



# THE SHIVAKUMARS' GREEN HO

June 5 is World Environment Day but this family of four from Bangalore, who reside in an eco-friendly home, believe in living in harmony with nature every day

BY POOJA VIRENDRA KUMAR

**T**he Shivakumar residence in Bangalore could well be the envy of many urban homes in India. The family of four doesn't incur any monthly water expenses and still has 10,000 litres to spare every year.

Photographs by SHIVA PERUMAL



# USE

"Nature has so many resources. We should utilise them without harming her," says A. R. Shivakumar, with wife Suma and kids Anoop and Adinitha.

Their spacious bungalow, built on a 60x40 square feet plot, needs only Rs. 250 worth of electricity every month — an average home of this size would usually consume Rs. 800 worth.

"It's because we make nature work full time in our house," says 49-year-

old A. R. Shivakumar, a scientist and executive secretary at the Karnataka State Commission for Science and Technology at the Indian Institute of Science (IISc). Indeed, 'Saurabha' — the Shivakumars' bungalow — has been designed so as to extract the

## THE HOUSE THAT KEEPS GIVING

- Since their house receives maximum heat from the south and west, there are fewer windows facing those directions.
- The courtyard has plenty of greenery and a few water bodies, which help keep the temperature in and around the house low.
- The Shivakumars have collected around 22 lakh litres of water by rainwater harvesting since they built the house in 1995 and have used 18 lakh litres so far.



maximum benefits from their natural surroundings. An environment-friendly structure, it draws from solar energy, daylight, and organic methods to sustain a cost-effective and green lifestyle for its inhabitants.

Shivakumar and wife Suma, 40, who call themselves "weekend farmers", were always environmentally conscious. "Before we built Saurabha, we lived in a rented home where we practised rainwater harvesting. Somehow, we could never watch all that clean water flowing into the drain," says Suma, a homemaker.

That's why when the couple set out to build their dream house, they thought, "Why not build something which matches our interest in nature?" Shivakumar conducted a research on rainfall data in India, specifically Bangalore, for the last 100 years and studied the geography of their Vijaynagar plot carefully. Since

the plot is on a ridge seven feet high, gradually sloping towards the road, the family decided to use its contours to their benefit rather than level the earth. The final result not only looked beautiful but also saved the family a lot of money. "A conventional house would have cost us Rs. 60,000 per

square feet but our final cost was reduced by Rs. 20,000 per square feet. Plus, the long-term advantages of this house are many," says Shivakumar.

Rainwater harvesting, of course, plays a big role in this home. The rainwater is collected on the first floor of the house, on the extended roof over

the house, and is directed into a storage tank (of 4,500-litre capacity) on the ground floor. The water is used for day-to-day activities. Any excess is first collected in a sump tank and then flows into a borewell. "To make the water potable, I relied on a unique technique using pop-up filters, which have been installed in all the tanks and the sump," says Shivakumar.

The house also makes intelligent use of sunlight and air. The roof has been painted white to negate some of the heat; the ceiling has holes for sunlight. During the night, the family uses CFC bulbs, keeping their electricity bills to the minimum.

Visitors to the Shivakumar residence are, naturally, impressed. "Our neighbours and friends are full of praise for our efforts. Many have even borrowed some of our ideas," says Suma, who conducts free summer camps in her neighbourhood. "I like to tell kids stories about saving the environment. They also come to me with requests for saplings to plant next to their houses. I procure these saplings for them from the forest department." Shivakumar and Suma also hold training sessions in government offices and private companies on rainwater harvesting.

The couple's kids, Anoop, 18, and Adinitha, 16, seem to share their love of nature. "My kids love this place. It is their dream home. And they are always keen to spread the eco-friendly message around," says Suma. The problem, she feels, with most people is that they don't want to explore their options. "They can't be blamed really. Until existing practices pinch their pocket, they don't try something new."

But her earnest message might give them food for thought. "We should try to use our common sense liberally and not be a burden to society." ●

## THE ECO-FRIENDLY FEATURES



The walls of the house, built of stone, are based on a rat-trap design. The air is trapped between the two walls and acts as an insulator, controlling the room temperature.

The pop-up filter is a removable filter which traps the impurities in water and can be easily removed, washed and fixed back in the pipe.



Suma uses the solar cooker daily. The house makes use of solar energy for heating. "Many of our friends and neighbours have implemented ideas like solar heating and cooking in their homes."



Anoop and Adinitha in the garden. The family does not use plastics and converts its kitchen waste to compost through vermiculture.

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