



# One *Planet* One *Purpose*

Sustainability Report  
FY 24





At Granules, we recognize that the health of our planet and the well-being of humanity are deeply interconnected. This understanding drives our commitment to sustainability—not as a separate initiative, but as the very foundation of our business strategy. Our purpose, “Healing lives responsibly through pioneering green science,” is more than a statement; it is a guiding principle that shapes every decision we make.

With our climate targets validated by the Science Based Targets initiative (SBTi) and aligned with the 1.5°C pathway, we are on a transformative journey to achieve net-zero emissions by 2050. This commitment extends across our entire product lifecycle—from responsible sourcing and efficient operations to sustainable manufacturing and delivery. Beyond operational efficiencies, we are investing in bold, science-driven initiatives, including green chemistry, solvent and polymer-free formulations, and our long-term Green Molecules Platform through Granules CZRO.

Our innovative approaches, such as Eco Scale and Green Card, integrate sustainability into product development from the outset, ensuring greener solutions at every stage. By fostering collaboration across the pharmaceutical value chain, we are redefining industry benchmarks, addressing Scope 3 emissions, and decarbonizing healthcare.

Sustainability at Granules goes beyond environmental impact. We are committed to ethical governance, employee well-being, and community welfare, ensuring long-term value creation for all stakeholders. With One Planet, One Purpose, we are shaping a future where business growth and sustainability go hand in hand—creating lasting impact for generations to come.

# One Planet. One Purpose.

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Our reports are available on  
<https://granulesindia.com/wp-content/uploads/sustainability/>



# Our Reporting Framework



**We are pleased to present Granules India Limited's inaugural sustainability report. This report highlights our comprehensive sustainability achievements from April 1, 2023, to March 31, 2024 (GRI 2-3), and also includes the environmental performance for the first nine months of FY 25 (April – December 2024). It details our efforts to integrate sustainability into our core culture. Throughout this report, Granules India Limited will be referred to as "Granules."**

In FY 23-24, we published a Business Responsibility and Sustainability Report (BRSR), documenting our sustainability performance in alignment with the Securities and Exchange Board of India's (SEBI) 2021 guidance. We are committed to publishing an annual sustainability report to highlight our progress on Environmental, Social, and Governance (ESG) criteria.

## Reporting Standards and Frameworks

This Report adheres to the Global Reporting Initiative (GRI) 2021 standards and aligns with the Task Force on Climate-Related Financial Disclosures (TCFD) recommendations. The GRI Framework provides a holistic structure for reporting our sustainability performance, enhancing the Report's global relevance. Integrating TCFD elements, especially in the risk assessment section, underscores Granules' commitment to achieving net zero emissions by 2050, prioritizing climate action.

We have mapped the United Nations Sustainable Development Goals (UNSDGs) and are proud signatories of the United Nations Global Compact (UNGC). We adhere to the Sustainability Accounting Standard Board (SASB) guidance for Biotechnology & Pharmaceuticals, addressing our industry's unique disclosure requirements. These principles support our sustainability strategy and commitment to tackling critical global challenges.

## Scope and Reporting Boundary

This Report covers the sustainability performance of our operations in India, including our corporate office, six manufacturing units, and four R&D centers, along with data from our subsidiaries, noting any specific exclusions in the relevant sections.

## Restatement of Information

This is the inaugural report, so no restatements or corrections apply.

## External Assurance

This Sustainability Report has undergone limited external assurance by British Standard Institution (BSI). We verified the reliability and accuracy of our data following GRI guidelines, using specific assumptions and methodologies outlined in the Report. The GRI has been notified of the application of its standards for this Report's preparation.

## Feedback

We prioritize transparency in all our disclosures and communication, especially on ESG matters. Stakeholder input is vital to our reporting approach, so we welcome and appreciate any feedback or suggestions you may have after reviewing this report. Please address these to [esg@granulesindia.com](mailto:esg@granulesindia.com).





# Message from Chairman and Managing Director



## Dear Stakeholders,

It gives me immense pride to present Granules India Limited's very first Sustainability Report. This milestone reflects our commitment to drive positive change and underscores our belief that businesses can and must be powerful catalysts for a healthier planet and a healthier society.

The alarm bells of climate change are ringing louder than ever. Headlines from the State of the Climate Update 2024 reveal not only record-breaking heat, some of the hottest years on record have occurred in the last decade, including 2024, but also a stark escalation of extreme weather events. Unprecedented floods, droughts, and wildfires wreak havoc across continents, while ocean heat content climbs and polar ice continues its decline. These shifts signal that our global climate system is changing at an alarming pace, threatening ecosystems and communities alike.

Even though the outlook seems daunting, the call to limit global warming to 1.5°C remains urgent and achievable. This critical threshold demands bold action from countries, societies, and industries worldwide. By significantly slashing emissions, accelerating the shift to renewable energy, and embracing green technologies, we can put the world on a safer trajectory. Indeed, this is both a responsibility and a monumental opportunity, one that urges us to unite and act decisively.

## Role of Industry, Healthcare, and Pharmaceuticals

While the global momentum around renewable energy and electric vehicles is encouraging, there is still a massive challenge ahead: decarbonizing industrial processes. The industrial sector accounts for roughly 30% of global greenhouse gas emissions, with Iron & Steel, Cement, and Chemicals among the largest contributors. Meanwhile, the healthcare sector vital in saving lives emits around 2 billion tonnes of CO<sub>2</sub> annually, ranking it as the fifth largest global emitter if it were a country.

As part of the healthcare ecosystem, the pharmaceutical industry holds a unique dual responsibility: not only to protect and heal human health but also to safeguard the health of our planet. Through innovation and sustainability driven strategies, we have the power to reshape our sector. At Granules,

we fully embrace this responsibility by pioneering green science and championing the transition to low-carbon solutions, a commitment that defines our approach to healthcare for today and for generations to come.

## Granules Sustainability: Our Commitment and Action Plan

Sustainability lies at the heart of Granules' strategic vision. To cement our leadership in sustainable pharmaceutical manufacturing, we conducted a thorough materiality assessment aligned with Global Reporting Initiative (GRI) standards and mapped our actions to the United Nations Sustainable Development Goals (SDGs).



**We have measured and disclosed our full value chain emissions across Scope 1, 2, and 3, and estimated the Product Carbon Footprint for our key molecules covering 65% of our revenue.**







“

**In line with the 1.5°C trajectory, our near-term, long-term, and net zero climate targets have been validated and approved by the Science Based Targets initiative (SBTi).**

”

This underscores our commitment to comprehensive decarbonization, which extends from renewable energy procurement to green molecule synthesis. We have meticulously analyzed our Scope 3 emissions, formulated a Net Zero roadmap, and initiated Carbon Emission Reduction Measures (CERMs) such as accelerating renewable energy adoption, enhancing operational efficiencies, and exploring low-emission biofuels.

“

**Through close collaboration with our suppliers, covering over 88% of our value chain, we are embedding sustainability across every facet of our operations.**

”

Moreover, our Eco Scale and Green Card programs integrate sustainability into product development, emphasizing responsible business practices. By embracing green chemistry principles such as biocatalysis and flow chemistry, we aim to minimize environmental impact in our manufacturing processes. Our partnership with NIPER Mohali to establish a Centre of Excellence for Innovative and Sustainable Pharmaceuticals further advances our commitment to research-driven sustainability.

“

**One of our boldest and long-term initiatives is Granules CZRO, a green pharma platform designed to decarbonize the entire supply chain by combining green energy and green molecule platform.**

”

Focusing initially on high-volume molecules like Paracetamol and Metformin, Granules CZRO takes a leap toward medicines with near net-zero carbon footprints. In parallel, we are proud to be a founding member of the World Economic Forum's Centre for the Fourth Industrial Revolution (C4IR) in Telangana, a testament to our dedication to creating a more equitable and sustainable future for healthcare.

As we unveil our first Sustainability Report, we are filled with optimism for the road ahead. The climate crisis is formidable, but through collaboration, innovation, and an unwavering commitment, we can overcome these challenges. Granules is determined to walk this path hand in hand with our stakeholders, continuously measuring our progress and enhancing our initiatives.

We promise to keep you updated on our sustainability journey every year, charting our collective efforts to build a healthier planet and society. Together, let us pioneer green science, decarbonize healthcare, and create lasting value for future generations.

Thank you for your continued support,

**Dr. Krishna Prasad Chigurupati**

Chairman & Managing Director





# Foreword



**Mr. Ovais Sarmad**

Vice Chair, GHG Protocol Steering Committee  
Advisor on Sustainability

2024, the hottest year on record, is a stark reminder that global warming is no longer a distant threat but an urgent reality demanding immediate and collective climate action beyond net zero commitments. As someone who has witnessed the global evolution of sustainability and climate action firsthand, I am deeply inspired by the ambitious strides Granules India is making. The commitment to embed sustainability across their operations, from pioneering green molecules through CZRO to addressing the complexities of Scope 3 emissions, is both commendable and essential. Granules' focus on renewable energy adoption, supplier collaboration, and green manufacturing reflects a forward-thinking approach that aligns with the urgent need for climate action.

The pharmaceutical sector, with its dual responsibility to heal humanity and protect the planet, stands at a unique crossroads. Granules' integration of ESG principles, science-based targets, and a robust sustainability strategy place them at the forefront of this critical transition. Their motto, '*Healing lives responsibly through pioneering green science*,' embodies a vision that transcends immediate business goals to embrace a broader impact on the planet and society.

As we face the hottest years in human history, companies like Granules are setting an example of how industry can be a force for good. Their work not only advances global climate goals but also paves the way for a sustainable and equitable future. I am honored to contribute to this transformative journey.

*Mr. Ovais Sarmad is the Vice Chair GHG Protocol Steering Committee, former Deputy Executive Secretary of the UNFCCC (2017 - 2023), former Chief of Staff and Director of Resources Management at International Organization for Migration (1990 - 2017).*

# Message from JMD and CEO



**Dr. K.V.S. Ram Rao**

Joint Managing Director &  
Chief Executive Officer

At Granules, sustainability is at the heart of our business strategy, driving our mission to create value responsibly while addressing the evolving challenges of the pharmaceutical industry. I am proud to share our key milestones in this inaugural sustainability report, which demonstrates our commitment to environmental stewardship, operational excellence, and social responsibility.

This year, we achieved a milestone by obtaining approval for our science-based targets from the Science Based Targets initiative (SBTi), for both our net zero goals as well as near term goals aligned with 1.5°C. We have made significant progress in reducing our environmental footprint across Scope 1 and Scope 2, achieving a 22% absolute reduction in greenhouse gas (GHG) emissions compared to the baseline year. Renewable energy now contributes 47.4% of our total energy consumption, a testament to our efforts to transition towards cleaner, sustainable energy sources.

Our focus on waste management has also yielded impressive results, with 88% of hazardous waste diverted from landfills through recycling, co-processing, and other sustainable disposal methods. This highlights

our dedication to minimizing environmental impact and fostering a circular economy within our operations.

Innovation remains a cornerstone of our business and sustainability strategy. By integrating green science and advanced technologies into our processes, right from product development and through its life cycle, we are pioneering sustainable solutions in pharmaceutical manufacturing. Our collaboration with industry and academia further strengthens our capacity to deliver innovative and environmentally conscious products.

Beyond environmental sustainability, we remain deeply committed to employee well-being and community development. Our initiatives to ensure a safe, inclusive, and empowering workplace have continued to drive employee engagement and productivity. Simultaneously, our community programs focus on health, education, and environmental sustainability, creating a positive and lasting impact in the regions where we operate.





# Performance Highlights



## Environment

# 22%

Absolute reduction in GHG emissions  
(Scope 1 & Scope 2)\*

## 47%

Electricity consumption  
from renewable sources

## 40%

Wastewater recycled  
and reused

## 88%

Hazardous waste  
co-processed

## 29,200 MT

GHG emissions avoided

## 915,945 kWh

Energy saved



## Social

# 11.7%

Workforce female representation

## Zero

Confirmed cases of  
discrimination

## 1,200

Students trained through  
Pharma Pathshala

## 31%

Increase in  
women employees\*

## 14.3%

Increase in  
community beneficiaries\*

## 10%

New women recruits



## Governance

# 100%

Employees trained in the  
Code of Conduct

## 50%

Independent Directors

## Zero

Customer complaints  
on cybersecurity

## 25%

Women in Board

## Zero

Product recalls





## Our Purpose

# Healing Lives Responsibly through Pioneering Green Science

## Our Vision

To establish ourselves as a world leader in the green chemical and pharmaceutical industry by harnessing cutting-edge technologies to enhance the quality of life.

## Our Values



### Challenging the Limits

Our unwavering belief in pushing boundaries and thinking beyond the possible drives us to challenge the status quo, embrace risk, and consistently pursue innovation fearlessly, without necessarily conforming to established practice. In doing so, we leverage the power of science in the best way possible.



### Customer Driven

Being driven by the customer's best interests is a way of life for us. It fuels our passion to develop tailored solutions that prioritize customer preferences. It inspires us to go above and beyond and forge lasting, meaningful relationships.



### Quality Everywhere

Quality excellence is not just a goal but a relentless pursuit embedded in our DNA. We are driven by an approach to achieve 'best-in-class' across our products, operations, processes, and conduct. We believe this is the only way to go further, be a preferred partner for our customers, and inspire confidence and ambition in all stakeholders.



### Futuristic Thinking

We think about tomorrow and beyond. Our actions and efforts must have a positive and transformative impact for a long time to come, and everything we do is evaluated through this prism.



### Empowering Employees

People are the beating heart of Granules. They must be encouraged and empowered to be the best version of themselves. Through our approach, we enable and empower our colleagues and communities to achieve their highest potential, co-creating opportunities for collaboration and impact.



### Environmental Stewardship

Being a positive force for the planet and its preservation is a fundamental duty that we fulfill through our efforts in green science, responsible practices, and an approach of trusteeship. Long-term success is based on our ability to partner in fostering a harmonious relationship with the planet and caring for it for the benefit of future generations.







# We are Granules

Over the past four decades, we have grown from single paracetamol manufacturing facility to a multi-faceted global pharmaceutical company, delivering safe, cost-effective, and high-quality medicines. Strategic partnerships, particularly in the United States, and investments in research and development have helped us expand our product offerings to include finished dosages (FDs) and extend operations across India. Since inception, our actions have aligned with our commitments, embedding responsible practices at every stage from design through delivery.

## 6,525+

Workforce

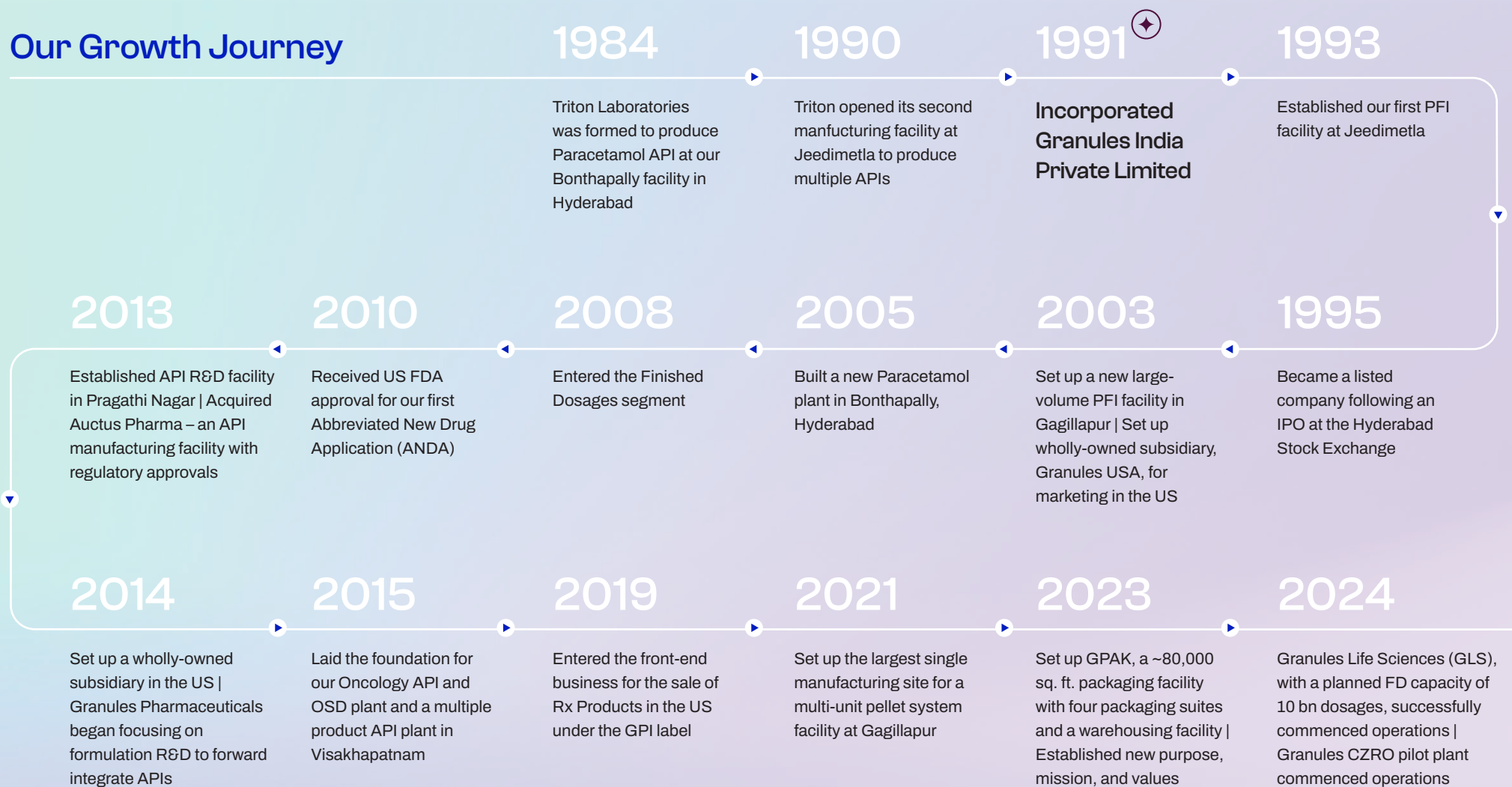
## 10

State-of-the-art  
manufacturing facilities

## 300+

Global customers  
across 80+ countries

## Our Growth Journey





# Our Sustainability Journey

FY 23-24 marked another crucial milestone in our journey of sustainable value creation. Over the years, we have achieved remarkable progress, and now we are harnessing our solid foundations to move closer to our vision.



See [Sustainability Data Summary](#) for full metrics and methodology.





- ▶ Achieved SBTi validation and approval for both near-term and long-term goals. Aligned with the 1.5°C pathway towards net zero by 2050 or sooner
- ▶ Achieved 1 MW on-site rooftop solar installation at Gagillapur Unit
- ▶ Achieved 69% Renewable Energy share through PPA, Rooftop Solar and I-RECs

**2030 TARGETS**

Reduce Scope 1 and Scope 2 absolute emissions by 42%

Reduce Scope 3 absolute emission by 42%

Sourcing 100% renewable electricity

Achieve Zero Waste to Landfill

Touch 1 million+ lives through CSR programs

Achieve gender pay parity

Achieve a 100% increase in women's employment compared to FY 24

**2027 TARGETS**

Energy intensity reduction by 20%

Water intensity reduction by 27%

27% reduction in waste to landfill

**2032 TARGETS**

Achieve Water Positivity

**2050 TARGETS**

Achieve Net Zero emissions

**2024****2027****2030****2032****2050****MID-TERM STRATEGY****Scope 1**

- ▶ **Demand-side Initiatives Area:** Boiler Plant Optimization | Condensate Recovery
- ▶ **Supply-side Initiatives Area:** Switching from Coal to Biomass Boiler

**Scope 2**

- ▶ **Demand-side Initiatives Area:** Chiller Plant Optimization | Pumping Optimization | Air Compressor Optimization
- ▶ **Supply-side Initiatives Area:** Renewable Energy through PPA & Group Captive

**Across Value Chain**

- ▶ Supplier Sustainability Program to work with supplier to decarbonize value chain | Supplier Mix optimization | Green and sustainable sea cargo

**Eco Scale in Product Development**

- ▶ Optimized resource utilization | Incorporating circularity in process development

**LONG TERM STRATEGY****Green Molecule Platform**

- ▶ **24x7 Carbon free energy:** Renewable Energy plus Battery storage
- ▶ Green molecules such as Green Hydrogen, Green ammonia
- ▶ Green chemicals for Pharmaceuticals (KSM/Advanced intermediates starting with raw material for Paracetamol and Metformin)

**Green Chemistry Platform**

- ▶ **Enzymatic bio catalysis**
- ▶ **Flow & continuous manufacturing**
- ▶ **Granules Eco scale**

**Sustainable Formulations**

- ▶ **Solvent and polymer free formulations**
- ▶ **Plant based excipients**
- ▶ **Water efficient manufacturing**
- ▶ **Biodegradable and sustainable packing**





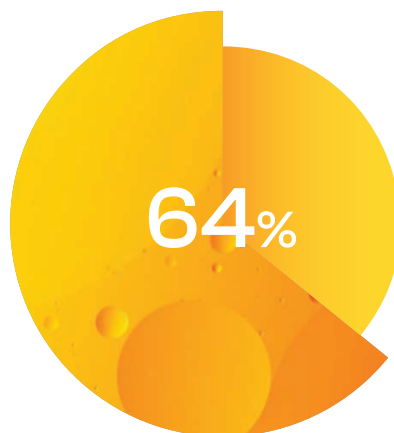
# Our Products

We have a diverse portfolio of products across three main business segments. Our top three medicines are the largest molecules by volume in the Oral Solids category and rank among the top 10 on the WHO list of essential medicines.

