



## UN-Habitat Helps Families to Construct Environmentally-Friendly Houses in the North of Sri Lanka

Forty one year old homeowner, Ms. Vasuki, lives in Ponnagar village in Killinochchi District with her five children. Separated from her husband for the past seven years, she is the sole bread winner for her family.

Showing remarkable courage in facing life’s many challenges, Vasuki is gradually rebuilding her life that has been disrupted by years of conflict. With a cash grant from the Government of India and technical assistance from UN-Habitat, Vasuki has completed the construction of her conflict damaged house. The remarkable feature of her new home is that it is a “demonstration” house, constructed with sustainable construction materials and methods and used to demonstrate these matters to other beneficiary families. Vasuki managed the entire house reconstruction process while contributing her own labour to optimize the housing grant.



Proud homeowner, Ms. Vasuki.



Transitional shelter with two of Vasuki’s sons.

Vasuki’s family consists of four sons and a daughter. Her eldest son, 16 year old Mathan, had dropped out of school to seek employment due to the family’s difficult economic situation. The other four children are attending school at Thirumurikandy Hindu Vidyalayam, located close to their home.

Vasuki’s family had suffered multiple displacements during the conflict. In September 2008, they were compelled to leave home with thousands of other families and travel to several villages in Mullaitivu district. In February 2009, they moved to Kathirkamanathar Internally Displaced Persons (IDP) camp in Vavuniya District. Vasuki recalls facing many difficulties during their displacement as she had to care for five children amidst poor sanitary conditions and inadequate shelter from the rains.

When the Government commenced resettling families in their villages of origin, Vasuki’s family also returned to Ponnagar village in July 2010. However, they found much of the village infrastructure, including their home, damaged beyond repair. As Vasuki had no savings to construct a permanent home, she built a temporary shelter using salvaged concrete blocks and tin sheets to shelter her family. This tiny, 200 square foot transitional shelter was barely adequate for the family of six. The children had no indoor space to study and it didn’t offer enough protection from the heavy monsoon rains. As Vasuki had no regular source of



Vasuki with the UN-Habitat team. Her temporary shelter is in the background.



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income, she started a cottage industry by grinding and packaging spices and rice flour. She earned about Rs.300 per day which was the main source of income for the household.

In November 2012, Vasuki was selected as a housing beneficiary by the Indian Housing Project. As a female head of household, she was given priority support by the project. As she showed a keen interest in building a house with eco-friendly features, Vasuki was selected by UN-Habitat to build a “demonstration” house. Technical assistance was provided by UN-Habitat including the selection of a suitable house plan, obtaining local authority approvals, selecting skilled workers and sourcing eco-friendly building materials.



Foundation work in progress.

As the housing project followed a “homeowner driven” process of construction, Vasuki was responsible for the planning and supervision of the construction work with UN-Habitat’s technical team. In December 2012, Vasuki received her first grant installment of LKR. 100,000 to lay the foundations. During the construction period, she had hired several masons and carpenters to construct the house while providing her own labour support whenever time permitted. Although Vasuki had faced several challenges during the construction process including the scarcity of water due to prolonged drought and a shortage of skilled labour, she was determined to construct her new home.

In April 2014, Vasuki completed her house construction. Her new home, which stands out in the village with its beautiful brickwork is 550 square feet with two bed rooms, a living room, kitchen and an outdoor toilet. A rain water harvesting system has been installed to address the scarcity of water as she has no access to a regular water source.

Instead of the concrete blocks generally used in the North, Vasuki’s house walls have been constructed using Compressed Stabilized Earth Bricks (CSEB). CSEB walls are a cost effective and environmentally friendly method of house construction as they require no plaster and consume less cement mortar for bonding. The houses constructed with stabilized earth bricks are cooler than others, as the soil has a superior cooling effect.



During house construction. CSEB brickwork and precast window frames are visible.

For roof construction, Vasuki had used “Grandis”, a plantation timber species. This timber had been treated at the site with used heated engine oil, an alternative low cost treatment method. Door and window frames have been produced with pre-cast concrete frames which has also helped save precious timber resources and cut costs. In addition to using alternative building materials, Vasuki had practiced several methods to minimize wastage and construction costs. These included using salvaged building materials such as small recycled debris for the foundation. Concrete, tile and brick pieces converted to course aggregates of concrete had been used for paving. She was also trained on the correct storage methods of building materials, helping to eliminate wastage.

Vasuki stated “I am grateful to the Indian Government for giving me money to build this beautiful house. It is very different to the other houses in the village. Although I had no money of my own, I took the responsibility to construct the house. My children helped to clear the site to lay the foundation. They also helped the masons by fetching





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building materials. I carefully followed the instructions given by the UN-Habitat engineers on new construction methods.”



Mr.Firthows of UN-Habitat monitoring progress.

Mr. Firthows from the UN-Habitat technical team, who provided assistance to Vasuki during construction, commended her diligence. “Vasuki very keenly adopted new construction technologies. She worked with the Village Rehabilitation Committee to hire skilled masons who were trained by the NERD Centre on earth block construction. With her diligence, careful monitoring and labour contribution, she was able to build this lovely house for her family”.

Vasuki’s house is now used to raise awareness and educate other homeowners and artisans on sustainable construction practices. While Vasuki is very happy in her new home, she still struggles to make ends meet with no financial assistance from her husband. She is hoping for livelihood assistance to purchase her own grinder and further develop her spice packaging venture. “I grind spices at a mill in Iranamadu spending about Rs.600 daily. If I have my own grinding machine I can save money and increase the production” she stated.

UN-Habitat is promoting several low cost, eco-friendly technologies including fair-faced masonry, earth plaster and earth based wall paint in its’ housing recovery programme. These methods are being adopted by many beneficiary

families who are keen to build sustainably whilst saving construction costs.



Vasuki’s unique new home stands out in the village.

The “homeowner driven” methodology adopted under the Indian Housing Project strengthens family relationships, enhances beneficiary’s skills in construction and leadership. It also empowers men and women to manage their own recovery, thereby reducing dependence. UN-Habitat is implementing this project in the districts of Killinochchi, Mullaitivu and Jaffna. From 2012- 2015 under this programme, UN-Habitat will support 18,000 families to reconstruct their damaged homes.

Vasuki’s remarkable achievements in rebuilding her home demonstrates the resourcefulness and resilience of women in the North of Sri Lanka on their road to self-recovery.