

**BONUS
EDITION**

A vibrant photograph of a tropical landscape. In the foreground, a wooden walkway with a railing leads through lush green vegetation. In the mid-ground, a waterfall cascades down a rocky ledge. The background features rolling hills and mountains covered in dense, multi-colored green forest under a bright blue sky with scattered white clouds.

**Around the World
in 80 Case Studies**

**Central and
South America**

Bienvenidos a Central and South America

Setting the Scene...

In Latin America, sustainability must go beyond solar panels, complex automation systems or philanthropy exercises

In our 2nd episode of Around the World in 80 Case Studies we visited Costa Rica. But we also came across some great examples from neighbouring countries in the broader region that we wanted to share with you as well. Presented here are just a few that address some of the issues faced in many countries across the region - and indeed across the globe.

In all the countries we looked at, issues of social housing and climate justice, climate resilience, and the role of nature based solutions were prominent. The interplay between these issues also became apparent - as indeed they are in the UK.

There are inextricable links between poverty, environmental degradation and increasing vulnerability to effects of climate change. This is apparent particularly visually on the border between Haiti where extreme poverty has led to the loss of all but 1% of primary forest cover and the neighbouring Dominican Republic. Joint efforts are underway to try and address this, but if the root causes are not addressed it is difficult to see how laws will be

effective.




The comparisons on the issue are stark. Costa Rica is the first tropical country to halt and reverse deforestation, while in Brazil deforestation rates are *increasing* rather than decreasing as targeted, but *reforestation* is what is actually required to avert disastrous tipping points for self-recovery. What happens next here affects all of us, but hopefully lessons from Costa Rica where conservation has translated into *more* economic opportunities not less, and collective action at the highest levels including commitments by governments across the globe to protect 30% of land and sea for biodiversity by 2030 will see positive change, soon.

While these top-down policies and directives clearly play an important role, the work of the team developing Urbanization El Paraiso (and all our other case studies) really illustrate the power of ground-up action to bring the changes needed to life in a way that people can see, touch and be influenced by.

Alliances with public authorities were essential when updating or adjusting regulations such as Land Management Plans



Community [must] work to overcome cultural barriers [and] promote a change of paradigm and valuation of construction models, housing, habitat and community lifestyles"

	Brazil 	Columbia 	Costa Rica 	Mexico 
Land Area	8.5m km ²	1.1m km ²	0.5m km ²	1.9m km ²
Population	210m	50m	5m	126m
GDP per capita	\$15,642	\$16,264	\$12,690	\$21,362
Biodiversity (source)	1 st	2 nd (1 st for birds)	17 th	4 th

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Urbanizacion El Paraiso

Valparaiso, Antioquia, Colombia



Key facts

12, 767m²

Construction, In use



Residential



Socio-Economic Impact

Project overview

Socio-economic Impact: SYMA's business model is based on comprehensive social support to homeowners through financial, social and environmental education processes, which have enabled people with monthly incomes of less than US\$225 to achieve financial closure to acquire a sustainable, healthy and quality home. In fact, 85% of the owners are people who, thanks to these processes, were able to access the financial system and the system of national and departmental subsidies, equivalent to 50% of the value of the home. In addition, they are beneficiaries of a discount on the interest rate, thanks to the sustainability levels of the project. This will allow them to pay a lower housing loan installment than what they were paying as renters.

However, this accompaniment process is not limited to obtaining the financial closure of the families. Also included is a process during the first year of the project's operation to generate the "El Paraíso Culture" through meetings and education programs that promote sustainable community habits, from the operation of its Business and Cultural Center El Paraíso, located inside the village

The Contact Centre also generates local employment, the urbanisation encourages agro-ecological food production, composting, recreation and connection with nature.

Notable achievements



- ✓ First and only housing project in Colombia to obtain the Exceptional Level of Sustainability of the CASA COLOMBIA Certification of the Colombian Council of Sustainable Construction.
- ✓ 20% operational water savings
- ✓ 35% energy savings
- ✓ Access of rural and ethnic communities to the banking system and housing projects

Further resources



You can find out more [here](#), [here](#) and this video:



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Matamoros Market

Matamoros, Tamaulipas, Mexico



Key facts



2,868m²



In use



Retail



Climate Change - Social Value

Project overview

The rectangular plaza around a garden was inspired by the historic market El Parian built in Mexico City in 1688. Its trapezoidal roof structures are designed to let in light while still shading the interior, but also act as chimneys to let heat escape.

The roof sections were pre-fabricated and consist of brick underneath, acting as an insulator and galvanised steel on top to increase light penetration and facilitate water run-off and storage.

It is also designed to be climate resilient, and withstand the 38 degree summer temperatures, be able to shed snow, and to withstand hurricanes and flooding events.

It was built for a design competition and needed to be constructed in 3 months, and replicable in other locations.

The garden at the centre, the market itself and the surrounding recreation facilities make this a focal point for the community.

Notable achievements



- ✓ Modular, prefabricated, replicable and able to be constructed within 3 months

Further resources



- You can find out more [here](#)

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GREEN ROOVES

Rio de Janeiro, Brazil



Key facts



36m²



In use



Residential



Climate Change - Nature & Biodiversity - Social Value

Project overview

This collaborative project between a University researcher and home-owner/activist aimed to instal low-cost green rooves for temperature moderation, wellbeing, and aesthetic improvements within Rio's notorious favelas.

Working on a typical fibro-cement roof tile, they retrofitted a geotextile substrate, impervious membrane, and another layer of geotextile on which they planted native orchids and bromeliads, along with other heat-tolerant species.

Irrigation was included and used on days when there was no rainfall. Monitoring by the researchers showed that there was a significant reduction in indoor room temperature in the green-roofed home against a comparable neighbour. The data obtained from this trial demonstrates green roofs are a viable low-cost, zero energy alternative to air conditioning, especially when electricity supply is difficult to obtain, and unreliable.

In addition, by opening his home as a demonstration, the community was encouraged to learn about and install their own roofs.

Notable achievements



- ✓ 20 degree temperature reductions in the heat of the day compared to neighbours
- ✓ Storm water run-off reduction
- ✓ Greening for health and wellbeing as well as reducing the heat island effect

Further resources



- You can find out more [here](#) and watch a video about it [here](#)