

# Boundless Impact

Manufactured Capital





# Manufactured Capital



Our Manufactured Capital is central to our ability to produce high-quality activated carbon products for diverse applications. We continued to enhance our Manufactured Capital through strategic investments, positioning ourselves to capture emerging opportunities while delivering on our long-term sustainability commitments.

**Much like the whale-resilient, efficient, and adaptive in its journey-we navigate transformation with strength, precision, and purpose-driven innovation.**

**BRAHMAN BALARATNARAJAH**

Deputy Managing Director

## MANAGEMENT APPROACH

Our approach to managing our physical assets are rooted in sustainable innovation, enhancing capacity and improving products and processes to a more sustainable future. Capital investments align with our long-term strategic priorities, sustainability, commitments and customer needs, and involve robust assessment by cross-functional teams. Haycarb leverages engineering expertise to repurpose used machinery, optimising capital expenditure and reducing its environmental footprint.



7

Production facilities across 3 countries

## Asset Base (PPE)

**Rs. 6.9 Bn**

Local

**Rs. 5.8 Bn**

Overseas

## OUR STRATEGIC PRIORITIES IN 2024/25



Our greenfield investment in the Philippines



Capacity enhancements to capture emerging opportunities



Enhancing the capacity of value-added carbon manufacturing



Strengthening the sustainability of our operations

## PROGRESS MADE IN 2024/25

Investment in efficiency yield and production process

Rs.  
**55**  
Mn

Investment in wastewater treatment plant

Rs.  
**114**  
Mn

Decrease in Carbon Foot print through Solar Investment

**531**  
tCO<sub>2</sub>e/  
Year

Investment in Solar power generation during 2024/25

Rs.  
**600**  
Bn

## WAY FORWARD



### Short Term

- Construction of the manufacturing facility in the Philippines - Phase 1
- POU Carbon capacity improvement in Sri Lanka and Thailand.
- Expansion of Kiln capacity in Thailand (Shizuka) - June 2025.
- Expansion in solar power generation in Sri Lanka and Thailand.
- Upgrade Recogen to enhance its electricity generation capacity within the year.

### Medium to Long Term

- Explore opportunities to expand our manufacturing footprint into India.
- Ongoing capacity expansions to increase penetration in the energy storage carbon.
- Expansion of Regeneration capacity.
- Expansion of the Philippines project - Phase 2 and 3



Capital trade-offs			Link with material topics	Link with key risks and opportunities / SRROs / CRROs	Alignment with strategic priorities	Contribution to SDGs
	Short-term	Long term				
FC	↓	↑	<ul style="list-style-type: none"> <li>M10,M20</li> </ul>	<ul style="list-style-type: none"> <li>R8, R21</li> </ul>	<ul style="list-style-type: none"> <li>Market growth</li> <li>Innovation led growth</li> <li>ESG mindset</li> </ul>	 
MC	↑					
S&RC	↑	↑				
NC		↑				

## VALUE CREATED IN 2024/25

- Obtained Preliminary approvals for the 8th Manufacturing location in Philippines.
- Sustainability focus related investment including installation of solar panels in Sri Lanka.
- Enhancement of capacity and efficiency for value added carbon ranges in Sri Lanka and Thailand.
- Enhanced production capacity to manufacture energy storage carbons in Sri Lanka.
- Augment capacity to manufacture POU water carbons in Sri Lanka and Thailand.
- Automation and digitalisation of monitoring and recording of process parameters.
- Augment ETP facilities in line with increased capacities RO technology implemented in Badalgama.
- Construction of new laboratory and office complex at Badalgama Sri Lanka.

## DIGITALISATION

During the year, we advanced the automation and digitalisation of our operational processes, with a key focus on the real-time monitoring and recording of critical process parameters. This transformation involved the integration of sensor-based technologies, data acquisition systems, and centralised digital dashboards to track variables such as temperature, pressure, flow rates, and energy consumption with enhanced accuracy and consistency.