## Business Segments



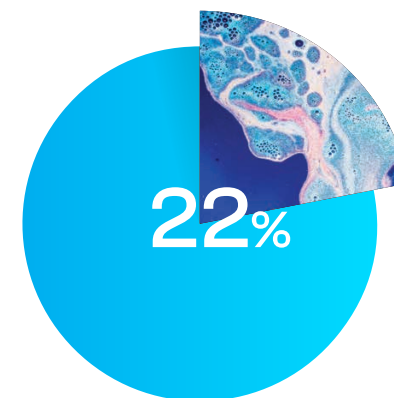
### Finished Dosages (FD)



### Pharmaceutical Formulation Intermediates (PFI)



### Active Pharmaceutical Ingredients (API)



#### Core Capabilities and Share of Revenue (% as share of Revenue)

- Our FD portfolio includes Tablets, Caplets, Press-fit Capsules, blister packs, and bottles
- At our Gagillapur facility, we produce rapid- and extended-release tablets, utilizing advanced automation, durable equipment, and robust manufacturing systems
- We have 92 approved ANDAs and Dossiers across US, Europe, Canada, UK and Rest of the world

- We specialize in large-scale PFI production with a 6-ton batch capacity at our Jeedimetla and Gagillapur facilities
- Our efficient process enables direct transfer from drums to hoppers, establishing us as a global PFI supplier

- We produce high-volume APIs like Paracetamol, Metformin, Guaifenesin, and Methocarbamol with a focus on quality and affordability
- With dedicated R&D efforts to expand our API portfolio, we have added products across categories, including anti-hypertensives, antihistamines, anti-infectives, analgesics, anti-coagulants, anti-fibrotic and platelet inhibitors







# Catering to a Global Customer Base

We have established a strong global presence, Supplying over 60 molecules to more than 300 customers across 80 countries. With operations in India and the US, supported by four R&D centers in India, we drive innovation, scale, and efficiency, making Granules the preferred partner for leading pharmaceutical companies and retailers across the US, EU, UK, and other key markets.

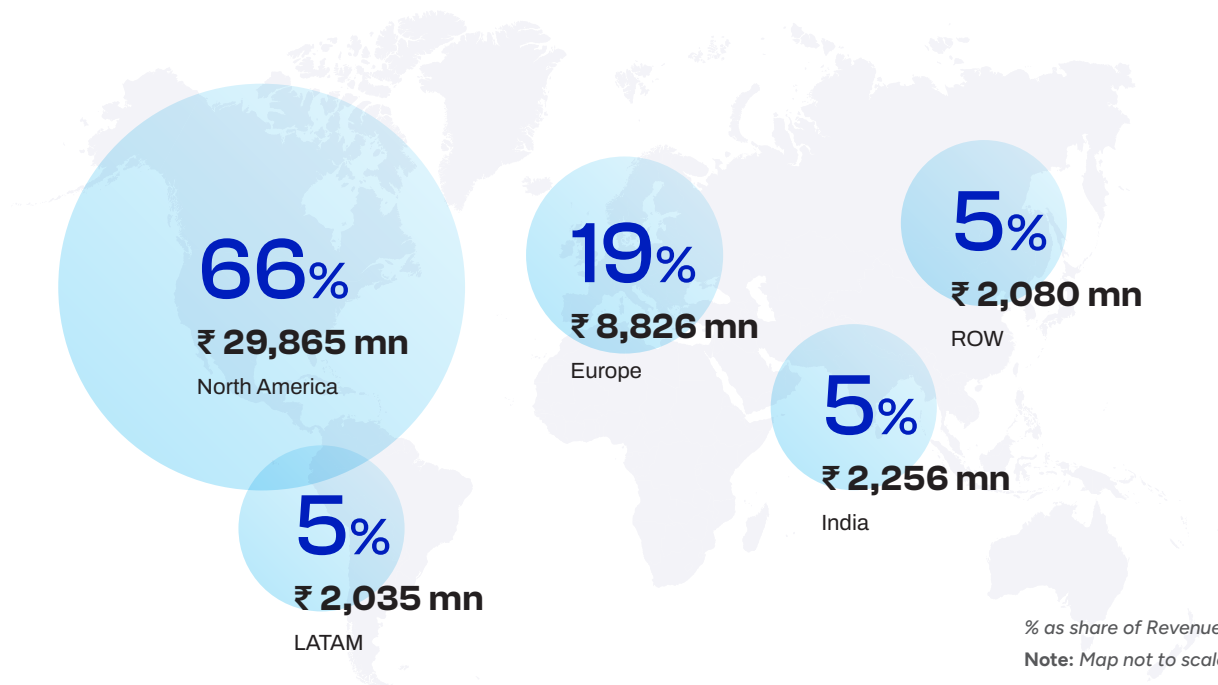


**Ms. Priyanka Chigurupati**  
Executive Director

At Granules, we recognize that achieving sustainability in our industry demands a comprehensive approach encompassing the entire value chain. While the pharmaceutical sector has made notable strides in reducing Scope 1 and Scope 2 emissions - those stemming directly from internal operations, these account for only a small fraction of our overall carbon footprint. The bulk of emissions, over 80%, arises from Scope 3 sources within the supply chain, a critical area that demands increased focus and action as we work toward the goals of the Paris Agreement. Granules is committed to supporting our customers in addressing these challenges and meeting their climate goals.

By embedding sustainable practices into every stage of our operations, from efficiency measures and renewable energy adoption to sustainable product development and manufacturing, culminating in our long-term vision of green molecules through our CZRO subsidiary, we are embracing green science for our customers to reduce their Scope 3 emissions and achieve meaningful climate milestones.

Trust-based partnerships are central to our philosophy, fostering collaboration and innovation to drive shared success. Together, we are shaping a future where sustainability is fundamental to every interaction, advancing toward a greener, more responsible world.



	Manufacturing Units	Capacity	Regulatory Approvals
<b>API</b>	Bonthapally, Telangana Jeedimetla, Telangana Vizag (Unit IV), Andhra Pradesh Vizag (Unit V), Andhra Pradesh Bonthapally II (API Intermediate)	34,560 TPA 4,800 TPA 380 KL 15 KL 61.5 KL	US FDA, EDQM, WHO, COFEPRIS, INFARMED US FDA, EDQM, COFEPRIS, WHO, CDCSO US FDA, KFDA, EU GMP, WHO GMP, EDQM EU GMP
<b>PFI</b>	Gagillapur Jeedimetla, Telangana	23,200 TPA 1,440 TPA	US FDA, COFEPRIS, TGA, MCC, INFARMED WHO GMP, COFEPRIS, INFARMED
<b>FD</b>	Gagillapur Virginia, USA Vizag (Unit V) Granules Life Sciences (GLS)	26.8 bn 1.5 bn 1.1 bn 2.5 bn (Phase-1)* 7.5 bn (Phase-2)#	US FDA, MCC, COFEPRIS, TGA, INFARMED US FDA, DEA EU GMP
<b>Packaging</b>	Virginia, USA	2 OTC lines and 1 Rx line	US FDA

\* Phase-1: Annual capacity by Mar-2025

# Phase-2: Annual capacity by 2026



# Awards & Recognitions



2024



## BW PharmaWorld Person of the Year Award 2024

Granules India's Chairman and Managing Director honoured for his exemplary leadership and transformative contributions to the pharmaceutical industry

2024



## Golden Peacock Awards – Winner of Sustainability 2024

Recognised for outstanding contributions to sustainability in business practices

2024



## ET RE Pharma Awards

Awarded for excellence in contribution towards sustainability within the pharmaceutical industry

2024



## CII 25<sup>th</sup> National Award for Excellence in Energy Management 2024

Recognised for excellence in energy efficiency and sustainable energy management practices

2023



## QMS Integration Award & Quality Culture Transformation Award

Granules India Limited (Gagillapur) received these prestigious awards for their innovative enhancements to the batch release system, which reduced errors and cycle times since 2017

2023



## Future Ready Organization

Granules India Limited was honored with the prestigious Economic Times Future Ready Organization Award, a testament to our commitment to innovation and preparedness for the future

2023



## TSREDCO Awards TSECA 2023

Received the Gold from Telangana State Energy Conservation Awards under Large Scale Industry category

2023



## Most Trusted Brands of India 2023

Recognized for exceptional trust and reliability in delivering products and services

2023



## IGBC Green Factory Buildings – Crusader of Sustainability

Honored for Granules Life Sciences Limited's commitment to sustainable factory operations

2022



## Gold and Silver Winner at the 10<sup>th</sup> CII National Poka-Yoke Competition

Awarded for excellence in implementing quality control and error-proofing manufacturing processes





# Partnerships, Collaborations and Ratings

## Commitments



Our climate targets covering Near-term, Long-term, and Net Zero goals (2050 or sooner), aligned to 1.5°C pathway, have been validated and approved by SBTi & aligned with RACE TO ZERO



Committed to UNGC 10 Principles of Human rights, Labor, Environment, and Anti-corruption



Granules Gagillapur unit has cleared the C-TPAT (Customs Trade Partnership Against Terrorism | US. Customs and Border Protection) Audit with 84% score

## Sustainability Ratings



Received 'C Score' in Climate Change Disclosure



\*Achieved by Unit - 1 Bonthapally

Received EcoVadis Silver Rating for Granules Unit-1 Bonthapally and Bronze Rating for Unit-2 Jeedimetla



Granules MSCI ESG Ratings

## Partner Collaboration Platforms



## Membership of Associations

Granules is a member of:



Pharmaceutical Supply Chain Initiative (PSCI)



Bulk Drug Manufacturer Association of India (BDMAI)



Confederation of Indian Industry (CII)



The Federation of Telangana and Andhra Pradesh Chambers of Commerce and Industry (FTAPCCI)



World Economic Forum Center for fourth Industrial Revolution (C4IR) Telangana - Founding Member





# Our Sustainability Strategy and Pillars



## Environmental Stewardship Beyond Limits



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## Breaking Barriers



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## Integrity in Action



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In FY 24, we created a comprehensive strategy to achieve our sustainability vision, defining specific targets and initiatives.

Our sustainability vision is built on a foundation of well-defined pillars and strategic initiatives aimed at driving meaningful impact. The Board oversees implementation, monitors progress, and recommends changes as needed. Our sustainability strategy integrates social and environmental considerations into operations, exceeding compliance and aligning with global benchmarks. Sustainability remains central to our vision, fostering environmental stewardship through collaboration with academia, government, and social organizations.

### Strategic Initiatives

This year, we introduced a comprehensive sustainability strategy and reporting framework, following a detailed evaluation of our operations. These initiatives reinforce our commitment to pioneering industry-leading innovations.

### Focus Area Identification

Key ESG priorities were identified through stakeholder engagement and a structured materiality assessment.

### Our Stakeholders

Investors/Shareholders

Board of Directors

Suppliers & Business Partners

Regulatory Bodies

Customers

Employees

Workers

Communities & NGOs





# Message from Chief Strategy & Sustainability Officer



**Sanjay Kumar**

Chief Strategy and Sustainability Officer

At Granules, sustainability is more than a commitment—it is the cornerstone of our strategy to deliver long-term value responsibly. As we navigate the challenges of climate change, we are proud of our comprehensive approach to decarbonization. Our Science Based Targets initiative (SBTi)-validated goals, spanning near-term, long-term, and net zero pathways, reflect our alignment with the 1.5°C trajectory.

Granules' focus extends beyond reducing Scope 1 and 2 emissions; with Scope 3 emissions constituting approximately 88% of our footprint, we have launched a Supplier Sustainability Program to collaborate with top suppliers, driving transparency, disclosures, and actionable climate goals. Initiatives such as Granules CZRO and our green molecule platform underscore our dedication to pioneering innovative solutions for a comprehensive solution to Scope 3 emissions and thus driving a sustainable future.

Equally, we prioritize employee well-being, gender diversity, and skill development while advancing impactful CSR programs in health, education, and community well-being. By integrating ESG principles across our operations and fostering trust-based partnerships with stakeholders, we aim to create a resilient, sustainable ecosystem.

Together, let us embrace innovation and collaboration to shape a healthier, greener future—one where sustainability drives every interaction and decision.

**Our Science Based Targets initiative (SBTi)-validated goals, spanning near-term, long-term, and net zero pathways, reflect our alignment with the 1.5°C trajectory.**

**With Scope 3 emissions constituting approximately 88% of our footprint, we have launched a Supplier Sustainability Program to collaborate with top suppliers, driving transparency, disclosures, and actionable climate goals.**

**22%**

**Absolute reduction in GHG emissions (Scope 1 & Scope 2)**

*Representation or advocacy at global events like IOD, CPHI*



SCIENCE  
BASED  
TARGETS

DRIVING AMBITIOUS CORPORATE CLIMATE ACTION

THE NET  
ZERO  
STANDARD

APPROVED NET-ZERO TARGETS







# Stakeholder Engagement

We prioritize the importance of engaging key stakeholders for long-term success. Continuous engagement at all organizational levels involves various mechanisms to value insights and monitor outcomes, led by senior leadership and operational teams with the Board's oversight.

## Legend

- Frequency of Engagement
- Channels of Communication
- Internal Stakeholder
- External Stakeholder



## Investors and Shareholders

Quarterly, Half-yearly, Annual, Board updates, Need-based

Investors and shareholders are key stakeholders providing essential financial resources that shape our business strategy and sustainability adoption, with their valuable insights and feedback.

- Investor and Analyst Meetings
- Presentations at Industry Forums
- Circulation of the Annual and Sustainability Report
- Communicating Financial Results to Shareholders
- Annual General Meeting



## Customers

Quarterly, Half-yearly, Annual, Board updates, Need-based

Our operations focus on our valued customers, prioritizing their health and well-being while fostering loyalty. Therefore, the sustainability impact on this group is crucial to us.

- Customer Meets and Feedback
- Customer Visits and Manufacturing Facility Audits



## Suppliers and Business Partners

Events, Need-based

Suppliers are foremost in our supply chain and are prioritized in our decarbonization strategy. It is crucial to balance supplier relationships with ESG evaluation.

- Supplier Meets
- Visits
- Supplier audit
- Facility Visits
- Strategic Business Partner Training and Development

## Community and NGOs

Quarterly, Half-yearly, Annual, Board updates, Need-based

We believe that business expansion is closely tied to community advancement. A collaborative ecosystem is crucial, as businesses significantly impact their ESG initiatives. Thus, local communities and NGOs supporting our efforts are vital stakeholders.

- Interactions through CSR Initiatives



## Employees

Quarterly, Half-yearly, Annual, Board updates, Need-based

Our employees are significant catalysts in our pursuit of quality excellence. Their innovation, dedication, and zeal help us meet high-quality standards and sustain our market presence. We prioritize their contributions and well-being in the workplace.

- Monthly and Quarterly In-House Publications
- Quarterly Communication by the Senior Leadership Team
- HR Communication
- Engagement Programs



## Workers

Quarterly, Half-yearly, Annual, Board updates, Need-based

Workers' health and safety are paramount in our industry, and ensuring their satisfaction and rights at work is essential for promoting social sustainability.

- Daily, Monthly and Quarterly In-House Publications
- HR Communications
- Safety Programs

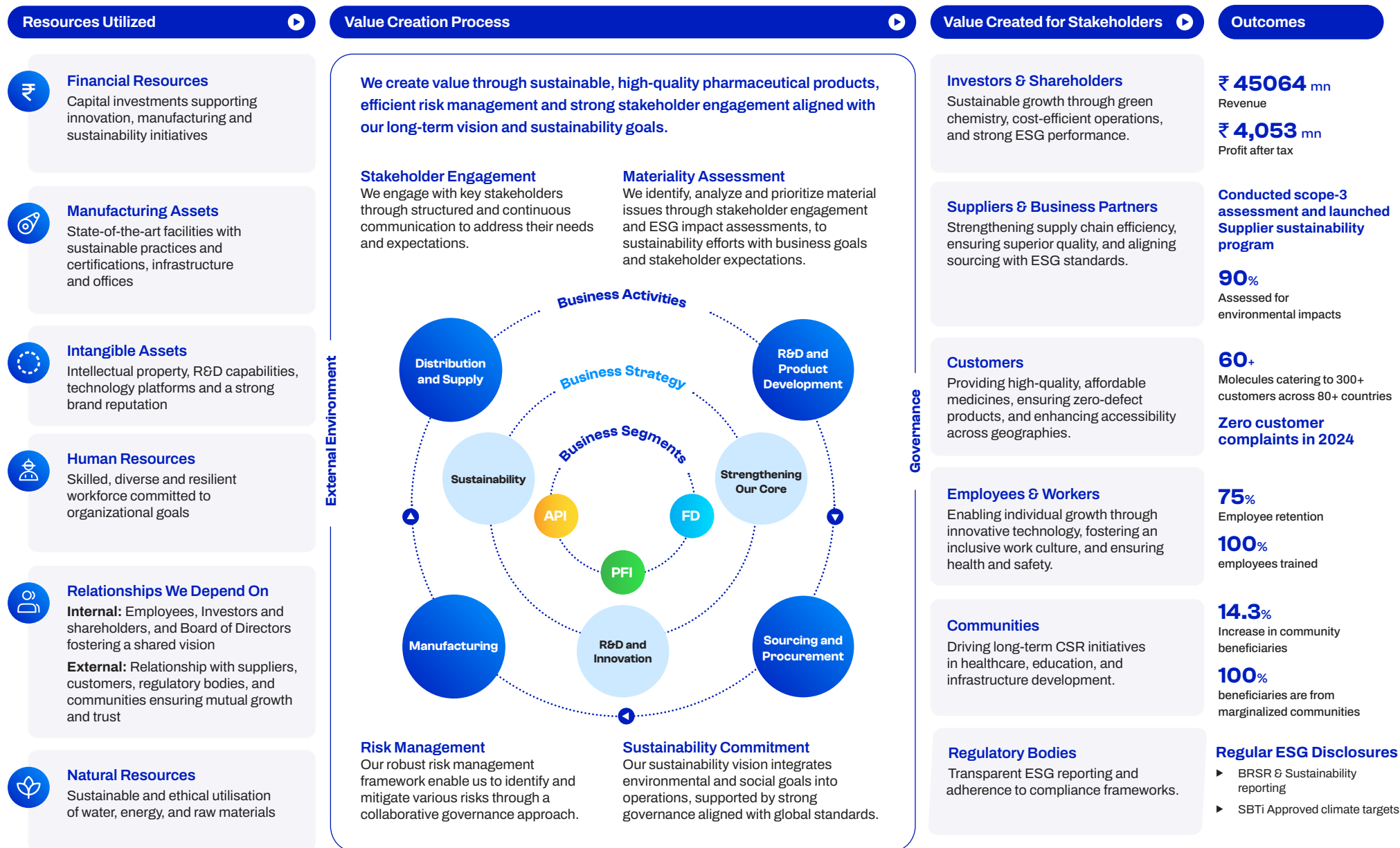




# Creating Value for Stakeholders

We aim to expand our footprint and improve product accessibility while creating value for societies and communities. Our comprehensive value-creation model highlights the mutual impact between our stakeholders and us.

