Miiroku, the Union of Two Worlds

Submitted By: Cementos Argos



Organization Profile

Organization Name: Cementos Argos

Organization Type: Private sector

Website: https://argos.co/

Practice Details

Country(ies): Colombia

City(ies): Uribia

Start Year: 2024 **Ongoing:** Yes **End Year:** N/A

Main Adequate Housing Components:



Housing Thematic Areas:

- Housing Rights & Social Inclusion
- Housing & Climate Mitigation
- Housing & Climate Adaptation

Relevant SDGs:



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Problem & Context

La Alta Guajira, northern Colombia, faces extreme drought, heat, and isolation, limiting access to water, health, education, energy, and sanitation. The Wayuu, over 40% of the population, live in structural poverty: 70% poor, 48% extreme poverty, with severe child malnutrition and lack of safe water. Only 4% have continuous water access, 60% lack stable electricity, and over 80% lack sanitation. Traditional houses, though based on ancestral knowledge, are fragile under harsh climate. Wayuu culture, language, and community systems are invaluable heritage now at risk from poverty and institutional neglect. This structural humanitarian crisis demands urgent, sustainable, and culturally relevant housing solutions that ensure rights, equity, and protection of indigenous identity.

Solution Developed

The Miirokú homes, 80 m², are built on family-owned land and adapted to Wayuu culture.

They incorporate autonomous systems: rainwater collection and purification, clean energy through solar panels, and dry toilets. Conceived as a scalable model for multiple Wayuu Indigenous communities—who represent about 20% of Colombia's Indigenous population, the largest in the country—its philosophy is based on co-creation between experts and Indigenous communities, with a focus on local labor contracting, regional supply, and continuous training.

Technological, social, and institutional innovation

The project combines an industrialized steel framing structural system with ancestral Indigenous knowledge, supported by laboratory and field research to improve traditional earth plaster mixtures. This integration achieves construction speed, structural safety, sustainability, and cultural relevance.

Designed for families of 7–10 members, it doubles the capacity of conventional housing. The project obtained Casa Colombia sustainability certification, becoming the first differential rural housing prototype in Colombia to achieve this recognition.

Implementation

2017–present: The Constitutional Court (Ruling T-302) declared the humanitarian emergency in La Guajira.

- 2022: Hurricane Julia destroyed Wayuu homes.
- Feb.–May 2023: Field diagnosis on housing practices, local materials, issues, and start of community engagement.
- Aug.–Dec. 2023: Co-creation with experts and communities; participatory design; soil mix tests, lab trials, and construction system definition.

- Dec. 2023: Partnership signed between Ministry of Housing and Fundación Grupo Argos to build 30 priority rural homes. Fundación Santo Domingo and Grupo Aval joined.
- Feb.–Jun. 2024: Studies and designs.
- Jul. 2024–Jul. 2025: Construction and delivery of 30 homes (Stage 1).
- Jun. 2025: Sustainability certification by Casa Colombia.
- Jul. 2025: Partnership signed for Stage 2 (200 homes) and household selection.
- Sep. 2025: Public bidding opens.
- 2024–2025: Drafting decree to enable tax-for-homes mechanism nationwide.
- 2025: Replication of Miiroku project (80 homes with private sector).

Resources & Funding

- Stage 1: USD 1,004,055 (30% private, 70% FONVIVIENDA).
- Stage 2: USD 6.4M – 200 homes (public sector).
- Stage 3: USD 2.6M – 80 homes (private sector).
- Stage 4: ~USD 64.2M via tax-for-homes, aiming for 2,000 homes.

Enablers & Obstacles

Enablers

- Corporate support: Cementos Argos created Casa Para Mi to address Colombia's 4.9M housing gap.
- Tech & finance: Private R&D enabled climate-adapted models.
- Public–private: Partnerships aligned with rural housing policy & SDGs.
- Triple sustainability approaches.
- Community: participation, women's voices, cultural relevance.
- Territory: Climate-resilient design using ancestral knowledge.
- Long-term: Local training, impact indicators, lasting sustainability.

Obstacles and Solutions

- Social & Cultural: Wayuu mistrust and risk of rejection. Sol: intercultural dialogue, co-creation.
- Technical: Artisanal and insecure construction. Sol: innovative bioclimatic model mixing modern with local techs.
- Environmental & Logistic: Difficult access, no water, no sanitation, no energy. Sol: transport supply with communities, dry toilet, solar panels.
- Financial: Public funds limited and delay. Solution: private cash flow, impact fund with low rates.

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Results & Impact

- 30 units built
- 280 units structured
- 2,480–3,100 Wayuu impacted (≈3–5% of the Indigenous population)
- Scalability: Decree pending signature, approx. 2,000 units, benefiting 16,000–20,000 people
- Family satisfaction, training in sustainability, improved sanitation access: 100% of families
- Community participation in construction: 50% of users
- Rainwater collection: 2,000 liters/household/month during rainy season
- Dry toilets, clean stoves, family gardens, autonomous solar energy: 100% of units built
- 104 minimum monthly wages → 80 m², 33–50% more area per peso invested. Increased living space: +25–35 m² compared to the standard

The project strengthens access to dignified and culturally relevant housing, improves water and food security, sanitation, community health, energy transition, climate resilience, capacity-building, expansion of habitable space, and reduction of overcrowding.

In the long term, it contributes to a more autonomous, cohesive, and resilient community. It increases territorial visibility, attracting external partners who trust the organizational capacity of the Wayuu. It also creates new opportunities for economic diversification in construction, agriculture, and tourism—fueled by the presence of dignified housing that strengthens the territory's image and builds investor confidence.

It further promotes water resilience in the Guajira desert, soil regeneration, and reduction of CO_2 emissions.

Replication & Scale Up

Colombia has 115 indigenous communities with unique cultural wealth, yet most face poverty and vulnerability. This project shows that closing these gaps requires housing adapted to each way of living. The Miiroku model proves solutions must emerge from dialogue, diagnosis, and local materials. Replication must respect diversity, avoiding imposition, while research ensures cultural continuity with scalable, industrialized systems.

This project achieved wide acceptance among Wayuu communities and public-private entities. Its success lies in culturally and environmentally adapted housing that prevents abandonment. After Stage 1, the government funded 200 more homes and private actors pledged support, with potential to impact 2,000 families.

Strategic Paths

- Community projects for income and housing co-pay.
- Diversified public-private and international funding.
- Renewable energy investment with shared benefits.

- Research and training in construction techniques.
- Replication in other indigenous areas.

Policy Uptake

This housing practice has informed or been partially integrated into policy discussions, strategies, or pilot-level policy instruments.

A national decree, supported by the Ministry of Housing, enables the “Works for Taxes” mechanism, allowing companies to allocate up to 50% of income tax to rural housing projects. Approved by the Ministry of Finance, it awaits presidential signature for the first pilot. In parallel, Social Impact Bonds are being explored to mobilize private capital, bridge subsidy delays, support small builders, achieve scale, and link financial returns to social outcomes.

Lessons & Takeaways

- Research on industrialized application models for improved plaster mixtures.
- Integration of construction solutions such as elevated slab systems on stilts and dry floor systems.
- Establishment of a departmental roundtable with Indigenous authorities to build long-term agreements.
- Planning of large-scale supply chains with local actors to diversify costs.
- Installation of a steel framing production plant in the region.
- Engagement of international stakeholders to leverage additional resources.