitigation is not viable.

Low income housing (estrato 1 and 2) represent 72% of the total housing in the city.





# LACK OF DWELLING

This table show the number of dwellings built per year in Cartagena since 2013. Annual production hasn't exceed 4.000 houses. Resulting in ONLY 15.000 HOUSES SINCE 2012.

This leaves a lack of 58.870, according to the data released in 2016 by CORVIVIENDA.

Déficit habitacional Cartagena								CARTAGENA cómo vamos
	Déficit año anterior	Nuevos hogares	Viviendas construidas (hogares reubicados)	Viviendas construidas por CORVIVIENDA	Viviendas construidas sector privado	Viviendas gratis	Mejoramientos habitacionales	Déficit final
2013	66.853	2.745	92	184	2.161	1.784	390	64.987
2014	64.987	2.745	39	150	1.946	1.612	1.467	62.518
2015	62.518	2.745	2	132	2.703		3.556	58.870

La información de Corvivienda muestra **inconsistencias** por permanentes cambios en la metodología de medición de déficit habitacional.  
Por lo anterior se recomienda utilizar con precaución estas cifras.

Para calcular los datos a 2015 se cambió la forma de medir el déficit habitacional: sí se tendrán en cuenta las viviendas reubicadas, lo que antes se consideraba una doble contabilidad. Además se cambió la fuente utilizada para determinar el número de las viviendas construidas por el gobierno nacional ("viviendas gratis"), antes eran los permisos otorgados por Corvivienda y ahora usan como fuente el DANE.

Fuente: CORVIVIENDA, elaboración Cartagena Cómo Vamos

# SUMMARIZING THE PREVIOUS DATA...

1. Currently, Cartagena lacks, according to official data, 59.000 dwellings.
2. 26.000 houses are built in areas where risk mitigation is not viable.
3. The addition of the previous two, comes to a **TOTAL LACK OF 85.000 HOUSES**
4. Due to flooding risk from rising sea level and rainfall combined, the dwellings placed in risk areas grow each year.
5. The average number of dwellings being built by the district, private sector and the state in Cartagena doesn't exceed the 3.000 bar.

Therefore, it will take 28 years to overcome the **CURRENT** lack of housing. **BUT**, an **ADDITIONAL 30%** of the total housing in the city will be under risk (according to the 2014 projections of climate change experts.)

# AREA OF INTERVENTION

El pozón slum is placed near a channel that leads to the estuary of “Ciénaga de la Virgen”.

A very depressed area, that does not count with drinking water or sewage system.





# PACHO'S CURRENT HOUSE





# PACHO'S HOUSE & NEIGHBORS





# UPYA, a sustainable, repeatable, resilient solution...

1. Eco-friendly and recycled materials to meet an ideal balance during construction and life cycle
2. 66M2 built (Social housing in Colombia is only 45M2)
3. Alternative technologies included to improve waste management, water management and implement urban farming
4. Recognize traditional building techniques of its inhabitants, being responsive to thermal comfort needs and aesthetically pleasant. (It was co-designed by architect Simón Vélez and a community in the south of Cartagena)





# THE CO-DESIGN PROCESS



# HOW?

## COMMUNITY EMPOWERMENT

1. Developing a model for urban housing, that may empower and train slum dwellers to solve their housing issues -until an eventual relocation-, with highly technical and human standards.
2. Reducing costs of immediate relocation, allowing them to concentrate into life quality solutions.
3. Proposing a solution that may help at least 30% of the total dwellers of the city (those placed in risk areas), dignifying and embellishing the city and avoiding uncontrolled slumification.

# HOW DOES MY DONATION HELP?

## Your donation will:

1. Finance technical studies so we can offer a long-lasting high quality solution.
2. Guarantee a close follow up to assist the inhabitants in the functional learning linked to alternative technologies.
3. Encourage Pacho and his family to take the leadership in their community transformation as an example for others.
4. Help Pacho and his family have a long-lasting house, that respects and integrates their daily activities and family dynamics, and it's free of flooding risk!



# URBAN IMPACT IS A HOUSE ENOUGH?

Glad you asked!

1. UPYA is not JUST a house, is a model of a bottom up initiative that shows the local government alternative solutions to solve housing issues in the city.
2. By working with “El Pozón” community, we are able to reflect on the potential that slum dwellers have when involved participatory, respectful, adapted projects.
3. UPYA manifests the urgent necessity of daring and testing new ways to access the *right to the city* to EVERYONE and democratizes technology and well-being.
4. By helping us build a model house, you solve Pacho's problem AND enable FEM to teach and empower at least 10.000 people in the next 10 years.

