GREEN INVESTMENT DELIVERS GROWTH

Key findings of GGGI's green industry scenario for Cambodia

Global Green Growth Institute

The industrial sector in Cambodia is a driver of economic growth, job creation, and poverty reduction. Its contribution to Gross Domestic Product (GDP) grew from 17% in 1998 to 29% in 2016. For Cambodia to continue to diversify and expand its economy, new ways must be found to increase productivity and access more premium markets. In the Industrial Development Policy 2015-2025, the Royal Government of Cambodia envisages a modernization of Cambodia's industrial structure from a labor-intensive industry to a skill-based industry, integrating local businesses into global and regional supply chains.

GGGI's economic modeling asserts greening the industrial sector is a way of doing this: investment in resource efficient technology can foster economic growth, while yielding social and environmental benefits.

Using integrated System Dynamics modeling, GGGI analyzed the potential impact of resource efficient technology in four industrial subsectors: food processing, bricks manufacturing, garment manufacturing, and electronics manufacturing under a so-called 'Green Industry' scenario.

This scenario demonstrates that the introduction of green technology can lead to an increase in real GDP of USD 2.7 billion by 2030, or otherwise an improvement of 46% for the garments sector, 14.7% for bricks, 33% for food processing, and 35.5% for electronics.

Greening these industrial sub-sectors can create 512,000 additional jobs and reduce Greenhouse gas (GHG) emissions by 3.37 million tons, with 17% reduction in the garment sector and a 30% reduction in electronics.

The analysis of four sub-sectors reveals that greening industry can:

+512.000 jobs

-3.37M tons GHG * emissions reduction relative to BAU

Greening boosts productivity

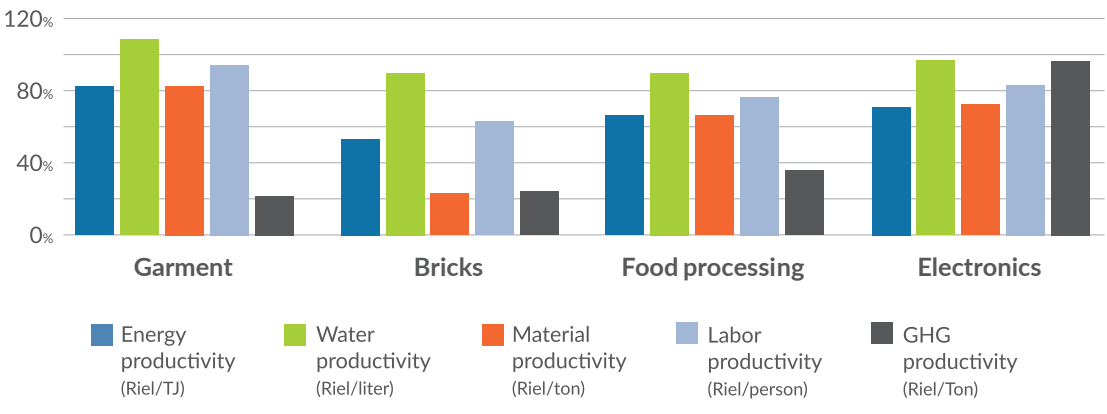
The analysis shows that resource efficient technologies are an attractive investment for business owners, with a short payback time, significant avoided cost and a high return on investment.

Productivity values depend on the resource intensity and cost structure of the sub-sector

* Productivity in the model is estimated by dividing GDP by production inputs (materials, labor, energy, and water) and productivity is also calculated in relation to GHG emissions.

Resource efficient technology can significantly reduce production costs and increase profit. Results show potential cost reductions in all four sub-sectors, particularly largest for food processing.

Productivity increase (Green Industry vs BAU) by sub-sector



Production cost:

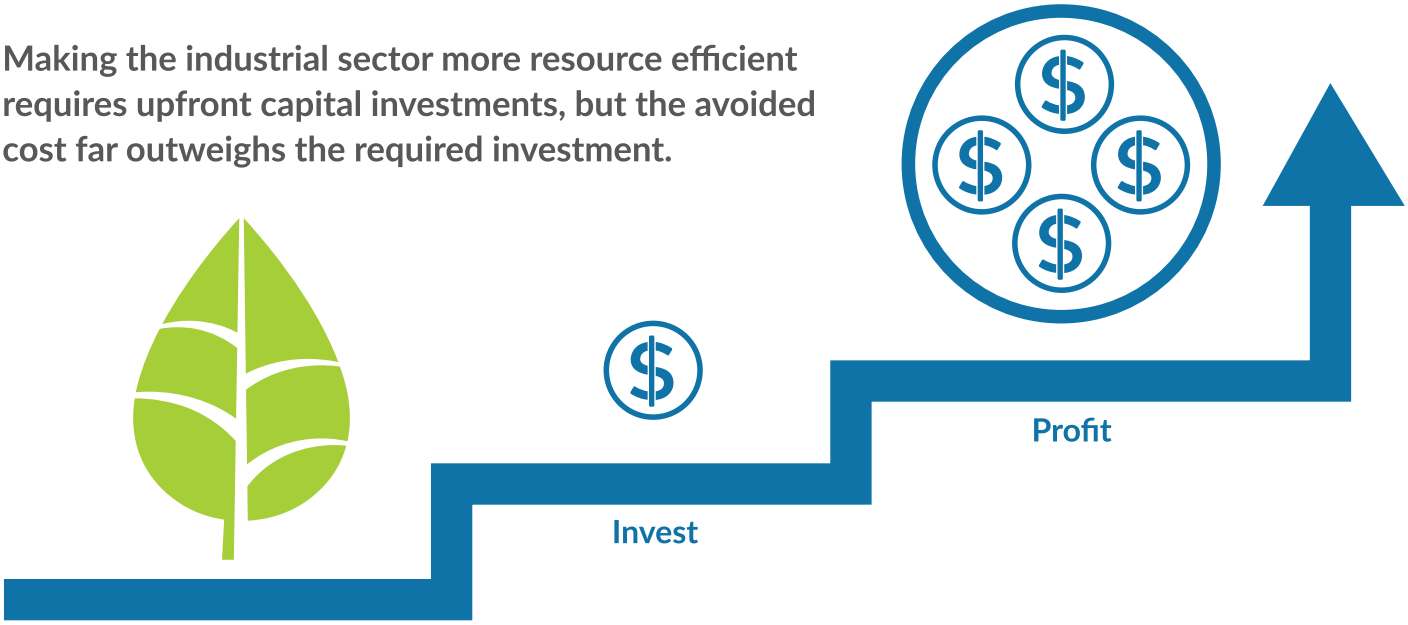
-21%

food processing

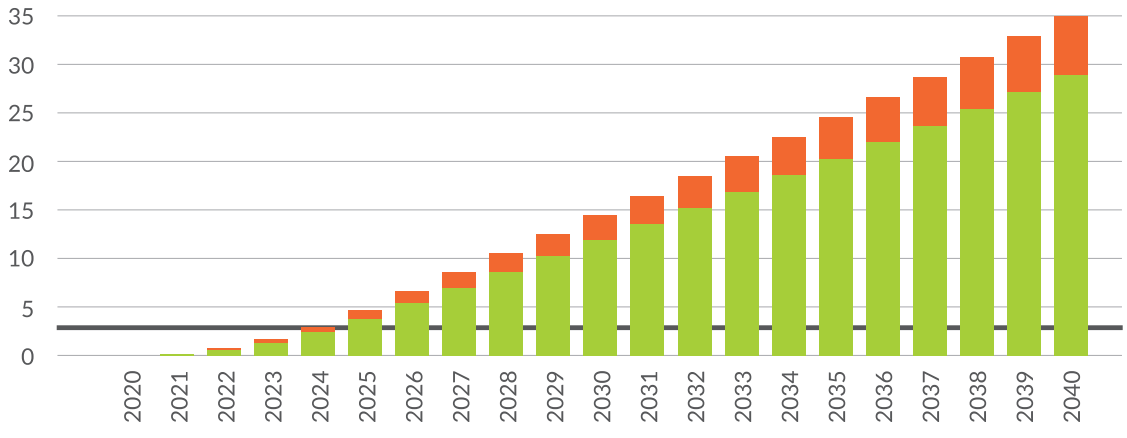
-18%
electronics

Avoided costs outweigh investment requirements

Making the industrial sector more resource efficient requires upfront capital investments, but the avoided cost far outweighs the required investment.



Comparing investments to avoided costs
USD (Billions)



GI scenario, benefits to investment ratio, year 2030, firm level and economy-wide.

