

Opportunities & Challenges for Sustainable Construction in Cambodia

About Us

Sevea is a consulting firm based in Cambodia, specializing in strategic and operational support for development partners, both in the private and public sectors, in their sustainability initiatives.

We are a team of passionate consultants operating mainly in the Energy, Water, Sanitation, and Hygiene (WASH), Agriculture, and Access to Finance sectors, and also supporting sustainability transition for corporates.

Challenges

- **10%** **of worldwide emissions** due to building construction including material manufactures (UNEP,2020)
- **11.5%** **of Cambodia GDP** relies on construction industry (EuroCham, 2018)
- **10,000** **tons/day of garbage** produced in Cambodia including 20% of plastic waste (Ministry of Environment, 2022)

Solutions

The company Eco-Bricks offers an innovative solution to **recycle plastic wastes** and turn them into **eco-friendly construction bricks.**

The aim is to **reduce the environmental pollution** caused by plastic waste and **mitigate the environmental impact** of traditional construction methods.

KEY RESULTS

9 provinces, 10 franchises

$US 45,000 of investment per franchise
(including machines, trainings, technical support)

Up to **20,000 bricks/month** sold



Founder's ID

Name: Mr. Sok Thy
Background: Learnt brick-making techniques from specialists in Thailand, Malaysia, India
Position: CEO of Eco-Bricks
Location: Kandal Province

"Eco-Bricks helps change people's mindset as it encourages them to sort their plastic waste to give it to the company.



Eco-Bricks

Eco-Bricks was founded in 2019 by Mr. Sok Thy. To ensure the highest quality for customers, the eco-bricks were tested in the Institute of Technology of Cambodia several times until obtaining the best results.

Prek Ho Lech village, Prek Ho commune, Takhmao city, Kandal province

Results

Eco-Bricks make **70-year lifespan construction bricks** out of plastic waste. The main raw materials are **plastic bags** which are collected from NGOs, restaurants, schools, and private companies. In exchange of 2.5kg of plastics, the company gives 1 brick. Once collected, plastics are **shredded**, **grinded**, **mixed** with other eco-friendly material (sand, clay and cement) and **molded** to shape a brick. In one brick, there is 30% of plastic. During construction phase, a **male-female brick system** enables easy and fast building without plasterwork.

5 to10 tons
of plastic waste collected per month

Best Enterprise Award several times

Intellectual property
certificate from Ministry of Commerce

Environmental friendship
certificate from Ministry of Environment

The company is operating in **9 provinces** and **10 franchises** has been sold. All are private businesses except one in **Siem Reap**, where it is a **community project** supported by Oxfam. Eco-Bricks is suitable for all types of construction.

Shifting to Eco-bricks

Traditional bricks	Eco-bricks
No plastic waste savings Bricks made of clay	**↘ plastic waste** Bricks made of plastics, **5x stronger** than traditional ones
↗ deforestation Because of firewood during production process	**No deforestation** No firewood during production process
Dangerous Construction process for workers (high accidental risks with tools)	**Safe** Construction process for workers (no tools thanks to male-female brick system)
Expensive & Long Plasterwork requires cement and manual labor	**Cheap & Fast** No plasterwork, less cement and less manual labor.
A construction costing **$US 10,000** with traditional bricks	Will cost **$US 3,000** with eco-bricks

Conclusion

Mr. Sok Thy's innovative company shows that there are profitable and sustainable business models in the construction sector. His prospects for the next years include:

- **Seek new investors**
- **Invest in new technologies to lower production costs**
- **Join new competition program to gain visibility**
- **Scale-up the franchise in all Cambodian provinces**

Build cheaper... and cleaner



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