## Value Creation Model





# Materiality Assessment

Granules conducts a dual materiality assessment that evaluates the impact of environmental, social, and governance (ESG) factors on the Company and the effects of its operations on the broader environment and society. This approach acknowledges the interconnectedness of climate change, recognizing Granules' role in influencing and contributing to these issues. By addressing these dimensions the assessment provides nuanced and valuable insights into ESG risks and opportunities, facilitating informed decision-making aligned with the Company's sustainability goals and responsibilities.

In FY 23, Granules conducted a Double Materiality Assessment (DMA) to identify key sustainability issues for the organization and its stakeholders analyzing, their environmental and social impacts from both inside-out and outside-in perspectives of the Company.

## Impacts

This outlines the potential adverse or beneficial effects of Granules on the environment and society, including human rights implications related to its operations, products, and business partnerships. For example, Granules positively impacts society by promoting inclusivity in everyday health.

## Risks and Opportunities

These are unpredictable environmental, social, or governance events that can significantly impact Granules' financial performance, such as product recalls or quality issues.



## Stakeholder's contribution and validation of Granules' material issues, their impacts, risks, and opportunities.

**We gathered responses from around 97 stakeholders comprising Board members, senior leadership, employees, investors and research analysts, NGOs, suppliers, and vendors.**

The topics were selected based on insights from global frameworks such as the Global Reporting Initiative (GRI), Sustainability Accounting Standards Board (SASB), Business Responsibility and Sustainability Report (BRSR), Carbon Disclosure Project (CDP), and Task Force on Climate-related Financial Disclosures (TCFD), as well as macro industry trends, peer benchmarking, and aspects highlighted by rating agencies like MSCI, CRISIL, and S&P aligned with Granules' business goals.

## Process of Materiality Assessment

Identification of topics based on international standards, peer benchmarks

Engagement with stakeholders to rate the importance and impact of material topics

Analysis of data collected through an online survey

Arrival at final list of 13 material topics to focus on over the next 3 years

Using survey results to rank material topics by priority

Sustainability governance emerged as a key focus in this assessment and is central to our sustainability strategy and action. It guides our initiatives, establishes a solid foundation, and embeds sustainability into our corporate strategy. As a result, we have elevated sustainability governance from material topics (hence, not reflected in the list of topics) to a fundamental component of our strategy, ensuring a sustainable future for our Company

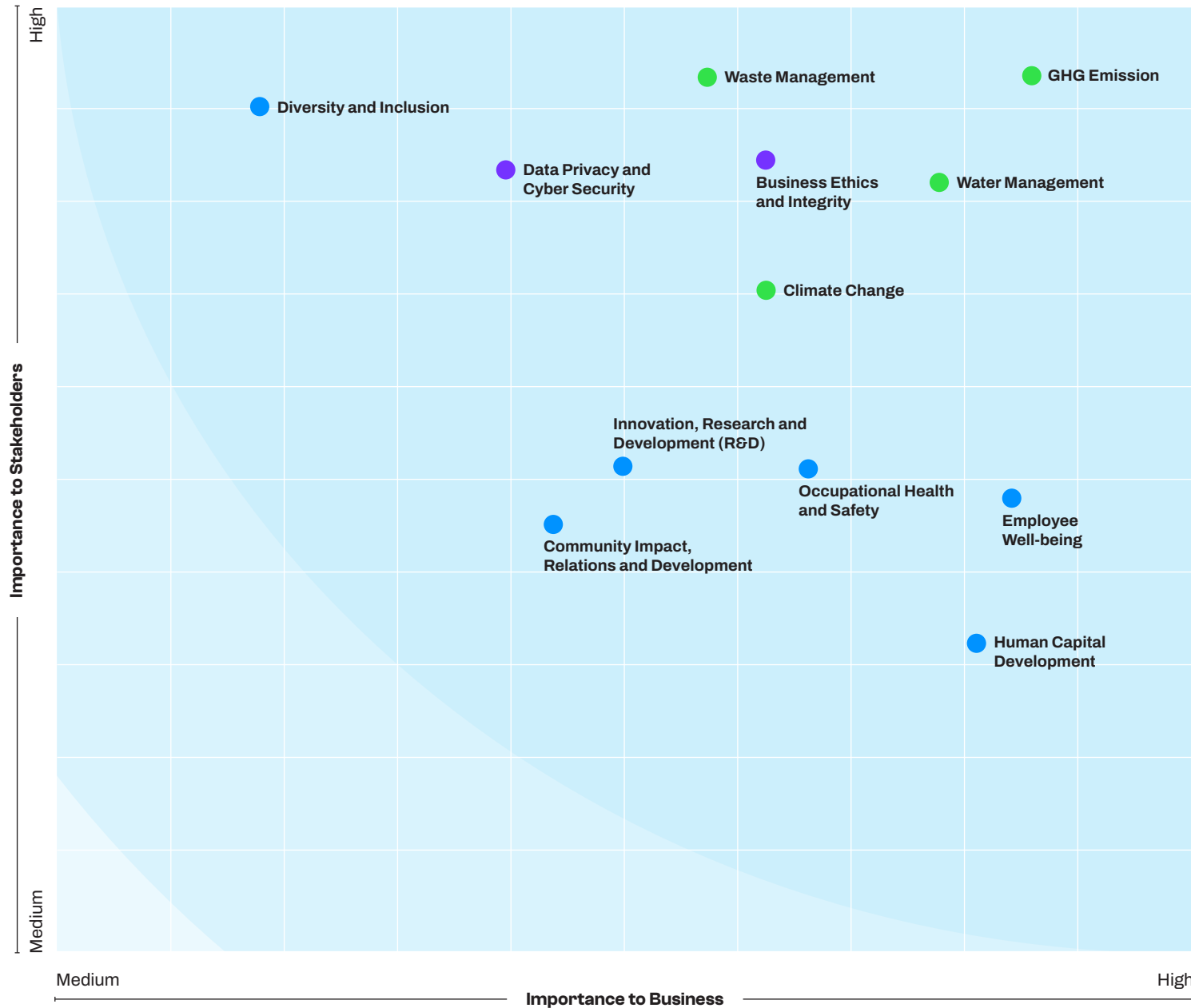
and the communities we serve. The final list includes 13 material topics refined from an initial 33.

This assessment has enabled Granules to enhance its sustainability and business strategy. Granules is committed to updating its Double Materiality Assessment every three years to align with industry best practices.





# Materiality Matrix

**Environment****Social****Governance**



## List of Material Topics

# Environment



### Greenhouse Gas (GHG) Emissions

Reducing our supply chain's carbon footprint is the main priority as Scope 3 emissions surpass Scope 1 and 2 combined. We aim for net zero emissions by 2050 through a comprehensive decarbonization strategy.

#### Impact Boundary

Within and outside Granules

#### Relevant SDG Indicators



**13.2.2** Total greenhouse gas emissions



### Climate Change

We prioritize green design and responsible manufacturing through collaborations and circular economy principles. Our key focus areas for minimizing environmental footprint include energy conservation, renewable energy use, and green hydrogen technologies.

#### Impact Boundary

Within and outside Granules

#### Relevant SDG Indicators



**7.2.1** Renewable energy share in total final energy consumption

**7.3.1** Energy intensity measured in terms of primary energy and GDP

**13.2.2** Total greenhouse gas emissions



### Water Management

Responsible water use is essential for reducing our environmental impact. We have implemented several water recycling, saving, and wastewater reuse initiatives to reduce our water consumption.

#### Impact Boundary

Within and outside Granules

#### Relevant SDG Indicators



**6.3.1** Proportion of safely treated domestic and industrial wastewater flows

**6.4.1** Change in water-use efficiency over time

**12.2.1** Material footprint

**12.5.2** Tons of material recycled

**15.2.1** Progress towards sustainable forest management



### Waste Management

Effective waste management is critical for green building certification and sustainability. We adhere to water disposal regulations and are close to a 100% recycling rate for non-hazardous waste by implementing the 3R principle (reduce, reuse, recycle).

#### Impact Boundary

Within and outside Granules

#### Relevant SDG Indicators



**12.5.1** Tons of material recycled

**12.4.2 (b)** Proportion of hazardous waste treated, by type of treatment





# Social



## Employee Well-being

In an industry where precision is vital for customer health and safety, we prioritize a supportive workplace for our employees. Employee well-being is important to us to enhance work productivity and promote healthy lifestyles for their longevity.

### Impact Boundary

Within Granules

### Relevant SDG Indicators



## Occupational Health & Safety

OHS is high-priority in the pharma sector where handling sensitive chemicals is critical. Our commitment to a safe workplace is reflected in our ISO 45001:2018 certification, and we prioritize monitoring, reviews, and training to uphold safety standards.

### Impact Boundary

Within Granules

### Relevant SDG Indicators



## Diversity and Inclusion

Fostering an inclusive and diverse work environment is integral to our talent management & retention strategy, as we believe it enhances employee performance. Although we do not currently adhere to international human rights frameworks, we prioritize this in our operations and ensure our suppliers meet relevant standards.

### Impact Boundary

Within and outside Granules

### Relevant SDG Indicators



**5.1.1** Whether or not legal frameworks are in place to promote, enforce, and monitor equality and non-discrimination based on sex

**5.5.2** Proportion of women in managerial positions

**10.3.1** Proportion of employees who reported experiencing personal discrimination or harassment in the past 12 months due to a specific factor

**16.3.1** Proportion of victims of (a) physical, (b) psychological, and (c) sexual violence in the past 12 months and reported it to authorities or official conflict resolution systems



## Human Capital Development

At Granules, we promote an environment of innovation and creativity through open idea exchange and tailored training initiatives that drive both professional and individual growth.

### Impact Boundary

Within Granules

### Relevant SDG Indicators



**4.7.1** The extent to which (ii) education for sustainable development is mainstreamed in (a) national education policies (Company policy), (b) curricula, and (d) student (employee) assessment





## Community Impact, Relations, and Development

We aim to improve individual health and well-being while empowering communities toward self-sufficiency. Our corporate social responsibility efforts support this through financial assistance and in-kind donations.

### Impact Boundary

Within and outside Granules

### Relevant SDG Indicators



**3.8.1** Coverage of essential health services (dialysis treatment, blood donations, eye treatments, etc.)

**4.3.1** Participation rate of youth and adults in formal and non-formal education and training in the past 12 months by sex

**6.1.1** Proportion of population (communities) using safely managed drinking water services



## Innovation, Research, and Development

Research and development is central to our operations, driving our business. We track emerging trends to integrate the latest scientific and technological developments and prioritize sustainable design and manufacturing as indispensable to our R&D initiatives.

### Impact Boundary

Within and outside Granules

### Relevant SDG Indicators



**9.5.1** Research and development expenditure as a proportion of GDP (expenditure)



## Business Ethics and Integrity

Integrity, accountability, and transparency are core principles of our governance framework. We prioritize compliance with regional and national regulations and aim for full adherence to ESG standards, forming the foundation of our governance system to enhance sustainability efforts.

### Impact Boundary

Within Granules

### Relevant SDG Indicators



**16.5.1** Proportion of individuals who interacted with a public official and either paid or were solicited for a bribe in the past 12 months

**16.5.1** Proportion of businesses that paid or were solicited for a bribe by public officials in the past 12 months



# Governance



## Data Privacy and Cybersecurity

The pharma industry faces increased cybersecurity threats to clinical trial data and proprietary research. To address this, we have implemented stringent data security protocols, pursuing ISO 27001 certification and strengthening our data protection practices with multiple review layers.

### Impact Boundary

Within Granules

### Relevant SDG Indicators





# Sustainability Governance

We established a sustainability governance framework that includes a comprehensive induction process covering Granules' purpose and objectives.

Granules has established a three-tier governance structure to effectively manage sustainability across all organizational levels.

At the top level, the Sustainability and CSR Committee, comprising Board members, sets strategic objectives, oversees performance, and ensures alignment with corporate values by integrating sustainability into business strategy.

At the executive level, the management team develops roadmaps, executes plans, and monitors progress, reporting directly to the Board-level committee. This team provides strategic direction and coordination for achieving sustainability targets.

At the plant level, execution teams led by Plant Heads and involving cross-departmental members implement specific sustainability initiatives and projects. These teams are responsible for meeting targets, tracking progress, addressing challenges, and updating the management team. This structure ensures a comprehensive, coordinated approach to sustainability across strategic, managerial, and operational dimensions.

Frequency of Meetings

## Tier 1

### Sustainability & Corporate Social Responsibility Committee of the Board

- ▶ Chairman & Managing Director
- ▶ Executive Director
- ▶ Independent Directors

Half-yearly

#### Functions

##### Governance

Oversight, decision-making

##### Strategy

Alignment of sustainability with organizational vision and mission

##### Risk Management

Identifying and mitigating ESG risks and opportunities

##### Fostering Resilience

Driving adaptation to ESG trends and changing regulations

##### Performance Monitoring

Prioritizing continuous sustainability improvement by monitoring metrics and goals

## Tier 2

### Management Team at the Executive Level

**Chairperson:** Joint Managing Director & Chief Executive Officer

**Convener:** Chief Strategy & Sustainability Officer

#### Members

- ▶ Chief Financial Officer
- ▶ Head of Sourcing and Supply Chain
- ▶ Head of API Operations
- ▶ Head of FD Operations
- ▶ Chief Human Resource Officer
- ▶ Head of EHS
- ▶ Head of Legal
- ▶ Head of Marketing
- ▶ Head of IT

Quarterly

#### Functions

##### Roadmap

Review of ESG goals progress

##### Coordination

Overseeing implementation of sustainability processes and monitoring targets across various time frames

##### Data Monitoring

Advising measures on quarterly evaluation of ESG key performance indicators (KPIs)

## Tier 3

### Execution Team at Plant Level

**Chairperson:** Plant Heads

**Invited members:** Head of API/FD Operations, Chief Strategy & Sustainability Officer, Corporate Head of EHS

**Convener & Co-Convener:** Head of Engineering & Plant Head of EHS

#### Members

- ▶ Engineering and Projects
- ▶ Production/Manufacturing
- ▶ Procurement and Supply Chain
- ▶ EHS
- ▶ HR
- ▶ Corporate Sustainability Team
- ▶ Other departments as and when required

Monthly

#### Functions

##### Execution

Implementing envisaged goals at a granular level

##### Monitoring

Regular reviewing dashboard data and providing monthly scorecards recommendations





# Sustainability and Climate Risk Management

Our robust risk management and governance framework effectively identifies, assesses, and prioritizes internal and external risks. Integral to our strategy, our enterprise risk management program minimizes and mitigates potential risks through a multi-faceted governance approach that involves employees at all levels.

Our Risk Management Committee implements the risk management policy, evaluates the system, and analyses the enterprise risk profile, updating the Board regularly. An internal risk committee (IRC) of executives and functional heads assesses enterprise risks, which the Board reviews annually and the Risk Management Committee semi-annually. Internal risks are evaluated quarterly and monthly at sites and functional levels.

## CFO & Risk Manager

Facilitation of ERM initiatives across the Company; Coordination with site and functional heads for key enterprise risks.

## ERM Coordinator

Implementation of ERM programme across sites, functions; Aggregation of the enterprise risk register.

## Risk Officers

Embedding of risk ownership across sites; supporting of risk management activities across sites and functions; focused discussion on identified risks related to assigned processes, periodical assessment of risks.

## Assessing the Sustainability Risk

Sustainability risks affect business aspects prompting us to implement a comprehensive strategy. A key milestone is integrating ESG factors into our ERM framework demonstrating our commitment to sustainable risk management. ESG-related risks can harm reputation and impact business due to challenges in meeting stakeholders' expectations and achieving commitments. These risks are interconnected with other issues, such as data privacy and security, and health and safety. Granules addresses these through its ERM program, which addresses various ESG aspects. We aim to improve our ESG risk assessment with a Sustainability Governance Mechanism and a dedicated committee to oversee ESG matters. Additionally, we have set KPIs for both short- and long-term ESG goals, ensuring organizational alignment.



**Mukesh Surana**

Chief Financial Officer

At Granules, our financial strategy is intrinsically linked to sustainability. We prioritize robust risk management frameworks and integrate sustainability into capital allocation and investment decisions, ensuring long-term value creation. By embedding Integrated Capital Planning (ICP), we align financial resources with our environmental, social, and governance (ESG) goals, fostering resilience and sustainable growth. Our commitment to evaluating investment decisions through a sustainability lens underscores our dedication to responsible stewardship of resources. As we progress, we continue to balance financial performance with our mission of creating a positive impact, ensuring sustainable outcomes for our stakeholders and the communities we serve.

## Proactive Risk Strategies

### Policy Formulations/Modifications

These constitute policy-level prioritizing specific risks at a management level

### Assessments and Audits

These involve inquiries, audits, and assessments to understand current state and future actions

### Training and Capacity Building

Initiatives to improve employee skills and capabilities to mitigate specific risks

### Focused Interventions/Reporting

Implementing tailored programs with quantitative targets, improving communication and disclosure







## Risk Mitigation Strategy for ESG-related Risks



### Health and Safety

**Critical Risk**

*Inconsistent adherence to health and safety regulations can harm employee welfare.*

Without regular monitoring, we may struggle to identify and prevent hazards, increasing the risk of workplace accidents/illnesses. Additionally, a lack of emphasis on promoting safety compliance may lead to ongoing performance inconsistencies.

#### Mitigation Strategy

We prioritize to mitigate risks. This year, we will implement a safety performance index to reduce lost time injuries, which includes comprehensive personnel training and assigning safety responsibilities to site leadership. Updated EHS guidelines have been shared across all locations. We are increasing Gemba walks, safety observation, and conducting site risk assessments and third-party audits. A safety perception survey will be conducted across all our sites. Our goal is to ensure that 100% of the emergency response team receives advanced firefighting training by FY 27.



### Regulatory

**Severe Risk**

Adhering to quality guidelines in the pharmaceutical sector is crucial, as violations can jeopardize health and safety and harm the Company's reputation. Even isolated non-compliance incidents can lead to negative regulatory findings during inspections, threatening long-term goodwill.

*The risk of regulatory non-compliance includes adherence to environmental, labor, and regulatory authority requirements.*

#### Mitigation Strategy

Quality-related regulatory compliance is an ongoing activity. We are mapping roles within the Manufacturing, Science, and Technology Team (MSAT) to manage site transfer projects with support from the Site Investigation Team (SIT). The MSAT will improve product robustness while the SIT will handle technical investigations, root cause analysis, out-of-specification cases, and market complaints. We are also implementing skill development programs for analysts and manufacturing team members focused on investigations, and fostering a 'Quality Everywhere' culture to foster audit readiness and promote a bottom-up approach to quality compliance.

*Environmental and social compliance is ensured by providing optimal technology and interventions to maintain regulatory standards.*



### Talent

**Severe Risk**

Talent loss and delays in augmenting organizational capabilities can disrupt operations and hinder strategic goals. Insufficient tracking of attrition factors may lead to significant operational disruption. Ongoing investments in training new hires and their integration can threaten strategic goals. Moreover, a lack of a positive work environment may increase attrition if not proactively addressed.

#### Mitigation Strategy

We are adopting a multi-pronged strategic approach to reduce talent attrition by recognizing outstanding employee performance. New two-way communication channels, including quarterly sessions on corporate performance, will enhance transparency. Our goal is to establish a targeted goal-setting process with regular reviews, coaching, and mentorship for high-potential employees.



### Focused Succession

**Severe Risk**

Focused succession is critical for effective talent management. Ignoring it can lead to the loss of key senior management resulting in knowledge gaps and increased costs from productivity loss and recruitment. Extended vacancies may also lead to legal expenses due to the obligation to have qualified staff.

#### Mitigation Strategy

A structured succession management plan is in place for the top 25 critical roles and high-potential employees, guided by consistent performance metrics and supported by individualized development plans. Succession planning for key roles is aligned with key performance indicators to ensure a robust talent pipeline. This year, we have introduced additional training initiatives to support career advancement and implemented tailored retention strategies for key executives, addressing their career aspirations and benefits expectations.