# 85%

Capacity Utilisation



# Rs. 12.7 Bn

PPE at the end of March 2025



# Rs. 2.6 Bn

Capital Expenditure



# Rs. 1.25 Bn

Investment to enhance the production capacity of energy storage carbon

# Manufactured Capital

**NUMEROUS MANUFACTURING BEST PRACTICES, INCLUDING LEAN MANUFACTURING, SIX SIGMA, 5S AND KAIZEN HAVE BEEN IMPLEMENTED WITHIN OUR MANUFACTURING FACILITIES TO MAINTAIN A CULTURE OF 'ZERO PRODUCT DEFECTS'.**

## ENHANCING CAPACITY FOR SUSTAINABLE GROWTH

Consistent investments in enhancing manufacturing capacity have enabled us to drive economies of scale, improve operational efficiency and respond more effectively to the evolving needs of our customers. During the year under review, we invested Rs. 2.5 Bn to enhance our Manufactured Capital to support future growth. Key focus areas in 2024/25 included,

## EXPANDING OUR FOOTPRINT TO THE PHILIPPINES

Given its potential to diversify and strengthen our supply chain along with its strategic positioning to serve key markets, we continued to make progress on our strategic greenfield investment in the Philippines.

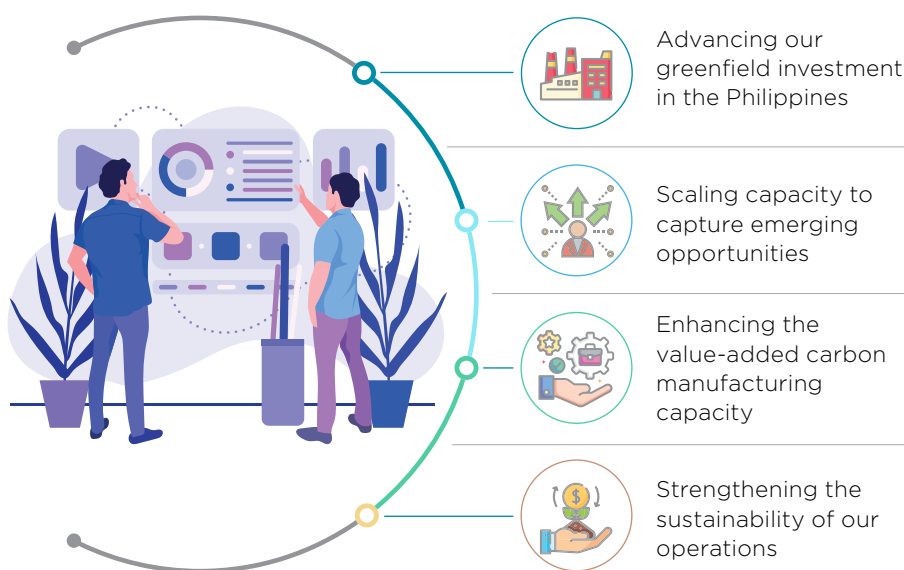
Having incorporated Haycarb Philippines Corporation in December 2023, during the year we obtained the BOI approval for our investment

and after evaluation of multiple sites and selected the PHIVIDEDEC Industrial Authority in North Mindanao, Mindanao Island.

We are presently in the process of obtaining other relevant approvals from the Ministry of Finance and the Department of Environmental and Natural Resources. Both approvals are expected within 2025/26 financial year. Construction is scheduled to advance in three phases as follows, commencing from first half of 2027.

Level	Planned capacity enhancement
Phase 1	4,500 MT per annum
Phase 2 & 3	6,750 MT per annum

## SCALING CAPACITY TO CAPTURE



## EMERGING OPPORTUNITIES

Increasingly stringent environmental regulations and the global transition to a low carbon economy have presented numerous growth opportunities for our value-added product range. Accordingly, we invested Rs. 1.25 Bn in numerous initiatives to enhance the production capacity of value-added products with specific emphasis on energy storage and water purification applications.