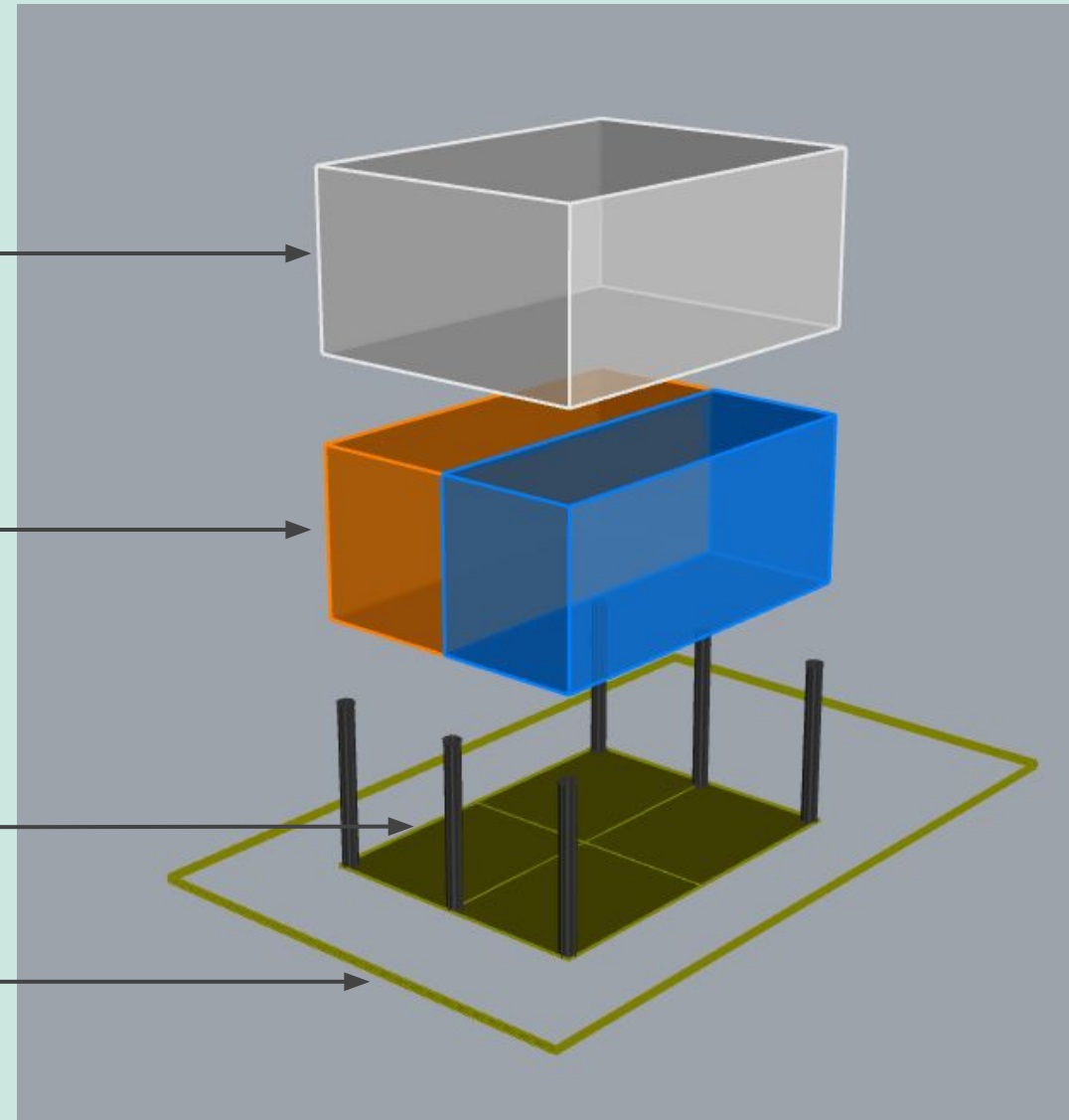
# WHAT? THE FUNCTIONAL DIAGRAM

SECOND FLOOR FOR  
ADDITIONAL BEDROOMS  
SPACE

SOCIAL AREA  
(KITCHEN, WC, LIVING) +  
PRIVATE AREA

DRY SEASON  
PRODUCTIVE AREA /  
RISK MITIGATION PILOTS

LOT



# THANKS!

More info:

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[www.femcolombia.org](http://www.femcolombia.org)

[Globalgiving Campaign](#)