## Supply Chain

### Severe Risk

Overreliance on specific locations or suppliers for essential raw materials heightens the risk of business interruptions from shortages, affecting operations. Disruptions from economic, political, or natural disasters can hinder supply, while poor stock monitoring may lead to ongoing operational challenges.

### Mitigation Strategy

We implement backward integration for our KSMs through CZRO while assessing geographical dependencies and climate hotspots.

*We have onboarded alternative vendors for specific materials, and our production and planning team is evaluating our replenishment model.*



## Data Security & Technological Risk

### Critical Risk

Cyber attack risks like malware, phishing, ransomware, and IT/OT breaches are widespread. Ineffective data protection jeopardizes sensitive information, risking financial loss and long-term reputational damage.

### Mitigation Strategy

We proposed a Business Continuity Plan, Disaster Recovery Plan, and data privacy policy to enhance system robustness. A data privacy policy is under review, and a comprehensive vulnerability assessment and penetration testing have been completed. Security awareness training and 'Train the Trainer' sessions, along with ongoing information security training and a cyber awareness program for new employees, have been conducted. A data privacy sensitization program was held for the legal and IT teams, and phishing simulations are partially completed, with full completion expected next year. We also initiated automated cloud-based backups for critical applications and are implementing Data Loss Prevention solutions.

## Climate Risks and Opportunities<sup>1</sup>

The Intergovernmental Panel on Climate Change's (IPCC) AR6 report reaffirms that human activities have caused unprecedented climate change over the past two millennia, significantly impacting the atmosphere, ocean, cryosphere, and biosphere. Climate change is already altering global weather patterns, increasing the frequency and severity of heat waves, heavy rainfall, droughts, and tropical cyclones. The report predicts that South Asia, particularly India, will experience more intense heat waves, humidity-related heat stress, and greater variability in monsoon rainfall throughout the 21<sup>st</sup> century.

Climate change will significantly impact businesses and lead to global economic losses. The World Economic Forum highlights extreme weather and insufficient climate action failure as major risks in the next 2 to 10 years. Projections indicate a potential GDP decline of 18% by 2050 under a 3.2°C emissions scenario and a 4% decline if warming is kept below 2°C as per the Paris Agreement. In a severe scenario, India could face a GDP reduction of up to 35% by mid-century. Since no one can escape climate change's effects, collective action is essential. We are committed to a net-zero pathway to help address these challenges.

We are improving our understanding of climate change risks related to energy, water, emissions, raw materials, and logistics. The evolving climate landscape poses transition risks from changing customer expectations,

regulations, procurement challenges, and investor expectations. In response, we have initiated a climate action transition plan to redefine our business and separate growth from climate impacts, leveraging innovations in green science to convert these risks into long-term opportunities.

Our manufacturing facilities are primarily located in Telangana, India, where climate action plans suggest minimal physical risks from climate change. However, we understand that the rising temperature and extreme weather may impact our workforce. To mitigate severe heat-related incidents we are enhancing our measures. We have also analyzed relevant climate change scenarios to identify current risks and inform our responses to potential future shifts.

Addressing climate risks is essential for our resilience. We conduct climate risk analyses for all facilities and strategic suppliers to adapt to changing conditions and mitigate climate change impacts on our business.

We are addressing climate risks and opportunities, adapting to challenges, and following the Task Force on Climate-Related Financial Disclosures guidelines.

<sup>1</sup> <https://www.ipcc.ch/report/sixth-assessment-report-working-group-i/>  
[https://www.ipcc.ch/report/ar6/wg1/downloads/factsheets/IPCC\\_AR6\\_WGI\\_Regional\\_Fact\\_Sheet\\_Asia.pdf](https://www.ipcc.ch/report/ar6/wg1/downloads/factsheets/IPCC_AR6_WGI_Regional_Fact_Sheet_Asia.pdf)  
<https://www.swissre.com/media/news-releases/nr-20210422-economics-of-climate-change-risks.html>





## Mapping Climate Risks and Opportunities

Climate Risk Type	Factors Influencing the Risk Without a Mitigation Plan	Impact Areas	Possible Financial Impact Areas	Considered for Being Converted to an Opportunity
Policy	Changes to international law and bilateral agreements	Operations	Constraint to growth	Yes
	Changes to national legislation	Operations	Increased compliance costs	-
	Changes to the regulation of existing products and services	Operations	Increased direct costs	Yes
Liabilities	Non-compliance with legislation	Operations	Increased compliance costs	-
Technology	Transition to lower emissions technology and products	Operations, upstream and downstream value chain	Increased capital expenditures	Yes
			Upfront costs to adopt/deploy new practices and processes	Yes
Market	Changing customer behavior	Operations	Brand image	Yes
	Lack of availability or increased cost of certified sustainable material	Operations	Increased production costs, constraints in growth	Under Review
	Lack of availability or increased cost of recycled or renewable content	Operations	Increased production costs, constraints in growth	Under Review
Reputation	Impact on human health	Operations, upstream and downstream value chain	Disruption to workforce management and planning	Under Review
	Increased partner and stakeholder concern or negative partner and stakeholder feedback	Operations, upstream and downstream value chain	Brand image	Yes
	Negative press coverage related to support of projects or activities with negative impacts on the environment	Operations, upstream and downstream value chain	Brand image	-
Acute physical	Cyclone, hurricane, typhoon, flooding & heavy precipitation	Upstream and downstream value chain	Disruption in the upstream value chain	Under Review
	Heatwave	Operations	Disruption to workforce management and planning	Under Review
Chronic physical	Heat stress	Operations, upstream and downstream value chain	Disruption to workforce management and planning	Under Review
	Water Stress	Operations, upstream and downstream value chain	Constraint to growth	Under Review







# TCFD Core Pillars and Our Progress

## Governance

- A comprehensive sustainability governance system governs our climate risks and opportunities
- A three-tier system has been formed to monitor our climate risks, opportunities, and initiatives with efficiency. It includes a board sustainability and corporate social responsibility committee, a management team at the execution level, and plant-level teams

## Strategy

- We have committed to reach net zero emissions by 2050
- We have identified regional-level physical and transition climate risks based on TCFD recommendations
- In our physical risk assessment, we evaluated climate change impacts using IPCC scenarios, including 'optimistic' (RCP 4.5) and 'business as usual' (RCP 8.5), across all manufacturing facilities
- Our new greenfield facility and Granules CZRO demonstrate our commitment to eco-friendly products and reduced emissions in our supply chain



## Risk Management

- Our enterprise risk management framework offers critical guidelines for identifying and managing all risks, including climate and ESG risks
- In FY 24, we adopted TCFD recommendations for assessing our climate risks and opportunities
- Our internal risk committee engages in an annual risk mapping exercise through responses
- We have initiated a comprehensive water and risk assessment using the TCFD framework

## Metrics and Targets

- We assess our climate-related risks and opportunities through varied targets
- We have a climate action transition plan seeking to achieve climate resilience by adopting green molecules and green chemistry and creating breakthroughs in formulation manufacturing
- The Granules' Climate Commitment sets clear goals for transparency in climate targets, reducing Scope 1, 2, and 3 emissions, and adopting renewable energy

In response to increasing sustainability and climate risks, we are enhancing our risk evaluation and monitoring framework to build resilience, strengthen risk management systems, and identify opportunities for viable business prospects.

To enhance our climate strategy, we are implementing key measures aligned with TCFD recommendations. We will assess climate risk and opportunities in the coming years to identify significant risks starting with a detailed evaluation of climate and water risks under the TCFD framework for effective environmental risk management.

**Our focus is to determine Granules' risk resilience and identify opportunities for low-carbon transition, covering multiple climate scenarios, including current practices, net-zero transition, and worst-case outcomes. We will also evaluate the supply chain to mitigate potential climate-related business continuity risks.**





# Our Sustainability Goals and Progress

In the final phase of our strategy development, we set clear short-, medium-, and long-term goals, assessed current state of ESG integration, and developed ambitious sustainability goals. These goals align with relevant functions and team members in the performance matrix, for annual evaluations, ensuring appropriate rewards and driving actionable progress.

## Climate and Environment Targets

### GHG Emissions

*Driving Net-Zero: Leading the Way in Decarbonization*

### Achieve Net Zero Emissions by 2050

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#### Mid-to-Long Term Goals

- ▶ **Net Zero Target:** Granules committed to reach Net Zero GHG emissions across the value chain by FY 50
- ▶ **Near-Term Targets:** Granules committed to reduce absolute Scope 1, Scope 2 and Scope 3 GHG emissions 42% by FY 30 from FY 23 base year
- ▶ **Long-Term Targets:** Granules committed to reduce absolute Scope 1, Scope 2 and Scope 3 GHG emissions 90% by FY 50 from FY 23 base year

#### Short Term Goals

- ▶ Complete techno-commercial feasibility of alternate fuels for boilers for Bonthapally and Gagillapur
- ▶ Develop an Internal Carbon Pricing (ICP) by FY 25
- ▶ Conduct climate risk analysis for all facilities and strategic suppliers by FY 25
- ▶ Conduct climate risk analysis using the Task Force on Climate-related Financial Disclosures (TCFD)
- ▶ Recommendations and integrate major physical and transitional risks with Granules' Enterprise Risk Management (ERM) framework
- ▶ Roll out supplier sustainability framework, identify strategic suppliers, and engage them to adopt and share climate targets by FY 25
- ▶ Develop a green packaging strategy by FY 26

#### Performance

##### ✓ Targets Approved by SBTi

Granules has received SBTi validation and approval for both our near-term and long-term goals, aligned with the 1.5°C pathway towards achieving net-zero by 2050 or sooner.

##### ✓ 22% Absolute reduction in GHG emissions (Scope 1 and 2)

In FY 24, the Total GHG footprint (Scope1+Scope2) is 87,886 tCO<sub>2</sub>e. The Specific GHG Emission Intensity (tCO<sub>2</sub>e/MT of Production) is reduced by 26.7% compared to FY 23.

Absolute GHG Emissions (Scope1+Scope2) in the reporting period were reduced by 22%. Implementing rooftop solar panels and purchasing Renewable Energy through PPAs and I-RECs have contributed to this reduction.

##### ✓ Net Zero RoadMap finalized

##### ✓ 29,200 MT of GHG Emissions avoided in FY 24

Granules implemented several energy-saving initiatives, achieving a total annual savings of 915,945 kWh. Key actions included replacing outdated vacuum pumps, which saved 70,296 kWh, and upgrading conventional blower motors to energy-efficient EC blowers, resulting in 474,272 kWh savings. Additionally, installing interlocks on RT pumps contributed 28,244 kWh in savings.

##### ✓ Scope-3 Inventorization using the highest level of accurate methodology

##### ✓ Emissions assessments across the value chain (Scope 1, 2, and 3) for all subsidiaries

##### ✓ Climate risk assessments aligned with TCFD

##### ✓ Product carbon footprint conducted for the top five products (covering 65% of revenue)



## Climate and Environment Targets

### Energy

*Empowering Progress  
through Renewable Energy  
and Efficiency*



**Achieve 100% sourcing  
renewable electricity by FY 30**

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#### Mid-to-Long Term Goals

- ▶ Granules committed to increase the active annual sourcing of renewable electricity to 100% in FY 30
- ▶ Energy intensity reduction by 20% by FY 27

#### Performance

##### ✓ 47.4% Share of Renewable Energy

The Solar power plant in Gagillapur has generated 359 MWh of electricity; we have procured 6,528 MWh of renewable electricity through PPA and 33,000 MWh of I-RECs for Gagillapur and Bonthapally units. Incorporating all these initiatives has increased our renewable energy contribution to 47.4% in our energy mix.

#### Short Term Goals

- ▶ Increase renewable energy mix in electricity consumption
- ▶ Commission 1 MW rooftop solar plant at Gagillapur unit by FY 25
- ▶ Increase renewable energy purchases through PPA across our plants

##### ✓ 915,945 kWh energy saved

Granules implemented several energy-saving initiatives, achieving a total annual savings of 915,945 kWh. Key actions included replacing outdated vacuum pumps, which saved 70,296 kWh, and upgrading conventional blower motors to energy-efficient EC blowers, resulting in 474,272 kWh savings. Additionally, installing interlocks on RT pumps contributed 28,244 kWh in savings.

### Water

*Preserving Every Drop:  
Innovating for Water Stewardship*



**Achieve Water Positivity  
by FY 32**

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- ▶ Achieve Water Positivity by FY 32
- ▶ Water intensity reduction by 27% by FY 27

#### Performance

##### ✓ 25% Intensity reduction in Water Consumed

The Specific Water Intensity (KL/MT of production) is reduced by 25% compared to FY 23 due to various water conservation measures implemented and an increase in business volumes.

- ▶ Conduct water risk assessment and develop a water stewardship plan by FY 25

##### ✓ 40% of wastewater recycled

The percentage of water recycled during this financial year is more than 40% of effluent generated, which is recycled and reused in operations.

### Waste

*Turning Waste into Value:  
Towards Zero Landfill*



**Achieve Zero waste to  
landfill by FY 30**

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- ▶ Achieve Zero Waste to Landfill by FY 30
- ▶ 27% reduction in waste to landfill by FY 27

#### Performance

##### ✓ 88% of hazardous waste co-processed

More than 88% of the hazardous waste is disposed of by cement industries for co-processing, thereby promoting circular economy as well as reducing the GHG footprint.

- ▶ Increase co-processing of waste to 95% by FY 26

##### ✓ 100% of our non-hazardous waste generated at our operations are recycled through authorized vendors





## Social Targets

### Community Impact, Relations and Development



*Empowering Communities,  
Enriching Lives*

**Touch 1 million lives through CSR programs by FY 30**

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### Human Capital Development



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### Occupational Health and Safety



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### Employee Engagement & Employee Well-being Safety



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### Access, Diversity and Inclusion



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## Mid-to-Long Term Goals

- ▶ Touch 1 million lives through CSR programs by FY 30

- ▶ Target to be in the top quartile in the pharmaceutical industry on L&D parameters

- ▶ Foster a safety-first culture and target zero workplace fatality
- ▶ Identify and execute projects to improve workplace safety parameters to the best-in-class such as incident rate, Lost Time Injury Frequency Rate (LTIFR), etc.

- ▶ Drive employee engagement for measurable outcomes

- ▶ Achieve gender pay parity by FY 30
- ▶ Achieve a 100% increase in women's representation across the organization by 2030 compared to FY 24 levels.
- ▶ All plants to be made accessible for physically challenged people

## Short Term Goals

- ▶ Drive health, skilling, environmental sustainability, and Volunteering as part of CSR activity
- ▶ Conduct CSR impact assessment and improve the number of lives impacted by 50%

- ▶ Identify mandatory training and ensure 100% compliance
- ▶ Target 24 hours (3 days) of training and development per employee per year

- ▶ Target zero workplace fatality by identifying set of safety related lead indicators and improving over previous year
- ▶ 10% YoY reduction in the Lost Time Injury Frequency Rate (LTIFR)

- ▶ Expand employee health and wellness program; initiate mental health program including access to psychological counselling

- ▶ Ensure equal opportunity in selection and promotion
- ▶ Develop a process for increasing the pool of women in the CV sourcing and screening stage of recruitment





## Social Targets

### Sustainable Procurement

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#### Mid-to-Long Term Goals

- ▶ Reduce environmental impact across the supply chain through supplier engagement and innovation
- ▶ Foster a culture of ethical practices across the supply chain.
- ▶ Ensure fair labor practices and safe working conditions throughout the supply chain
- ▶ Engage 75% of key suppliers in carbon reduction initiatives by 2028
- ▶ Encourage suppliers to adopt innovative solutions for sustainable product development

#### Short Term Goals

- ▶ Communication of sustainability expectations through Supplier Code of Conduct/Supplier Sustainability Program/Purchase Order to 100% suppliers
- ▶ Obtain Signatory on Climate & Environment commitment goals (Pledge) covering 85% of supply value by FY 25
- ▶ Ensure 100% of key suppliers adhere to Granules' Supplier Code of Conduct
- ▶ Conduct annual audits of 100% of high-risk suppliers to verify compliance to the supplier code of conduct once in 3 years
- ▶ Engage 100% of strategic suppliers for awareness and training on responsible sourcing practices
- ▶ Roll out supplier sustainability framework, identify strategic suppliers, and engage them to adopt and share on following climate targets by FY 25

#### Performance

- ✓ Female representation in the workforce stands at 11.7%
- ✓ 31% increase in women employees\*
- ✓ 6,525+ employees
- ✓ 10% of new hires are females
- ✓ Launched its first women-led production plant
- ✓ 100% return-to-work rate after parental leave

- ✓ Zero confirmed cases of discrimination
- ✓ 25% women on the Board
- ✓ 14.3% increase in community beneficiaries\*
- ✓ 1,200+ students trained through Pharma Pathashala
- ✓ Industry-Academia Partnership between Granules India Limited and NIPER

\* Over previous year





## Governance Targets

### Business Ethics and Integrity

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### Sustainability Governance

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### Data Privacy and Cyber Security

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#### Mid-to-Long Term Goals

- ▶ Ethical business conduct and zero tolerance to violations through robust culture building and training
- ▶ Transparency through disclosures on various ESG reporting platforms
- ▶ Conduct an annual third-party vulnerability threat assessment, IT & OT security Gap & Convergence Assessment
- ▶ Ensure zero data privacy and cyber security breaches
- ▶ Target ISO 27001 certification by FY 27

#### Short Term Goals

- ▶ Conduct awareness programs and mandatory code of conduct training
- ▶ Adopt sustainability governance across the organization and integrate with ERM framework
- ▶ Conduct annual vulnerability threat assessment, and IT & OT security Gap & Convergence Assessment
- ▶ Conduct cyber safety awareness program for targeted audience within the organization and ensure 100% coverage

#### Performance

- ✓ ESG-linked performance and incentives for CEO and KMP
- ✓ Dedicated sustainability committee has been established
- ✓ 100% of employees receive training on the Code of Conduct
- ✓ Enterprise risk management framework established
- ✓ No significant fines paid towards non-compliance with laws and regulations
- ✓ Featured decarbonization plan at COP 28 (Global Innovation Hub of UNFCCC)
- ✓ Zero product recalls
- ✓ 50% independent directors
- ✓ Zero customer complaints on cyber security







Our commitment to environmental responsibility drives us to reduce greenhouse gas emissions through our 'One Planet, One Purpose' ethos. We're cutting Scope 1 and 2 emissions at Bonthapally and Gagillapur with renewable energy, biomass conversion, and energy optimization. Focused on achieving net zero, we are tackling Scope 3 emissions, which make up over 80% of our carbon footprint. By investing in solar energy and renewable credits, we are setting ambitious standards for a sustainable future.

#### Material Topics Addressed

**GHG Emissions** **Climate Change** **Water Management** **Waste Management**

# Environmental Stewardship Beyond Limits

## Inside this section

Climate and Environment	36
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47.4%

Share of Renewable energy

915,945 kWh

Energy saved

40%

Wastewater recycled

88%

Hazardous waste co-processed







# Climate and Environment



## Context

In recent years, it has become evident that climate change is not a far-off issue but an urgent crisis with profound implications for the global economy and corporate sustainability. Extreme weather can affect society through disruption to business continuity, infrastructure, and supply chains, as reported by the Intergovernmental Panel on Climate Change (IPCC). Meanwhile, the Asian Development Bank (ADB) warned that climate loss at reference levels could shrink Asia-Pacific's GDP by nearly 11% by the end of the century.

India, the second-most populous country in the world and one of its largest growing economies is at high risk of climate change impacts. Changes in weather patterns have already wreaked havoc on the country. India has experienced a 10% increase in extreme weather events—such as more intense heatwaves and unpredictable monsoon patterns—which have had severe implications for agriculture, water resources, and public health over the past few decades, according to the Indian Ministry of Earth Sciences. The World Bank, for example, has warned of a 2.8% decline in India's GDP opportunity loss by 2050 if present climate trends continue, which could exacerbate poverty and inequality.

Understanding the global implications of these changes, climate change is identified as the most significant risk to world stability in a decade by the World Economic Forum, which bears consequences for resource accessibility, financial markets, and geopolitical dynamics. The COP28 summit has left no doubt over the renewed and reinvigorated call to action for corporates, communicating that they are both

a large part of the problem and also at least as important as any other group in solving climate change. Businesses that do not adapt to the low-carbon transition will be putting themselves at higher regulatory, reputational, and financial risk.