### Activated Carbon for POU Applications

The enactment of the National Primary Drinking Water Regulation in the USA in April 2024, and the establishment of legally enforceable Maximum Contaminant Levels for six per- and polyfluoroalkyl substances (PFAS) in drinking water has presented growth opportunities in water purification. During the year under review, capacity enhancements were undertaken in Sri Lanka and Thailand to facilitate increase production of POU Carbons.



### Energy storage carbons

Increased emphasis on renewable energy generation has elevated the role of energy storage in ensuring battery range and efficiency. Therefore, significant investments were made to increase the production capacity of energy storage carbons by 50% during the year under review. Additionally, ongoing investments in the electro-chemical laboratory has enabled the production of small-scale batteries allowing us to provide enhanced insights to customers on the real-world performance of our carbons.



### ACHIEVING MANUFACTURING EXCELLENCE SUSTAINABLY

Several investments were also made in 2024/25 to further our sustainability commitments. These included,

- Rs. 600 Mn additional investments in solar power generation increasing the renewable energy generation capacity to 5,648 kWp.

- Rs. 114 Mn invested in enhancing wastewater treatment system and implement wastewater recycling and re-use system with the capacity of 128m<sup>3</sup> per day.
- Rs. 55 Mn invested in enhanced the efficiency and yields of production processes.
- Value addition for by-products to increase its commercial relevance.
- Rain water harvesting

### OPERATIONAL EFFICIENCY AND PRODUCTIVITY

We adopt the 3R (Reduce, Reuse, Recycle) approach to drive operational efficiency and productivity within our production processes while reducing waste. Numerous manufacturing best practices, including Lean Manufacturing, Six Sigma, 5S and Kaizen have been implemented within our manufacturing facilities to maintain a culture of 'zero product defects'.

Maintenance of plant and machinery is aligned with the Preventive Maintenance pillar of Total Productive Maintenance (TPM) minimising loss of productivity due to machine breakdowns.



# Rs. 460 Mn

31 lean initiatives were implemented during 2024/25 resulting in cost savings

# Manufactured Capital

## OUR MANUFACTURING EXPERTISE

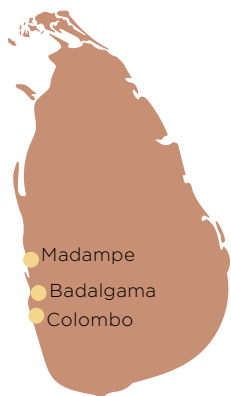
Our manufacturing footprint covers 3 countries and 7 manufacturing facilities as described below.



Our locations

## OUR MANUFACTURING FACILITIES

### PRODUCTION FACILITIES IN SRI LANKA



#### Haycarb Madampe

Designed for the manufacture of standard and value-added carbons and includes impregnated carbon

#### Haycarb Badalgama

Designed for the manufacture of standard and value-added carbons and including washed and pelletised carbons.

#### Ultracarb

A high-tech manufacturing facility for the manufacture of energy storage carbons.

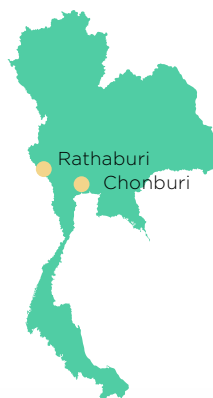
#### Recogen

Sustainable manufacturing of charcoal through a mechanised process with integrated power

**31,800 TPA**  
Production Capacity

**56%**  
of Total Production Capacity

### PRODUCTION FACILITIES IN THAILAND



#### Carbokarn-Chonburi

Designed for the manufacture of standard and value-added carbons and including washed and pelletised carbons.

#### Shizuka-Ratchaburi

Standard carbon manufacturing.

#### CK Regen Systems - Chonburi

Regeneration of spent carbon.