Firm-Level avoided cost

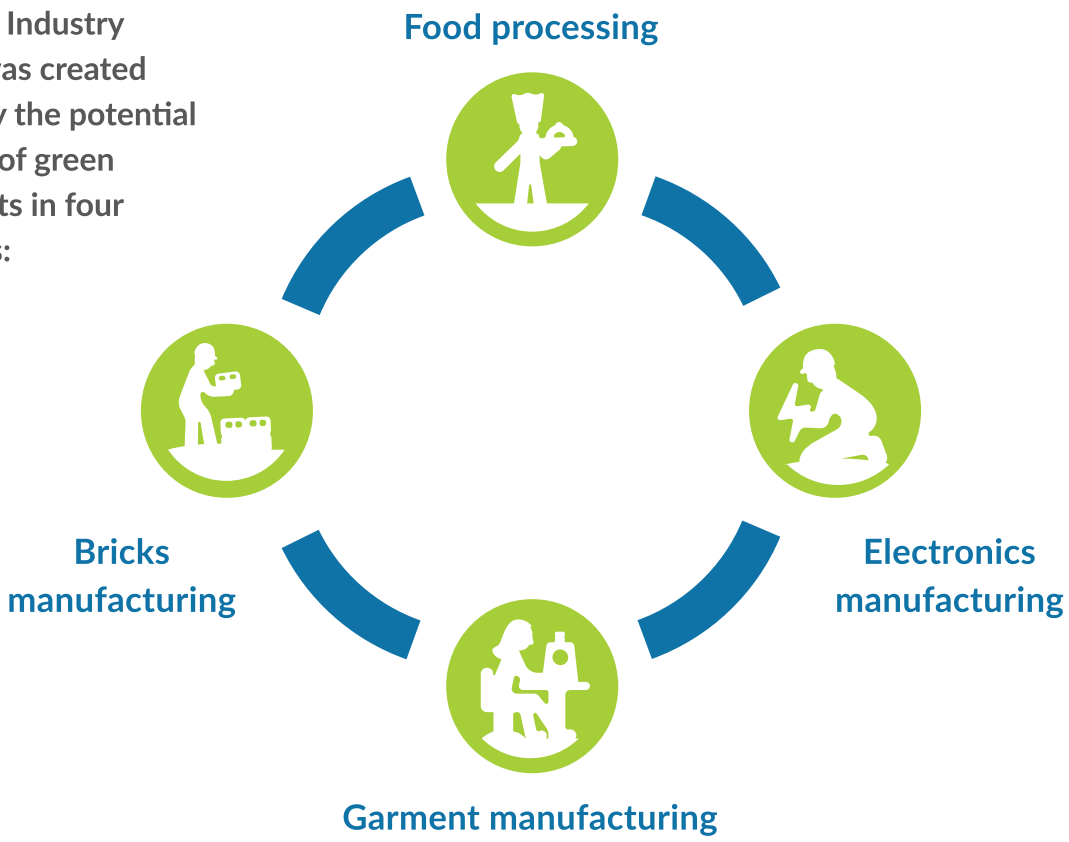
Societal-Level avoided cost

Investment

Under the Green Industry scenario, while the investment required totals USD 4.24 Bn by 2030 (or 2% of GDP over the next 10 years), the benefits reach USD 28.49 Bn. The benefits are 6.7 times larger than the investment required and generate positive returns.

What is the Green Industry scenario?

The Green Industry scenario was created to quantify the potential outcomes of green investments in four subsectors:



These subsectors were selected based on their economic significance, their reliance on natural resources and climate vulnerability, and their potential competitiveness.

Several scenarios were simulated to assess the possible contribution to economic growth, job creation, and GHG emissions reduction of a green transition in these four industrial sectors.

They were identified and defined with the support of local stakeholders, involving the private sector, government representatives, academia, and civil society. With lower resource consumption, leading to reduced costs and higher sectoral GDP, productivity increases for all subsectors in the Green Industry scenario.

Making this happen

The quantitative analysis performed in this study shows that there is a strong economic case for policy interventions to stimulate resource efficiency in Cambodian industries. Targeted mandates, standards, incentives and skill development would encourage investment in technology and increase value addition of industrial products. Such measures can strengthen competitiveness, diversification and export potential of Cambodian industries, pushing the country forward in its march towards technology and knowledge-based industries.

Policy and Government can stimulate resource efficiency through:

- Standards
- Incentives
- Skills Development