India is the third-largest greenhouse gas emitter in the world, with a large share of emissions from its energy sector and primarily coal-fired power plants. Yet, the Indian government has undertaken significant efforts in this regard. As part of the Paris Agreement, India plans to lower the emissions intensity of its GDP by 33-35% compared with 2005 levels. It aims for renewable energy sources to provide up to 50% of generation capacity by 2030.

It also intends to achieve net zero emissions by 2070—a reminder of the work that lies ahead. Indian companies play an essential role in fulfilling these goals. The Confederation of Indian Industry (CII) has constantly pushed the industry to follow global best practices in areas such as energy efficiency, waste management, and carbon reduction strategies.

In short, the need for corporate action on climate change has never been more apparent. Data from global organizations like the IPCC, World Economic Forum, and ADB, alongside India-specific data, validate the need for action now. The future belongs to businesses that invest in climate action today, especially those operating within the Indian economy. This is our last chance to act, and the cost of doing nothing is too great.







## Approach<sup>1</sup>

The pharmaceutical industry significantly contributes to global carbon emissions, accounting for approximately 4.4% of the worldwide carbon footprint. When evaluated per dollar, the sector's carbon intensity is higher than that of many other industries, including automobiles. This is primarily due to the energy-intensive nature of pharmaceutical manufacturing, complex global supply chains, and strict regulatory requirements. The reliance on coal-powered energy, particularly in manufacturing hubs like India, where many generic drugs are produced, further exacerbates the carbon footprint. Additionally, the extensive global supply chain contributes to the sector's environmental impact, with reports suggesting that optimising these networks could reduce the carbon footprint of certain drugs by up to 10%.

Transitioning to low-carbon emission manufacturing has been a persistent challenge for the sector. Developing sustainable technologies and processes that maintain drug efficacy and safety is complex and resource-intensive, requiring significant innovation and investment.

As climate change intensifies, health issues such as infectious diseases and respiratory conditions are expected to worsen. The pharmaceutical industry must tackle these challenges by reducing its carbon footprint. It also needs to innovate and develop treatments for emerging threats. This requires a fundamental rethinking in business strategies, operations and overall drug development approaches.

Granules India's purpose, 'Healing lives responsibly through pioneering green science', aligns with global efforts to combat climate change. This purpose statement reflects our commitment to enhancing health and well-being while conducting business sustainably and ethically and protecting the interests of all stakeholders and the planet. We foster a culture of innovation, consistently investing in research and development to achieve more affordable and efficient outcomes. Our emphasis on green science ensures that our methods and processes reduce environmental impact and address climate risks. Therefore, our Company's purpose and business conduct are intrinsically geared toward addressing climate change. This drives our approach to climate change. (To understand more about Granules and its business strategies, please visit the Annual Report 2023-24).

## Actions & Initiatives

Our actions and initiatives on climate change in the past years have been focused on knowing our contribution to climate change (elaborated under GHG emissions), setting ambitious targets aligned with the global best practices and making commitments, developing strategies for a climate action transition plan, cascading the action expectations within and beyond the operational boundaries and getting the armor together to deliver on the low carbon transition pathway.

As these long-term defined actions were under development, we continued improving our energy performance and greening the power we use and the infrastructure we build.



<sup>1</sup> World Economic Forum. (2022, November). How the pharmaceutical industry can reduce its climate impact. Retrieved from [World Economic Forum] (<https://www.weforum.org/agenda/2022/11/pharmaceutical-industry-reduce-climate-impact/>)

- Cornell Chronicle, "Drug industry's carbon impact could be cut by half," May 8, 2023.
- Pharmaphorum, "Public wants pharma to reveal carbon footprint of drugs," 2023.

- ISPOR, "The Pharmaceutical Industry's Carbon Footprint and Current Mitigation Strategies," 2023.







Granules India has received SBTi validation and approval for both near-term and long-term goals, aligned with the 1.5°C pathway toward net zero by 2050 or sooner.

Granules India Limited has reached a significant milestone in its sustainability journey with the validation and approval of its near-term, long-term, and net zero greenhouse gas (GHG) emission reduction targets by the Science Based Targets initiative (SBTi). This achievement places Granules among a select group of Indian pharmaceutical companies with SBTi-validated targets under the initiative's latest guidelines. Aligning with the 1.5°C pathway, these ambitious goals demonstrate Granules' commitment to addressing climate change responsibly and establishing leadership in sustainability within the pharmaceutical industry.



**Dr. Krishna Prasad Chigurupati**  
Chairman & Managing Director

Sustainability lies at the core of our decision-making and business strategy, as articulated in our purpose statement: **Healing lives responsibly through pioneering green science.** I am proud that Granules has received SBTi validation and approval for our near-term and long-term goals, aligned with the 1.5°C pathway toward net zero by 2050 or sooner. This milestone strengthens our commitment to accelerate decarbonization, integrate these targets across our operations and supply chain, and drive progress through collaboration and innovation.

This validation aligns Granules' sustainability strategy with its purpose, Healing lives responsibly through pioneering green science, and reflects collaborative leadership in embedding decarbonization into business processes and the supply chain. While this milestone is a proud achievement, it also highlights the need for decisive action to achieve these goals. Granules is focused on near-term initiatives, including efficiency measures in power and fuel usage, transitioning boiler operations to alternate fuels, accelerating renewable energy adoption, and engaging supply chain partners through its Supplier Sustainability Program.

#### About SBTi

The Science Based Targets initiative (SBTi), a collaboration among the Carbon Disclosure Project (CDP), United Nations Global Compact (UNGC), World Resources Institute (WRI), and World Wide Fund for Nature (WWF), provides guidance for companies to reduce greenhouse gas emissions. By defining how much and how quickly emissions must decrease to limit global warming to 1.5°C above pre-industrial levels, the SBTi offers a clear pathway to future-proof growth. The commitment is supported by well-crafted short-term and mid-long-term targets and objectives with a decided action plan to achieve the commitments.

Key highlights of these targets include



#### Near-Term Goals

Reduce absolute Scope 1 and 2 emissions by 42% and Scope 3 emissions by 42% by FY 30 (FY 23 baseline), while transitioning to 100% renewable electricity by the same year.



#### Long-Term Goals

Achieve a 90% reduction in absolute Scope 1, 2, and 3 emissions by FY 50.



#### Net Zero Commitment

Achieve net zero GHG emissions across our value chain, including all subsidiaries, by FY 50.





## Climate Action Transition Plan

Granules has a comprehensive Climate Action Transition Plan to reach net zero carbon emissions by 2050. This strategic roadmap, developed in collaboration with Siemens, addresses emission sources across all three GHG emission scopes.

### Tackling Carbon Emissions in Operations

A balanced approach of supply-side and demand-side initiatives has been identified to reduce Scope 1 and Scope 2 GHG emissions and support decarbonization till 2030. It identifies that beyond 2030, high green energy support will be needed to meet the decarbonization goals. This strategy is based on a detailed study at the Bonthapally and Gagillapur facilities, where the primary sources of emissions are coal-fired boilers and grid electricity. Granules will utilize a similar approach for other operational locations.

### Scope 1 Strategy: Direct Emissions Reduction

Granules' strategy for reducing Scope 1 emissions focuses on direct emissions from sources owned or controlled by the Company. The critical areas of focus include enhancing energy efficiency in our on-site operations, fuel switching, and exploring innovative carbon offset mechanisms.

One of the major initiatives is the transition from coal to biomass for our on-site boilers. This shift is expected to significantly reduce our carbon footprint while maintaining the efficiency of our heating and cooling processes. Additionally, Granules is investing in electrification, where feasible, to replace fossil fuel-dependent systems with those powered by renewable energy sources.

The Climate Action Transition Plan is a holistic approach that addresses emissions across all scopes. Through strategic initiatives in Scope 1, 2, and 3, Granules is not only working to meet its 2050 net-zero target but is also setting a benchmark for sustainability in the pharmaceutical industry.



### Scope 2 Strategy: Indirect Emissions Reduction from Purchased Energy

Reducing Scope 2 emissions, which stem from the electricity and energy we purchase, is a critical component of our climate action plan. Granules is committed to sourcing renewable energy, both through on-site installations and Power Purchase Agreements (PPAs). Our strategy includes acquiring Renewable Energy Certificates (RECs) to validate our further use of green energy.

### Scope 3 Strategy: Value Chain Emissions Reduction

Scope 3 emissions, which encompass all other indirect emissions across our value

chain, represent the most significant and most complex part of Granules' carbon footprint. Our strategy to reduce Scope 3 emissions involves close collaboration with suppliers, the adoption of green chemistry principles, and ongoing policy advocacy.

Granules actively engages with suppliers to ensure they align with our sustainability goals. We prioritize partnerships with those who commit to reducing their carbon emissions. Additionally, our CZRO initiative is pivotal in reimagining chemistry, focusing on developing green molecules and applying bio-catalysis and continuous manufacturing technologies.

Policy advocacy and industry engagement are also vital aspects of our Scope 3 strategy. By participating in global forums such as COP28, Granules is helping to shape the future of sustainable pharmaceutical manufacturing, ensuring that the entire industry moves toward decarbonization.







## Tackling Carbon Emissions in the Value Chain

### Supplier Engagement Program

Granules India Limited is committed to advancing its sustainability goals through a robust Suppliers' Sustainability Program. We prioritize the selection of suppliers who align with our sustainability objectives and work closely with them to reduce their carbon footprints. A significant portion of our Scope 3 emissions originates from the chemical inputs used in our production processes. To address this, we have leveraged the CZRO platform to actively work on reducing these emissions. This collaborative approach with our suppliers is essential in driving decarbonization efforts across our supply chain, ensuring that our sustainability initiatives extend beyond our immediate operations.



### Green Molecules

At Granules, our decarbonization efforts are built on three foundational pillars. The first pillar focuses on green molecules. To translate Granules' focus on green molecules into reality, we have constituted a separate subsidiary called the Granules CZRO to focus on green power, responsible water use, and clean air. Through this, we are developing a new greenfield plant spread across 100 acres, envisaged to be completed in the next five years. It aims to leverage an Integrated Green Energy & Green Chemicals Platform enabled by a third party. The facility will be powered by 24x7 carbon-free green energy, with only a very few input materials required from outside the two facilities being set up by Granules and its partners. Granules will utilize Carbon Free Energy and Green molecules to produce APIs, along with their KSMs and intermediates. Granules will be producing not only the KSMs for these products here but also most of the chemicals to make the KSMs at this site, which will lead to almost zero carbon footprint from the final API. In a nutshell, Granules CZRO seeks to achieve near net zero carbon footprint from 'Cradle to Gate' across Scope 1, 2, and 3.

### Reimagining Chemistry

The second pillar is our commitment to efficient methods of synthesis. We are also embracing principles of green science and green chemistry, such as bio-catalysis, continuous manufacturing (flow technology), and formulation technology & processes.

Our enzyme and bio-transformation technique is an eco-friendly substitute to metallo-catalysis because of its mild reaction conditions, mild reaction conditions, few side reactions,

non-toxicity, degradability, and safety. This is also being institutionalised in the form of an Eco scale, which uses six parameters and 38 sub-parameters. The parameters include yield, safety, effluent, input/RM cost, operations parameters, and infrastructure considerations.



### Breakthrough in Formulation Manufacturing

The third pillar is our groundbreaking work in formulation manufacturing. The process of converting APIs into tablets, injectables, or liquids presents substantial environmental challenges. We are addressing these by developing solvent-free pharmaceutical processes, creating polymer-free formulations, and minimizing water usage in our manufacturing processes. Our collaborations with premier academic institutions such as NIPER drive these advancements. Together, we are developing plant-based excipients, directly compressible crystals, and resource-efficient pharmaceutical products.

These pillars form the core of our environmental strategy, ensuring that we address sustainability comprehensively across all critical junctures of our value chain. Our efforts in green molecules, efficient synthesis methods, and innovative formulation manufacturing are redefining pharmaceutical manufacturing, demonstrating our commitment to producing medicines with a near-net-zero carbon footprint.

## Outlook

Our climate commitment is more than a response to external pressures—it reflects our core values and our commitment to regularly challenging the business to achieve a sustainable future. As we move forward, we will continue to refine our approach, ensuring that every step we take brings us closer to achieving our net-zero goals and making a lasting positive impact on the environment.

While significant actions for net zero are underway, we are focused on a cultural shift towards climate change within Granules. We are implementing policy changes and creating awareness towards green practices to bring about this change. Some initiatives getting rolled out in the coming year towards this shift are promoting virtual meetings to reduce unnecessary commutes, encouraging employees to use company buses for pooled travel and have already installed EV charging stations at our facilities to promote electric vehicle usage.







## Green Building at Genome Valley



The new formulation facility at Genome Valley integrates sustainable design with green building principles. It will add 10 billion dosages to our capacity and features energy-efficient systems, water conservation, and renewable energy, reinforcing our commitment to sustainability and innovation.

This facility touches all aspects of a green building, from design to implementation. To minimize environmental impact, soil erosion control starts with topsoil preservation, sedimentation pits, and rainwater harvesting. Moves to efficient waste management with the aim to divert at least 50% of construction waste from landfills by implementing strict waste segregation and monitoring processes, ensuring materials are reused or recycled wherever possible. The facility will feature a rainwater

harvesting system designed to capture 50% of runoff from the roof and non-roof surfaces, with storage capacity sufficient for two to three days of rainfall. This will significantly reduce reliance on external water sources.

Direct GHG emission reduction benefits will be achieved by good energy planning and management. We aim to achieve 20% energy savings over the ASHRAE90.1/ECBC standards, using 2004 as our baseline. This will be achieved through the installation of high-efficiency, CFC-free centrifugal chillers equipped with variable frequency drives, which optimize part-load efficiency and further reduce energy consumption and GHG emissions.



**1 MW of solar rooftop photovoltaics and Building Integrated Photovoltaics (BIPV) will be installed. Additionally, 75% of surface parking will be covered with solar panels, mitigating the micro-climate impact of heat dissipation.**

Efficient use of materials will be prioritized along with the use of salvaged and recycled materials, including steel, cement, glass, and tiles, to minimize the environmental impact of virgin material extraction and processing. All wood used in the project is certified by the Forest Stewardship Council or the local Forest Department, with at least 50% of renewable

wood-based products meeting this standard—the incorporation of building design features that promote health and safety. We have eliminated asbestos, a known carcinogen, and are targeting a daylight factor of 2% in at least 50% of occupied spaces to reduce energy consumption and enhance the indoor environment.

The Genome Valley facility is more than a construction project; it represents a holistic approach to sustainable development. We aim to achieve IGBC Green Certification for our GLS project and reaffirmed our commitment to this goal on Earth Day 2023 through the "Crusaders of sustainability" award for Green Building project.







# GHG Emissions



## Context

The pharmaceutical industry generates a significant share of the world's greenhouse gas emissions.<sup>2</sup> Emissions are generated from almost every stage of the pharmaceutical life cycle, including manufacturing, procurement, transportation, packaging, disposal, and even the use of drugs. The industry is fast on its way to becoming oxymoron-producing medicines for the betterment of health yet creating more significant hazardous health impacts in the process of making them. Innovative and collaborative approaches are essential in ensuring a reduced carbon footprint. However, nothing can start without good measurement. Therefore, GHG inventorization becomes the most essential part of the climate journey.

## Approach

Following the GHG Protocol Corporate Standards, we have implemented a comprehensive greenhouse gas (GHG) emissions inventorization process. The GHG Protocol provides a globally recognized framework for measuring and managing emissions. By adhering to this methodology, Granules India ensures the inventorization process is robust and transparent. This facilitates a firm ground for action on Granule's net zero commitment aligned to the SBTi.

We have adopted the operational control approach for GHG inventorization, accounting for emissions from operations where we have the control to implement the changes. Therefore, our GHG reporting boundary includes Granules India Limited and all its subsidiaries, ensuring a complete accounting of emissions across all operations. The subsidiary section of this report includes detailed emissions data for each subsidiary, while this section presents the GHG inventory data for Granules India Limited only.

We began GHG estimation for Scope 1 and Scope 2 emissions in FY 21. Scope 1 covers direct emissions from sources we own or control, such as fuel combustion in manufacturing processes. Scope 2 includes indirect emissions from the generation of electricity purchased by our facilities. These efforts laid the foundation for our GHG emissions inventorization and management. In FY 23, we expanded inventorization to include Scope 3 emissions, which are indirect emissions in our value chain. We identified 11 out of 15 Scope 3 categories relevant for Granules.

The base year for our GHG inventories is FY 23. This baseline allows us to accurately measure future emissions reductions and evaluate the effectiveness of our sustainability initiatives.





## Actions and Initiatives

### GHG Emission Profile

(GRI 305 - 1,2,3)

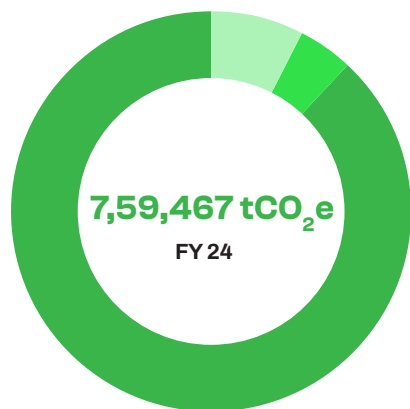
The outcome of our GHG inventorization activity provided deep insights into our emission profile. While it is known that the majority of the GHG emissions in the pharmaceutical sector are indirect emissions that occur in the value chain, the percentage contribution of the Scope 3 emissions in our GHG inventory was much higher than the generally observed norms. The Scope 3 emissions constitute 87.8% of the total GHG emissions of Granules.

Our detailed approach towards the Scope 3 GHG emission, especially the estimation of Category 1 emissions, has led to higher contribution from Scope 3 emissions. This underscores the significant environmental impact of the supply chain and other indirect business activities. Scope 1 emissions, accounting for 7.7% of the total, represent direct emissions from operations owned or controlled by the Company. Scope 2 emissions, at 4.5%, are from indirect emissions associated with purchased electricity consumption.