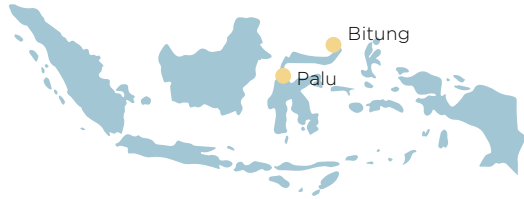
**12,000 TPA**  
Production Capacity

**3,600 TPA**  
Regeneration Capacity

**21%**  
of total Production Capacity



## PRODUCTION FACILITIES IN INDONESIA



### PT Mapalus Makawanua Charcoal Industry - Bitung

Manufactures standard and value-added carbons and washed carbon

### PT Haycarb Palu Mitra - Palu

Standard carbon manufacturing.

**13,000** TPA

Production  
Capacity

**23%**

of Total Production  
Capacity



## STATE-OF-THE-ART LABORATORY INFRASTRUCTURE

State-of-the-art laboratory infrastructure is of significant importance in driving innovation and ensuring the quality of our finished goods.

The analytical laboratory at our Head Office in Colombo, Sri Lanka, is well-equipped with a range of high-tech equipment to support the Group's research and development initiatives.



**8**

laboratories across our  
manufacturing locations.



# Manufactured Capital

Quality assurance laboratories established at each production location enables standard and specific testing of carbons to ensure finished goods meet the technical specifications of customers.

Key laboratory equipment that supports innovation and technical excellence in the Activated Carbon segment includes,

Equipment	Capability
Inductively coupled plasma mass spectrometric (ICP-MS) analyser	Ability to measure metal constituents at trace levels (ppt levels) enables the production of activated carbon with high purity.
Atomic absorption spectroscopy (AAS)	Ability to measure metal constituents in activated carbon facilitates the production of value-added activated carbons and enables maintaining required purity levels for the specialised carbon product portfolio.
ONH Element analyser	Ability to measure surface functional groups (Oxygen, Nitrogen, Hydrogen) in surface modified/treated activated carbon.
Surface area analyser	Measures pore geometry of activated carbon (pore area, pore diameter, pore size distribution, pore volumes of micropores and meso pores) and facilitates fundamental development work.
Laser particle size analysers	Ability to measure particle size and distribution facilitates the ability to maintain the correct drop in pressure at the end application.
Gas displacement pycnometer	Ability to measure high-precision volume measurements and true density calculations of activated carbon.
Coin and pouch cell assembling equipment	Our electrochemical laboratory equipped with instruments related to both coin and pouch cell assemble process specially for sodium ion, lithium ion and supercapacitor cells.
m-Braun Glovebox	Glovebox usually used to maintain dry and inert (Usually use high pure argon) atmosphere to assemble sodium ion, lithium ion and supercapacitor cells.
Arbin Battery tester and Gamry electrochemical workstation	Arbin battery tester together with Gamry electrochemical workstation used to test electrochemical performance of sodium ion, lithium ion and supercapacitor cells.
<b>New investments in 2024/25</b>	
Gas breakthrough testing facility	Developed in collaboration with Donaldson USA for SO <sub>2</sub> , NH <sub>3</sub> , and Toluene.





## ENVIRONMENTAL ENGINEERING SOLUTION SEGMENT

Our Environmental Engineering segment is supported by in-house laboratory facilities capable of conducting key analyses of various in-fluents and effluents. These resources

help support the development of new projects, enable process improvements, and allow for treatment plant capacity enhancements with minimal additions and reduced costs. Our company is also recognised by the Central Environmental Authority as a

specialist and consultant in the field of water pollution control.

## Warehousing

Access to a well-distributed global warehousing network continues to support efficient logistics and inventory management. Our marketing offices in the USA, Europe and Australia maintain warehousing facilities enabling the timely delivery of finished goods and fulfillment of urgent customer orders. We also maintain warehousing facilities at each manufacturing location to store raw materials, semi-finished and finished goods. Additional warehouses are also maintained within proximity to seaports to facilitate the shipment of finished goods. Ongoing investments in enhancing our warehousing network led to the addition of 2 new warehouses in Indonesia for collection of Charcoal.