### Our Carbon Footprint - Overview

Scope	FY 23	FY 24
Scope 1	57,816	58,354
Scope 2 (Market-Based)	57,974	34,519
Scope 3	6,25,236	6,66,694
<b>Total Emissions*</b>	<b>7,41,026</b>	<b>7,59,467</b>

All values in Tonnes of CO<sub>2</sub> equivalent



- Scope 1 — 7.7%
- Scope 2\* — 4.5%
- Scope 3 — 87.8%

\* Market-Based

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9967855/>

### Our Goal

## Achieve Net Zero Emission by 2050

**7,59,467** MTCO<sub>2</sub>e

Total GHG emissions  
(Scope 1, 2 & 3) in FY 24

**21.9%**

Absolute reduction in GHG emissions  
(Scope 1 & Scope 2)

**26.7%**

Intensity reduction in GHG emissions  
(Scope 1 & Scope 2)

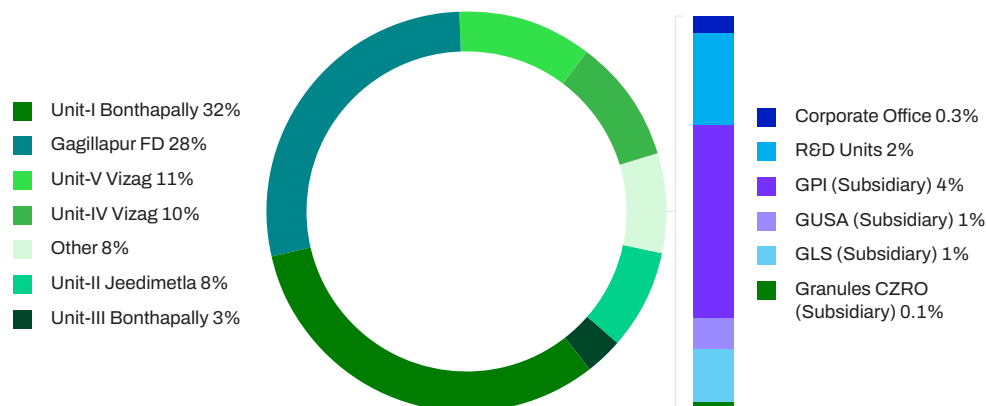




## Scope 1 and Scope 2 Analysis by Site (FY 24)

### Unit-wise Profile - Scope 1 and Scope 2 Emission

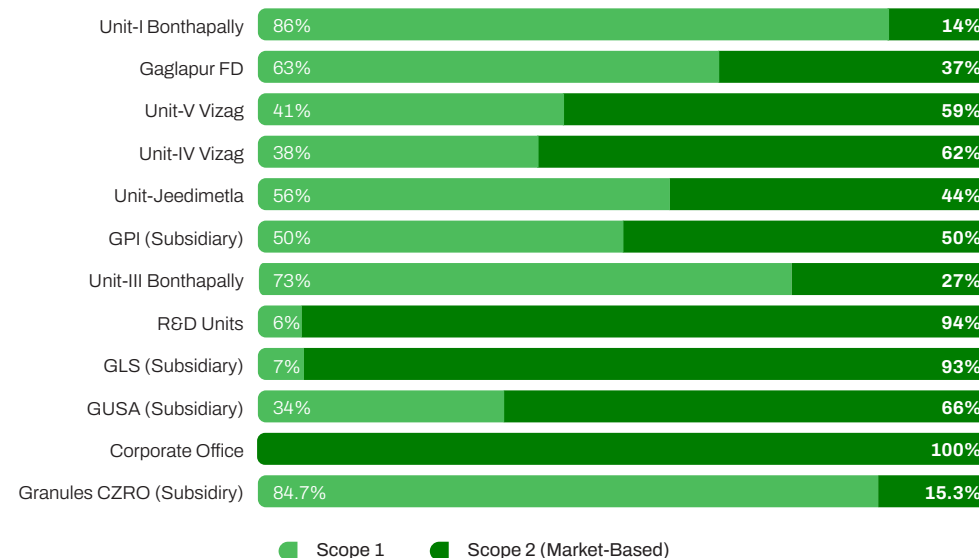
(Market-Based Method)



### Scope 2 as per Market-Based Method

The market-based method reflects the renewable adoption through power purchase agreement (PPA), solar roof top at site and purchase of Energy Attribute Certificates (EAC) through International Renewable Energy Certificates (IREC).

Unit & Location	Scope 1 tCO <sub>2</sub> e	Scope 2 tCO <sub>2</sub> e (Market-Based)	Total (Scope 1+Scope 2 Market-based)
Gagillapur FD	16,227	9,644	25,871
Unit-I Bonthapally	25,402	4,240	29,641
Unit-II Jeedimetla	4,484	3,482	7,966
Unit-III Bonthapally	2,351	876	3,227
Unit-IV Vizag	3,540	5,746	9,286
Unit-V Vizag	4,152	5,867	10,019
Corporate office	-	272	272
R&D Units	99	1,504	1,603
GPI (Subsidiary)	1,673	1,679	3,352
GUSA (Subsidiary)	196	386	582
GLS (Subsidiary)	57	808	866
Granules CZRO (Subsidiary)	74	13	87
<b>Total Scope 1+Scope 2 (Market-Based), tCO<sub>2</sub>e</b>	<b>58,254</b>	<b>34,519</b>	<b>92,773</b>







## Disclosure of Our Carbon Footprint

Granules GHG Emissions Profile, tCO <sub>2</sub> eq		Emission Profile for FY 23			Emission Profile for FY 24		
Scope	Emission Category	GIL Standalone	GIL All Subsidiaries	GIL Consolidated	GIL Standalone	GIL All Subsidiaries	GIL Consolidated
Scope 1	Direct emissions from sources owned or controlled by the Company (Coal, Fuels)	56,265	1,551	57,816	56,254	2,001	58,254
Scope 2 (Market-Based)	Indirect emissions from the generation of purchased energy (Electricity)	56,306	1,668	57,974	31,632	2,886	34,519
Scope 2 (Location-Based)	Indirect emissions from the generation of purchased energy (Electricity)	62,433	1,668	64,101	60,191	2,886	63,078
	Scope 1+2 Total	1,12,571	3,219	1,15,790	87,886	4,887	92,773
Scope 3	Category 1 - Purchased Goods & Services	4,95,807	882	4,96,689	5,14,516	5,292	5,19,808
	Category 2 - Capital Goods	4,705	465	5,170	10,265	18,565	28,830
	Category 3 - Fuel and Energy Related Activities	26,788	403	27,191	22,579	875	23,453
	Category 4 - Upstream Transportation & Distribution	8,392	33	8,425	8,557	83	8,640
	Category 5 - Waste Generated from Operations	2,992	1,625	4,618	3,571	150	3,721
	Category 6 - Business Travel	295	37	332	850	81	931
	Category 7 - Employee Commuting	1,476	314	1,790	1,571	518	2,089
	Category 8 - Upstream Leased Assets	587	4,205	4,792	1,628	6,153	7,781
	Category 9 - Downstream Transportation & Distribution	22,381	3,131	25,512	24,827	1,097	25,924
	Category 10 - Processing of Sold Products	46,658	-	46,658	41,187	1	41,188
	Category 11 - Use of Sold Products	-	-	-	-	-	-
	Category 12 - End of Life Treatment of sold products	4,031	28	4,059	4,287	43	4,330
	Category 13 - Downstream Leased Assets	-	-	-	-	-	-
	Category 14 - Franchises	-	-	-	-	-	-
	Category 15 - Investments	-	-	-	-	-	-
	Scope 3 Total	6,14,113	11,123	6,25,236	6,33,837	32,857	6,66,694
Total Emissions - Scope 1, Scope 2 (Market-Based) and Scope 3		7,26,684	14,342	7,41,026	7,21,723	37,744	7,59,467







## Scope 3 Emissions

Purchased goods and services contributed the largest share of Scope 3 emissions in both years, accounting for approximately 78% of total Scope 3 emissions. Processing of Sold Products, fuel, and energy-related activities, as well as downstream transportation and distribution, contribute 16% of the emissions. Therefore, these are the four categories that will continue to remain the focus for good GHG accounting practices in the future as well.

### Key Contributing Geographies

Eleven countries play an essential role in the supply of materials to Granules. From our Inventorization exercise, we found that China and India contribute over 70% of our raw material and packaging material supply chain emissions, with shares of about 40% and 30%, respectively. Chinese suppliers accounted for approximately 31% of the procured raw and packaging materials by weight and 43% of emissions. In comparison, Indian suppliers accounted for 50% of the procured weight and 30% of emissions, indicating a relatively cleaner profile. Select supplier geographies are planning significant decarbonization, particularly in electricity generation; however, implementation levels may vary. Therefore, we do expect the emissions to reduce with the grid-level measures; however, they may not be enough to provide the anticipated results towards decarbonization.

### Deep Dive - Our Top 20 Raw Materials and their Carbon Footprint

#### Total Scope 3 Emissions (tCO<sub>2</sub>e)

Key RM#1	1,79,208
Key RM#2	69,334
Key RM#3	50,789
Key RM#4	40,236
Key RM#5	34,279
Key RM#6	19,040
Key RM#7	10,054
Key RM#8	8,416
Key RM#9	7,165
Key RM#10	5,062
Key RM#11	3,441
Key RM#12	3,252
Key RM#13	3,131
Key RM#14	2,199
Key RM#15	2,173
Key RM#16	1,662
Key RM#17	1,557
Key RM#18	1,517
Key RM#19	1,378
Key RM#20	1,182

#### Scope 3 - Analysis by Category (FY 24)

##### Category 1

**78.0%** | 5,19,808 tCO<sub>2</sub>eq

Purchased Goods & Services

##### Category 10

**6.20%** | 41,188 tCO<sub>2</sub>eq

Processing of Sold Products

##### Category 2

**4.30%** | 28,830 tCO<sub>2</sub>eq

Capital Goods

##### Category 9

**3.90%** | 25,924 tCO<sub>2</sub>eq

Downstream Transportation & Distribution

##### Category 3

**3.50%** | 23,453 tCO<sub>2</sub>eq

Fuel- and Energy-related Activities

##### Category 4

**1.30%** | 8,640 tCO<sub>2</sub>eq

Upstream Transportation & Distribution

##### Category 8

**1.20%** | 7,781 tCO<sub>2</sub>eq

Upstream Leased Assets

##### Category 12

**0.60%** | 4,330 tCO<sub>2</sub>eq

End of Life Treatment of Sold Products

##### Category 5

**10.6%** | 3,721 tCO<sub>2</sub>eq

Waste Generated from Operations

##### Category 7

**10.3%** | 2,089 tCO<sub>2</sub>eq

Employee Commuting

##### Category 6

**0.10%** | 931 tCO<sub>2</sub>eq

Business Travel

##### Category 11

**0%** | 0 tCO<sub>2</sub>eq

Use of Sold Products

##### Category 13

**0%** | 0 tCO<sub>2</sub>eq

Downstream Leased Assets

##### Category 14

**0%** | 0 tCO<sub>2</sub>eq

Franchises

##### Category 15

**0%** | 0 tCO<sub>2</sub>eq

Investments

##### Total

**6,66,694 tCO<sub>2</sub>eq**

Total Scope 3





## Intensity

Scope: GHG Intensity (S1+S2+S3)

12.53

FY 24

13.02

FY 23

## Performance

3.8% ↓

Scope: GHG Intensity (S1+S2)

1.53

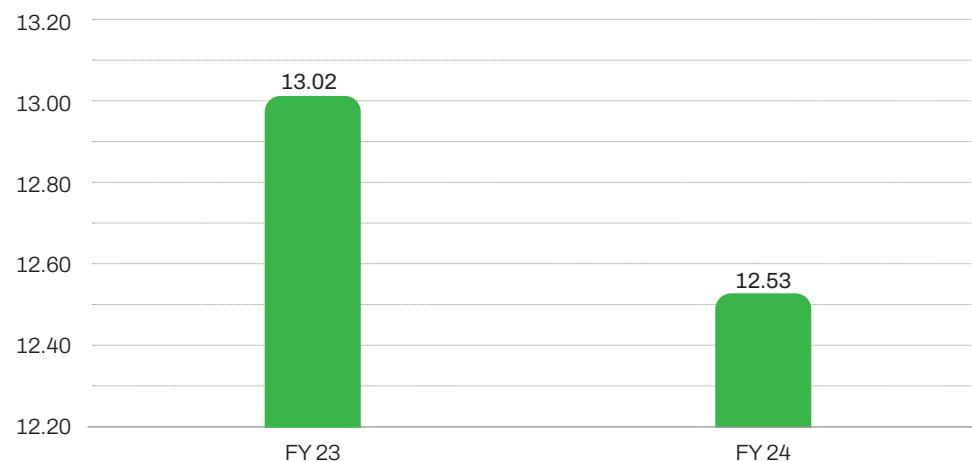
FY 24

2.03

FY 23

25% ↓

## GHG Intensity (S1+S2+S3)



## Scope 3 GHG Emission Estimation Methodology

Our approach to GHG emission estimation aligns with the GHG Protocol, which offers multiple methodologies for precise and accurate measurement. We have selected estimation methods for each category under Scope 3 that ensure accuracy and reliability. Recognising that Category 1 is typically the most significant contributor to Scope 3 emissions, Granules has prioritised the use of the most accurate estimation methods for estimating emissions under Category 1 for over 80% of the value chain:

- **Supplier-Specific Emission Estimation:** This method involves gathering detailed emissions data directly from our suppliers, allowing us to tailor our inventory to reflect actual emissions from the goods and services we purchase.
- **Hybrid Method:** This method enhances the accuracy of our emissions calculations by combining elements of supplier-specific data and broader industry averages.

We conducted a detailed breakdown of Category 1 emissions to understand our emissions profile better. This analysis focused on manufacturing, packaging, and logistics.

We analyzed emissions associated with 30 critical raw materials, enabling us to identify specific areas for improvement and drive targeted sustainability initiatives. For detailed information on our category-wise approach and the sources of key activity data, please refer to the annexure of this report.

Our meticulous approach to GHG estimation lays a robust foundation for Granules' journey toward net zero emissions. By employing precise estimation techniques, we can better strategize and implement long-term GHG reduction initiatives.

*We decided minimize the usages of one of the most prevalent methods, the spend-based method, for any Scope 3 GHG estimation scenario, as it does not provide the precision required for well-founded net-zero strategies. GHG emissions estimated largely based on spend-based methods are much lower than those of the above approaches. It does not provide an in-depth understanding of the GHG emission hotspots within the pharmaceutical supply chain. For example, the carbon footprint of locally sourced materials in large quantities may differ notably from those sourced internationally in smaller batches.*





## Product Carbon Footprint

The product carbon footprint (PCF) exercise is a cornerstone of Granules' strategy to achieve net-zero emissions. It supported developing a GHG reduction plan for high-impact products from the highest GHG emission-contributing category under Scope 3. The comprehensive PCF exercise conducted at Granules quantified and identified key emissions across the raw materials supply chain, which is a significant contributor to the carbon footprint of pharmaceutical products.

We have estimated the Product Carbon Footprint (PCF) for five key molecules (for all SKUs) of our molecules covering 65% of our product sales. In the near future, we will conduct Life cycle assessments covering all the impact categories.

### PCF Coverage - Product in Focus

We have estimated the Product Carbon Footprint (PCF) for 5 Key molecules (for all SKUs) of our molecules covering 65% of our product sales. In the near future, we will conduct Life cycle assessments covering all the impact categories.

#### PCF Coverage - Product in Focus

5 Products	65% of our sales	59% of our dispatches by line-item count
<b>Product Choice</b> Product on which the GHG life cycle inventory is performed	<b>Paracetamol</b> (API/PFI/FD) <b>Metformin</b> (API/PFI/FD) <b>Potassium Chloride</b> (PFI/FD) <b>Metoprolol Succinate</b> (API/PFI/FD) <b>Venlafaxine</b> (PFI/FD)	
<b>Unit of Analysis</b> Performance characteristics and services delivered by the product being studied	<b>Strength/Concentration</b> (for PFI/FD) <b>Dosage form</b> – Tablets/Capsules/Gel Caps/Caplets (for FD) <b>Release profile</b> – IR/ER (for FD)	
<b>Reference Flow</b> Amount of product on which the results of the study are based	<b>MT</b> (for API and PFI) <b>Number of tablets</b> (for FD)	
<b>Coverage</b>	<b>Cradle-to-Factory-Gate-to-Customer-Gate</b> Does not include Product Processing by customer, usage, end-of-life treatment, etc.	

The methodology employed for the PCF exercise was thorough and collaborative. The PCF was conducted for five essential products, accounting for 65% of our revenue. We engaged with 80% of our vendors in the PCF determination process, focusing on products representing 80% of our spending and integrating Scope 1 and 2 data with Scope 3 emissions to offer a complete carbon profile. This collaboration ensured accurate data collection and informed decision-making.

The PCF exercise provided valuable insights and outcomes. For instance, approximately 79% of Scope 3 emissions were linked to 30+ critical raw materials, contributing around 450,000 MT CO<sub>2</sub>e. This insight directs our focus on these essential areas for emissions reduction. Similarly, for selected suppliers, Scope 1 and 2 contributions to the material PCF were significant, while for others, the distance of material travel significantly impacted the GHG emissions.

These detailed and systematic insights helped Granules identify and implement strategic actions to support emission reductions across the product material sourcing value chain. Some of these interventions emphasize sourcing certain materials from geographically closer suppliers, setting up supplier-specific GHG reduction targets, and efforts to identify 'greener suppliers' and encourage suppliers to reduce GHG emissions.

By adopting a near-sourcing strategy alone, we estimate potential savings of approximately 14,000 MT CO<sub>2</sub> on the current baseline for select raw and packing materials. As the implementation of all identified strategies to reduce product-specific footprint continues, we shall achieve significant reductions in the coming years.

Our plan, targeting high-impact products to address the highest GHG emission categories under Scope 3, yields several collateral benefits, such as improved stakeholder trust and enhanced reputation with customers, investors, and partners. Additionally, cost savings are realized with an efficient and optimized material supply chain.



## Initiatives to Reduce GHG Emissions

### Our sustained and ongoing efforts to minimize our in-house Scope 1 and Scope 2 GHG emissions

At Granules, we have identified measures to decarbonize Scope 1 and 2 emissions for two of our largest facilities — [Bonthapally](#) and [Gagillapur](#), focusing on high-emission assets and utilities.

We have conducted technical evaluations of energy efficiency and performance of key assets like HVAC, Boilers, AHUs, and Air Compressors to identify decarbonization projects.

We conducted a value discovery process to identify Carbon Emission Reduction Measures (CERMs) focused on improving efficiency by adopting advanced technologies and reducing energy waste and solutions (e.g., optimizing

HVAC, coal consumption in boilers, optimization of air compressor systems).

We have analyzed selected CERMs, including engineering assessments, a responsibility matrix, savings potential, baseline agreements, and an action plan. Implementation is currently underway with a defined goal.

We are addressing specific Technical Gaps in Boilers, Air Compressors, Chiller plants, and AHUs and have initiated carbon emissions reduction measures (CERMs).

#### Initiatives Taken

### Our GHG Emission Reduction Strategy and Implementation in Near Term

During FY 24, Granules implemented various initiatives to enhance energy efficiency and reduce greenhouse gas (GHG) emissions across its units, leading to significant energy savings and improved environmental sustainability.

#### Efficiency Measure for Electricity Consumption

**Use of Energy-efficient Pump:** One of the key initiatives involved the replacement of outdated vacuum pumps at API unit-I Hyderabad, resulting in a remarkable energy saving of 70,296 kWh.

**Use of Energy-efficient Blower Motors:** Replaced conventional belt-driven blower motors at FD unit-Gagillapur with energy-conserving EC blowers, saving 474,272 kWh.

**Interlocks and Cut-offs for Energy Savings:** Interlocks were added to RT pumps at API unit-I to automatically shut down reaching the set temperature, saving 28,244 kWh.

Other measures included implementing auto cut-off systems for cooling tower fans, installing Variable Frequency Drives (VFDs) on motors,

and incorporating automatic tube cleaning systems for chillers, resulting in significant energy savings.

**Rooftop Solar:** Installation of rooftop solar panels at FD unit Gagillapur enabled direct generation and utilization of solar energy.

Moreover, by purchasing Renewable Energy Certificates (33,000 MWh) and utilizing solar energy, the Company avoided 28,700 MT of GHG emissions, contributing to environmental protection.

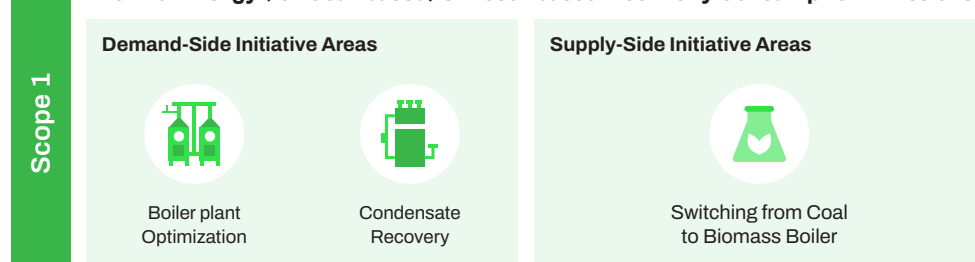
Granules renewable energy use is notable, with GIL-GGP contributing 17.98%. These energy-saving initiatives have resulted in significant financial savings of approximately ₹ 120.23 lakhs across all units.

Granules invested in a 320 KWp rooftop solar project in FY 23 and a 660 KWp project in FY 24 at Gagillapur. The company is also exploring equity investments in group captive solar power projects to secure renewable energy access, enhance sustainability, and reduce carbon emissions.

Altogether, these initiatives led to a total annual energy saving of

# 915,945 kWh

#### Thermal Energy (for Coal-based) & Diesel-based Electricity Consumption Emissions



#### Grid-based Electricity Consumption-related Emissions







## Initiatives to Reduce Greenhouse Gas Emissions

A comprehensive strategy integrating supply-side and demand-side initiatives has been identified to reduce Scope 1 and 2 greenhouse gas emissions and support decarbonization through 2030. Continued support for green energy will be crucial beyond 2030. This approach is based on an analysis of emissions from coal-fired boilers and grid electricity at the Bonthapally and Gagillapur facilities, and Granules will apply a similar methodology at its other operational locations.

### API Unit-1 Bonthapally Facility

At Bonthapally, carbon emissions predominantly arise from thermal energy and grid electricity, contributing 79% and 22% to energy consumption and 60% and 39% to the carbon footprint, respectively. Our decarbonization strategy focuses on implementing Facility Improvement Measures (FIMs) across key systems. For Scope 1 emissions, we are transitioning from coal to biomass boilers, optimizing boiler efficiency through better scheduling, and implementing condensate recovery systems to minimize waste, for significant direct emissions reduction.

For Scope 2 emissions, we are concentrating on demand-side initiatives such as optimizing air compressor operations by adjusting generation pressure and improving chiller plant efficiency through digitalization. Additionally, we are exploring integrating renewable energy sources and using carbon offset programs to reduce our reliance on non-renewable grid electricity, reducing our carbon footprint by 16,869 tonnes of CO<sub>2</sub>.

### FD unit Gagillapur Facility

The Gagillapur facility's decarbonization strategy targets reducing Scope 1 and Scope 2 emissions from coal-fired boilers and grid electricity. Our analysis shows these sources significantly impact the carbon footprint. To address this, we are optimizing boiler operations, refining scheduling, and improving coal boiler efficiency. We are also enhancing air compressor systems by optimizing pressures and reducing purge losses. Additionally, we are upgrading chiller plants and Air Handling Units (AHUs) to more efficient systems with EC fans and IE3 motors to boost overall operational efficiency.



**Mr. Ramraj  
Rangarajulu**

President & Head –  
Formulations Operations



**Mr. Sethumadhavan  
Sankaran**

Sr. VP & Head –  
API Operations

At Granules, operational excellence goes hand in hand with sustainability. We are deeply committed to prioritizing safety across all our facilities, ensuring a secure environment for our teams. Our energy initiatives emphasize the efficient use of resources, adoption of renewable energy, and innovative technologies to minimize consumption. By optimizing water usage and investing in conservation measures, we contribute to resource sustainability. Additionally, we actively pursue strategies to reduce greenhouse gas emissions, supporting our transition to a low-carbon future. These collective efforts reflect our unwavering dedication to integrating sustainability into operations while driving positive environmental and social outcomes.





## Carbon Emissions and Reduction Strategies for Granules' Gagillapur Facility

### Carbon Footprint Contribution

The Gagillapur facility's carbon emissions emerge from using coal, diesel, and grid electricity contributing to Scope 1 and Scope 2 emissions:

- Scope 1 emissions account for 62.7% of the total emissions, comprising 60.1% from coal consumption and 1.1% from diesel consumption used for electricity generation.
- Scope 2 emissions make up the remaining 37.3% of total emissions, driven entirely by grid electricity, which contributes 37.3%.

### Gagillapur Carbon Emissions



■ Scope 1 Emissions 62.7%  
■ Scope 2 Emissions 37.3%

### Reduction Methodologies and Proposed Decrease

To tackle these emissions, the facility has laid out a set of strategies to reduce its carbon footprint, focusing on both Scope 1 and Scope 2 areas:

- Scope 1 initiatives aim to reduce emissions from coal and diesel by optimizing boiler operations, implementing condensate recovery systems, and gradually switching from coal to biomass as a sustainable fuel source.
- Scope 2 strategies focus on reducing emissions from electricity use. The facility is improving energy efficiency by chiller and air compressor optimization, while also increasing renewable energy through a Renewable Power Purchase Agreement and a solar rooftop installation.

### Expected Emissions Reductions

With these strategies in place, the Gagillapur facility expects to reduce its overall carbon emissions by 47% in near term.

This breakdown includes:

- Efficiency measures across boiler and air compressor operation leading to 8% reduction of Scope 1 and 2 emissions. The initiatives include operational optimization and condensate recovery in boilers, various efficiency improvement measures such as pressure optimization, drain traps, and heat recovery in air compressor operations.
- Fuel switch for boiler: 39% reduction through transitioning from coal to biomass boilers, boiler optimization to improve efficiency, and condensate recovery to recycle steam and cut down on energy usage.
- In the long run, all the residual carbon footprint for the Gagillapur site operation (Scope 1 and Scope 2), will be decarbonized through accelerated renewable energy adaption via increased renewable power purchase agreement, installing solar rooftops up to permissible limits by the govt. authorities and renewable energy credits (RECs).

The Gagillapur facility's action plan targets a 47% reduction in Scope 1 and 2 emissions by optimizing boilers, recovering condensate, switching to biomass, enhancing chiller and air compressor efficiency, and increasing renewable energy use.







## Carbon Emissions and Reduction Strategies for Granules' Bonthapally Facility

### Carbon Footprint Contribution

Granules' Bonthapally (Unit I) facility's carbon emissions come mainly from the use of coal, diesel, and grid electricity. These energy sources contribute to both Scope 1 and Scope 2 emissions:

- Scope 1 emissions account for 85.7% of the total emissions. This includes coal consumption, which contributes 81.1% of the overall carbon emissions, and diesel consumption, which adds 1.6% to the total emissions.
- Scope 2 emissions account for the remaining 14.3%, driven by Grid electricity responsible for 14.3% of Scope 2 emissions.

### Bonthapally Carbon Emissions



- Scope 1 Emissions 85.7%
- Scope 2 Emissions 14.3%

### Reduction Methodologies and Proposed Decrease

To address these emissions, the Bonthapally facility has developed strategies focused on reducing its carbon footprint in both Scope 1 and Scope 2 areas:

- Scope 1 initiatives target emissions from coal, and diesel and include boiler optimization to improve efficiency and reduce coal consumption, condensate recovery to recycle steam and cut down on energy usage in short run, and switching from coal to biomass as an alternative fuel source in the long run in a progressive manner, which will significantly lower emissions.
- Scope 2 strategies focus on reducing emissions from electricity use, with the facility implementing chiller and air compressor optimization to improve energy efficiency and lower electricity consumption, along with increased share of renewable energy, in the electricity mix through Renewable power purchase agreement at the facility.
- Efficiency measures across Boiler and air compressor operation lead to 15% reduction of scope 1 and 2 emissions. The initiatives include operational optimization and condensate recovery in boilers, various efficiency improvement measures such as pressure optimization and purge loss elimination, lowering the operating pressure, and chiller plant optimization and digitalization.
- Fuel switch for boiler: 32% reduction through transitioning from coal to biomass boilers, boiler optimization to improve efficiency, and condensate recovery to recycle steam and cut down on energy usage.
- In the long run, all the residual carbon footprint for the Bonthapally site operation (Scope 1 and Scope 2), will be decarbonized through accelerated renewable energy adaption through increased renewable power purchase agreements up to permissible limits by the govt. authorities and renewable energy credits (RECs).

### Expected Emissions Reduction

With these reduction strategies in place, the Bonthapally facility expects to achieve a total reduction of 46% in emissions. This breakdown includes:

The actions implemented at the Bonthapally facility will result in an overall 46% reduction in emissions, significantly lowering the facility's carbon footprint. Through initiatives such as boiler optimization, condensate recovery, switching to biomass, chiller, and air compressor optimization, and increased adoption of renewable energy.





## Our Breakthrough Initiatives on Environmental Stewardship

### Initiative 1

# Granules CZRO

## Our Commitment towards Net Zero

### The Scope 3 Context

Pharmaceutical stakeholders have set various decarbonization and net zero goals. However, a decade of progress shows that while companies have reduced operational emissions (Scope 1 and 2), Scope 3 emissions—over 80% of the industry's total—remain largely unaddressed. To achieve decarbonization, the sector must focus on reducing these Scope 3 emissions linked to fossil fuel-based materials.

### Why Scope 3 Emissions Are Hard to Abate

The pharmaceutical supply chain relies on essential chemicals like Ammonia, Ethanol, Ethylene, Benzene, Toluene, Xylene, and others, primarily produced from fossil fuels—Oil, Gas, and Coal. In China, the chemical industry mainly uses coal gasification to convert coal into 'syngas', which is then transformed into various chemicals. This process emits substantial CO<sub>2</sub>, increasing the GHG intensity in chemical and pharmaceutical products.

The chemical industry is unique among fossil fuel-dependent sectors, using about 70% of these fuels as feedstocks and only 30% for energy. Feedstocks are crucial inputs that transform into final product components. For example, 80% of global methanol is produced via steam methane reforming, which uses water and methane, with much of the carbon from methane incorporated into the methanol. However, some final products, like ammonia (NH<sub>3</sub>), derived from fossil fuels, contain no carbon. Focusing on decarbonizing the production of these essential building blocks can significantly reduce greenhouse gas emissions.

### Granules Approach towards Solving Scope 3 Challenge

There are three aspects to eliminating GHG emissions from the chemicals industry and achieving zero carbon chemicals. The first is cleaning up the feedstocks present in chemical products. The second one is to decarbonize the heat driving chemical reactions and the third is



# 24/7

Carbon-free energy

to use the circular economy principle and avoid the release of by-products. Three sources of zero-carbon chemical feedstocks have great potential- green hydrogen combined with captured carbon dioxide, biomass, and recycled chemicals.

### Granules CZRO: Chemicals & Pharmaceuticals Manufacturing Reimagined

Granules CZRO aims to revolutionize chemical and pharmaceutical manufacturing and supply chain management by integrating key principles. In partnership with Greenko, we are developing a green pharmaceutical zone (GPZ) in Kakinada, Andhra Pradesh, India, using renewable energy, sustainable feedstocks, and circular economy practices.

Granules CZRO's new 100-acre greenfield facility will utilize an Integrated Green Energy and Green Chemicals Platform, developed with our partner, to produce green hydrogen, green ammonia, and essential chemicals like nitric acid. These green molecules, vital for

## Green molecules

Such as Hydrogen(H<sub>2</sub>), Ammonia(NH<sub>3</sub>), Nitric acid (HNO<sub>3</sub>) and Methanol(CH<sub>3</sub>OH)

## Built-in Circularity



pharmaceutical production, will be generated using renewable energy, water, air, and sustainable carbon sources, including carbon capture.

The project will be completed in the next five years. However, we have already started with a pilot plant at Vishakhapatnam, Andhra Pradesh.

The Kakinada facility will run on continuous carbon-free green energy, requiring minimal external materials from Granules and its partners. Granules will produce Active Pharmaceutical Ingredients (APIs) and their Key Starting Materials (KSMs) on-site, using mostly in-house chemicals, resulting in a final API with a negligible carbon footprint. This will enable Granules CZRO to achieve a near net zero carbon footprint from 'Cradle to Gate' across all three scopes: Scope 1, 2, and 3.







## Complete Supply Chain Decarbonization Plan for Paracetamol & Metformin

Granules is a leading global producer of two essential health molecules: Paracetamol for pain relief and Metformin for Type 2 Diabetes management, consumed in vast quantities worldwide. At Granules CZRO, we are launching a comprehensive decarbonization strategy for the entire value chain of these products, crucial for meeting the pharmaceutical industry's climate commitments. We will subsequently expand our efforts to include the value chains of other products in our portfolio and pipeline, including those from fermentation processes.

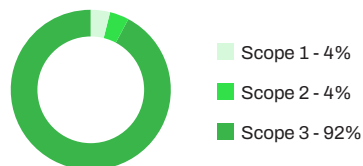
**Paracetamol**, or acetaminophen, is a non-opioid analgesic and antipyretic used to reduce fever and relieve mild to moderate pain. Available over the counter under brands like Tylenol and Panadol, global demand for Paracetamol API is around 170,000 metric tonnes annually. Its production involves acetylating para-aminophenol (PAP) with acetic acid or anhydride, using precursors such as benzene, chlorine, nitric acid, hydrochloric acid, caustic soda, methanol, and carbon dioxide.

**Metformin**, used to lower blood glucose in Type 2 diabetes, has an annual global usage of nearly 90,000 metric tonnes. Its main raw materials are dicyandiamide (DCDA) and dimethylamine hydrochloride (DMA HCl), which are derived from precursor chemicals like calcium cyanamide, produced from calcium carbide, nitrogen, ammonia, methanol, and hydrochloric acid. The production of DCDA requires high temperatures (up to 1400°C), resulting in a significant carbon footprint.

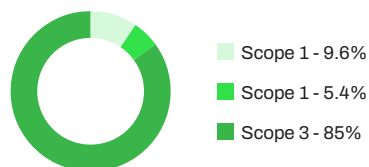
### Understanding Emission Profile for Paracetamol and Metformin

#### Scope 3 Contribution to Paracetamol and Metformin API

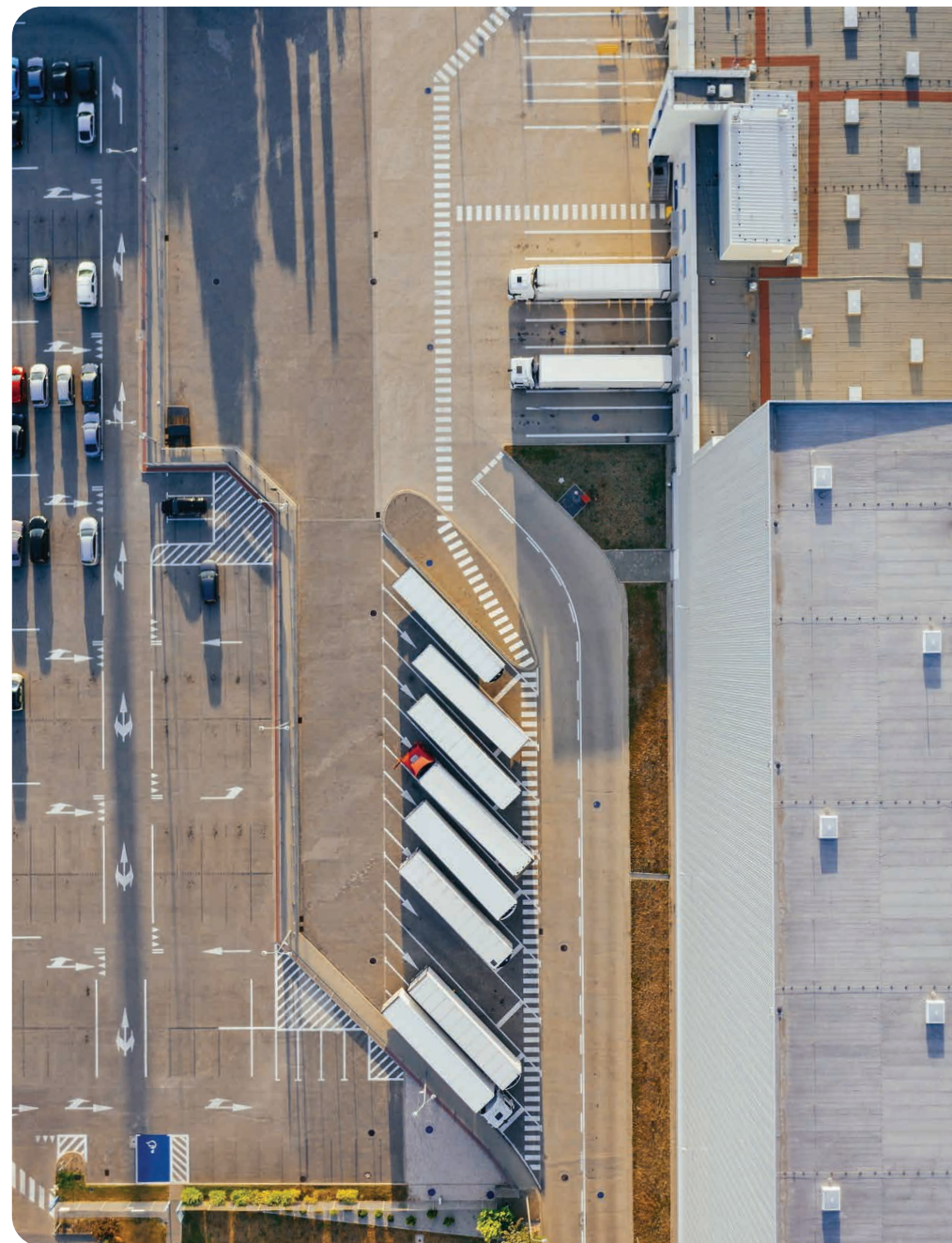
##### Paracetamol API Carbon Footprint



##### Metformin API Carbon Footprint



**A large portion of the chemicals for Paracetamol and Metformin APIs comes from fossil fuels. At Granules CZRO, we aim to fully decarbonize this supply chain, which accounts for two-thirds of our revenue, achieving an 80% reduction in carbon footprint across all scopes for these compounds.**



### CZRO Pilot Plant at Vishakhapatnam

At CZRO pilot plant, we have successfully validated our technology for sustainable manufacturing of DCDA, the key starting material for Metformin.

**The DCDA Challenge:** This material has high carbon intensity in our supply chain, sourced from a few suppliers in China. Its hazardous manufacturing process uses calcium cyanamide and involves temperatures over 1400°C, resulting in a large carbon footprint and difficult-to-manage waste byproducts.

**Our Solution:** At Granules CZRO, we have developed a novel process using a non-hazardous starting material that operates at just 700°C. This innovation enables us to utilize

electric energy from renewable sources, unlike the previous method that required fossil fuel combustion at 1400°C.

The procedure reduces energy demand and carbon footprint by 50%, even with fossil fuels. This lower heat requirement can now be met with renewable electric energy, bringing the carbon footprint close to zero and marking a significant advancement in heat decarbonization.

The DCDA pilot plant at Vishakhapatnam commenced operations in March 2024 with a capacity of 360 kg/day equivalent to 108 tonnes per annum, a testament to our R&D capability for sustainable product development and manufacturing.

### DCDA ROS Comparison Decarbonization of Metformin through DCDA Breakthrough Achieved at our CZRO Pilot Plant in Vizag

#### Conventional Process

EXISTING COMMERCIAL PROCESS  
Calcium Carbide

Nitrogen

Calcium Cyanamide

Continuous carbonation

Dicyandiamide

1400°C

Process heat requires fossil fuel

#### GRANULES CZRO Process

ALTERNATE ROUTE OF SYNTHESIS  
Replacing Calcium Carbide

ALTERNATE Raw Materials

INNOVATIVE PROCESS

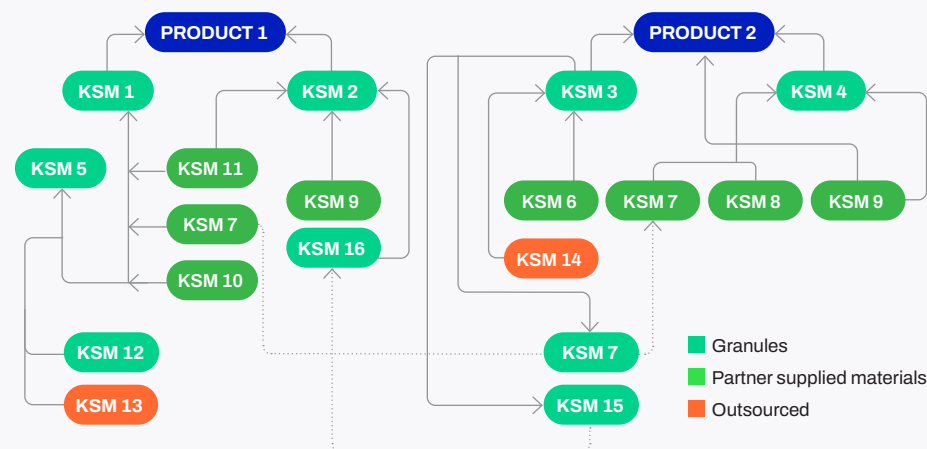
700°C

Process heat through electric furnace, powered by carbon-free energy

## Embracing Circular Economy Principle

The Granules CZRO initiative emphasizes a circular economy by highlighting material flow circularity in basic chemical manufacturing. Waste from one segment can be reused as input in another; for example, ammonia produced during DCDA production can be used to make Urea and DMA HCl. Similar circularity is seen with CaCO<sub>3</sub> and CO<sub>2</sub> in the value chains of Metformin and Paracetamol.

### Ownership and Decarbonization of Entire Value Chain with Built-in Circularity



Only two inputs, namely KSM13 and KSM14, will be sourced externally. The carbon footprint associated with these inputs will be offset through carbon sequestering methods.







## Initiative 2

## EcoScale – Eco-conscious Product Development for Sustainability

**Pioneering Green Product Development for Sustainable Growth:** At Granules, sustainability has been a core focus since our inception. We emphasize green chemistry principles like atom economy and efficiency, and we are implementing enzymatic processes and continuous manufacturing in our R&D. We are committed to advancing green science, including biocatalysis and flow technology, and are establishing green scores at each stage of the manufacturing process to ensure consistent application of these practices.

Choosing the right route for chemical synthesis (ROS) is a major challenge for chemists at the start of any project. To ensure the ROS is cost-effective and environmentally sustainable, we integrate the 'EcoScale' concept early in product development, alongside key green chemistry principles. We assess factors like atom economy, atom efficiency, and the E-factor against established criteria to highlight the importance of sustainability.

We evaluate factors such as acquisition simplicity, operational specifications, chemical characteristics, and effluent types and quantities up to commercialization. Our methodology includes a penalty point system with set acceptability standards, and manufacturing will only begin once these standards are met.



## Granules EcoScale

EcoScale assesses process efficiency through evaluation across

6

Parameters

38

Sub-parameters

every stage.

The EcoScale integrates our green chemistry matrix with principles such as atom economy, atom efficiency, and E-factor, supported by eco-friendly enzymes and biotransformation. Our superior capabilities in identified chemistries enhance sustainability at product development stage. Operational targets and green score thresholds drive our commitment to embedding sustainability in each product cultivating a greener and more responsible approach.



Dr. P.V. Srinivas

Chief Technology Officer &amp; Head of API R&amp;D

At Granules, innovation fuels our journey toward sustainable manufacturing. We embed green chemistry principles into every stage of our API development and manufacturing lifecycle, focusing on reducing environmental impact through process optimization and waste minimization. Tools like the Green card and Ecoscale, introduced during API product development, enable us to benchmark progress and align with our sustainability goals right from the start. Leveraging advanced technologies such as flow chemistry and biocatalysis, we enhance efficiency and minimize resource consumption. By integrating these transformative approaches, we aim to deliver eco-friendly solutions that advance our mission of pioneering green science, safeguarding the environment, and creating enduring value for all our stakeholders.







## Initiative 3

## Innovation in Finished Dosage Manufacturing

Industry-Academia Partnership between Granules India Limited and NIPER, Mohali: **Dr. Chigurupati Center of Excellence in Innovative and Sustainable Pharmaceutical Development (CCE-ISPD)**

## Collaborative Research Initiatives/Academic Partnerships

## Center of Excellence in Innovative and Sustainable Pharmaceutical NIPER X Granules

The center will focus on crucial areas such as exploring

- ▶ Plant-based excipients
- ▶ Polymer-free formulations
- ▶ Directly compressible crystals
- ▶ Promotion of solvent-free pharmaceutical processes
- ▶ Resource-efficient and energy-efficient pharmaceutical products



The formulation stage of converting API into formulating tablets into injectables or liquids has a significant environmental impact with solvents, excipients, and plastics.

The center aims to develop environmentally friendly pharmaceutical technologies, focusing on:

- ▶ Plant-based excipients
- ▶ Polymer-free formulations
- ▶ Directly compressible crystals
- ▶ Solvent-free processes
- ▶ Resource-efficient products

Granules India will invest in advanced laboratories and research instruments at NIPER to enhance research capabilities. This collaboration will promote joint research, and knowledge sharing through seminars and workshops, and provide research opportunities for faculty and students.

The collaboration promotes sustainability and innovation in the pharmaceutical industry, enabling research and strengthening academia-industry ties with potentially transformative impacts on the global pharmaceutical sector and society.



**Manikandan Ramalingam**

Senior Vice President & Head, Formulation R&D

At Granules, we are reshaping pharmaceutical innovation in finished dosage formulation development with a strong emphasis on sustainability. Our efforts focus on optimizing the use of excipients, polymers, and solvents to minimize environmental impact. Through our collaboration with NIPER, we are pioneering green formulations that promote eco-friendly practices throughout the formulation process. Initiatives such as advancing plant-based excipients, developing polymer-free and solvent-free formulations, creating directly compressible crystals, and designing resource-efficient products are setting new benchmarks in sustainable pharmaceutical technology. Granules remains committed to investing in state-of-the-art laboratories and fostering academia-industry collaboration through joint research, seminars, and workshops. These initiatives not only enhance sustainability across our operations but also contribute to the industry's ability to deliver innovative, environmentally conscious solutions with meaningful societal impact.





## Tackling Carbon Emissions in Value Chain (Scope 3 Emissions)

### Supplier Engagement Program

Granules India Limited is committed to sustainability through a Suppliers' Sustainability Program. We prioritize selecting suppliers aligned with our sustainability goals and work with Our top suppliers, responsible for 80% of our carbon footprint, to reduce emissions. This involves pledges, disclosures, and adherence to SDGs and SBTi.

### Key Features of Our Supplier Sustainability Program

Granules' Supplier Sustainability Program is built on collaborative partnerships to advance decarbonization and sustainable practices. The program's key components include:



#### Carbon Footprint Disclosure:

Suppliers are required to report Scope 1, 2, and 3 emissions related to their business with Granules.



#### Product Carbon Footprint (PCF):

Suppliers are expected to provide product carbon footprint sold to Granules.



#### Science-Based Targets initiative (SBTi):

Suppliers must develop and submit science-based targets by 2025 aligned with global climate objectives.



#### Renewable Energy Adoption:

Suppliers are encouraged to increase renewable energy usage, targeting 100% renewable energy for the next five years.

### This program underscores Granules' dedication to responsible and sustainable sourcing, aligning with our broader environmental goals.

Granules enforces its climate commitments and requires suppliers to adhere to ethical standards outlined in our Code of Conduct, which includes labor rights, environmental sustainability, business ethics, data privacy, and information security. Suppliers must ensure compliance among their employees and subcontractors, communicate these standards to their vendors, and incorporate similar provisions in their contracts. In case of conflicting laws or agreements, suppliers must follow the highest standard, reinforcing Granules' dedication to ethical supply chain practices.

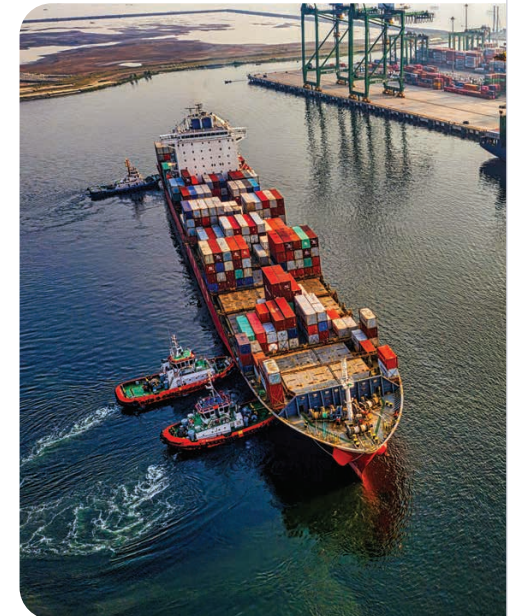
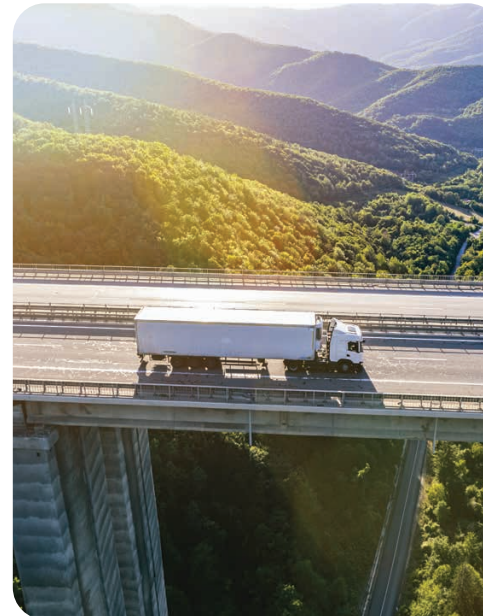


#### Riaz Ahmed

Senior Vice President & Head of Supply Chain Management

At Granules, supplier sustainability is integral to our responsible business practices and is a key driver in reducing Scope 3 emissions, which account for approximately 88% of our total emissions. Through our Supplier Sustainability Program, we collaborate with top suppliers covering 80% of our spend by value, setting clear expectations on baseline surveys, disclosures, pledges, actionable initiatives, and targets.

Our program focuses on aligning suppliers with our climate goals, resource efficiency, and sustainable sourcing principles. By fostering transparency, building capacity, and driving shared progress, we are creating a resilient and responsible supply chain. This approach strengthens our ecosystem while delivering long-term value for stakeholders and advancing our mission of sustainability and environmental stewardship.

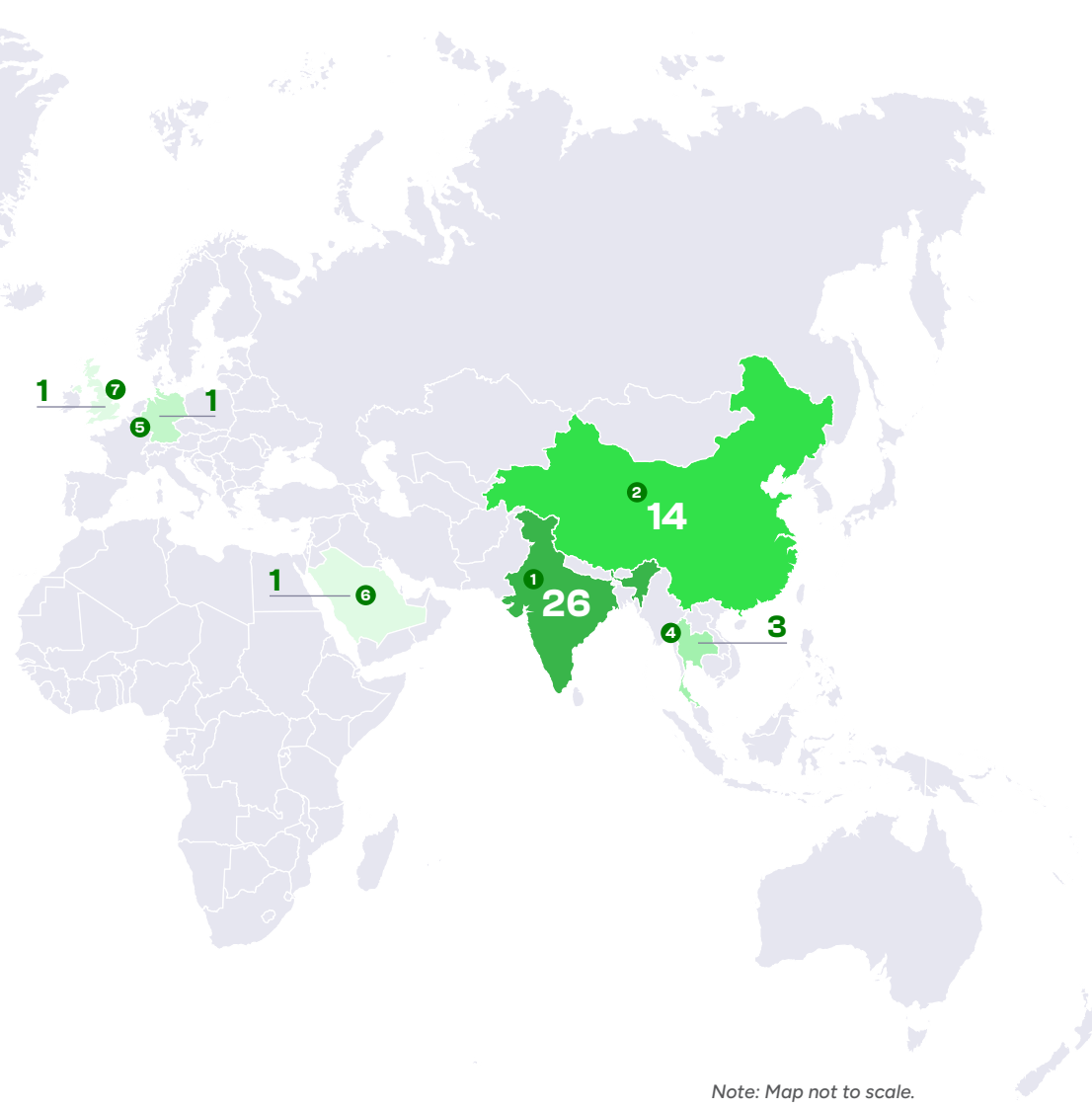




## Our Supplier Sustainability Program - Coverage in Numbers

### Geographical spread of our top 50 suppliers

1 India	26
2 China	14
3 United States	4
4 Thailand	3
5 Germany	1
6 Saudi Arabia	1
7 United Kingdom	1



# 62

No. of suppliers covered

# >85%

Coverage on purchase spend

# >80%

Suppliers with ESG/  
Sustainability policy

# 100%

Suppliers has conducted training  
on human rights

# >65%

Suppliers certified for EHS  
management system







# Energy Management



## Continuous Initiatives towards Reducing Climate Impact

### Adopting Green Energy

Our primary energy consumption comes from coal and furnace oil for steam generation, High-Speed Diesel (HSD) for diesel generator sets and vehicles. Electricity used in operations and corporate offices also forms a substantial part of our energy usage. To address this, we have adopted a twin-pronged strategy: optimizing energy consumption and transitioning to cleaner energy sources.

Our commitment to renewable energy has yielded significant results. During the reporting year, we procured 33,000 MWh of Renewable Energy Certificates (RECs). Along with rooftop solar installations, renewable electricity purchases through Power Purchase Agreements (PPAs), and I-RECs, these efforts increased renewable energy's share to 47.4% of our total electricity consumption.

Energy	Unit	FY 23	FY 24
Total Electricity consumption	MWh	77,078	84,066
Electricity from Renewable Sources (PPA+On-site+I-RECs)	MWh	7,565	39,885
<b>% of Renewable Energy share of consumed Electricity</b>	<b>%</b>	<b>9.8%</b>	<b>47.4%</b>
<b>Fuels Consumption</b>			
Coal Consumption	MT	22,149	21,732
HSD consumption	KL	742	508
Furnace Oil Consumption	MT	64.50	63.62
Petrol Consumption	KL	0.76	3.26
<b>Energy by Source</b>			
Energy From Electricity Consumption	TJ	277.5	302.6
Energy From Fuels Consumption	TJ	592.2	573.3
<b>Total Energy in TJ</b>	<b>TJ</b>	<b>869.7</b>	<b>875.95</b>
<b>Energy Intensity - TJ/Production</b>	<b>TJ/MT</b>	<b>0.01528</b>	<b>0.01445</b>

Granules made significant strides in energy management during FY 24, reaffirming its commitment to sustainability. Total electricity consumption increased from 77,078 MWh in FY 23 to 84,066 MWh in FY 24. Renewable energy contributions saw a notable rise, with renewable electricity (via PPA, on-site generation, and I-RECs) growing from 7,565 MWh to 39,885 MWh, boosting the renewable energy share from 9.8% to 47.4%.



Fuel consumption trends showed a reduction in diesel (HSD) use from 742 KL to 508 KL and a slight decline in coal consumption from 22,149 MT to 21,732 MT, reflecting improved efficiency measures. While total energy usage increased slightly from 869.7 TJ to 875.95 TJ, energy intensity improved from 0.01528 TJ/MT to 0.01445 TJ/MT, indicating more efficient energy use relative to production.

In March 2023, a 320 kWp solar power plant was installed at the Gagillapur facility, generating approximately 1,200 kWh of power daily and increasing the renewable energy share by 0.22%.

Looking ahead, Granules remains committed to expanding its renewable energy capacity. By FY 25, the company plans to commission a 1 MW rooftop solar plant at the Gagillapur unit, advancing its journey toward a sustainable energy future.

### Promoting Energy Efficiency

Reducing energy consumption is central to our commitment to energy savings, focusing on equipment replacement and retrofitting for optimal performance.

In FY 23-24, Granules saved 915,945 kWh through initiatives like replacing vacuum pumps (70,296 kWh), upgrading to energy-efficient blower motors (474,272 kWh), and installing interlocks on RT pumps (28,244 kWh). Rooftop solar panels enabled direct solar energy use, and systems like auto cutoff for cooling tower fans, VFDs on motors, and automatic tube cleaning improved efficiency.

Granules purchased 33,000 MWh in Renewable Energy Certificates, avoiding 28,700 metric tons of greenhouse gas emissions and achieving 17.98% renewable energy use. These efforts resulted in financial savings of ₹ 120.23 lakhs, demonstrating our commitment to resource optimization and operational excellence.

#### Our Goal

**Achieve 100 % Sourcing renewable electricity by FY 30**

**47.4%**

Of Electricity Consumption from Renewable sources (PPA, On-site Rooftop, I-RECs) in FY 24

**84,066 MWh**

Electricity consumed in FY 24

**1 MW**

On-site rooftop solar capacity at our Gagillapur unit

**876 TJ**

Energy consumed in FY 24

### Outlook

Granules will continue refining its GHG emission estimation approach using the templates and methods developed during this exercise for future assessments. Supplier-specific emission factors gathered will remain effective but will be updated periodically as supplier sustainability programs evolve. As new GHG emission factors are published, we will ensure timely updates to maintain accuracy. Additionally, we will continue obtaining third-party assurance for our GHG inventory to enhance transparency and reliability, reaffirming our commitment to rigorous emissions management.







# Water Management



## Context

The pharmaceutical industry has a significant water footprint, as water is crucial for manufacturing processes, serving as a raw material, ingredient, and solvent. Research from York University found pharmaceutical contaminants in many rivers worldwide at unsafe levels. The industry requires a reliable supply of high-quality water for production, sanitation, and cooling, while also using water for daily activities. Therefore, conserving water and responsibly disposing of pharmaceutical waste is essential.

## Water is a vital resource for value chain partners, consumers, and the pharmaceutical industry.

## Approach

Judicious water use is of prime importance to us because of the amount of water our operations demand. We hold ourselves accountable for water availability for communities surrounding our plants/offices that may be impacted due to the drawing of water for our everyday operations. Therefore, we monitor our water consumption closely and implement several initiatives to optimize our consumption.

Effluent management is a crucial enabler of our goal to ensure minimal environmental impact and achieve circularity in our operations. Our plants are Zero Liquid Discharge (ZLD), ensuring no wastewater is released into the environment. By treating and reusing our wastewater, we reduce water consumption promoting operational sustainable water use.

Our goals and EHS management system guide our commitment to ensuring the availability of clean, unpolluted water. We strive to advance responsible water stewardship within our operations, recognizing its importance for environmental sustainability.

## Actions & Initiatives

### Water Use Reduction

Our commitment to sustainability is reflected in our diligent monitoring and optimization of water consumption across our operations. Recognizing the importance of water conservation, we have implemented several innovative initiatives designed to reduce our water usage and enhance efficiency. At one of our facilities, we collect rainwater in an underground storage tank, repurposing it for gardening while conserving potable water and utilizing natural resources effectively.

In addition to rainwater harvesting, we employ advanced techniques such as steam condensate recovery and using flash jet pumps to optimize water use. These measures maximize operational efficiency while minimizing our environmental footprints. Furthermore, we recycle water within our facilities, utilizing treated effluent for utility make-up processes. Our water consumption has remained consistently at the same level over the past three years, despite our continuous efforts to expand our production capacity.







## Our Goal

## Achieve Water Positivity by 2032

# 2,26,082 KL 1,165 KL

Freshwater consumption in FY 24

Capacity of Rainwater collection system in our plants



### Effluent Management

Effluent management is a critical component of our strategy to minimize environmental impact and achieve operational circularity. Several of our plants operate with Zero Liquid Discharge (ZLD) systems, ensuring no wastewater is released into the environment. This approach is complemented by advanced Effluent Treatment Plants (ETPs) with RO Recovery Systems allowing us to treat and reuse wastewater, reducing our reliance on freshwater resources.

In FY 24, the amount of wastewater we discharged increased significantly compared to previous years. Despite this increase, we successfully treated 100% of the wastewater released from our operations. About 39% of our wastewater is recycled and reused in the operations through our ZLD systems.

We also procure RO-treated water for specific units, preventing the release of RO wastewater outside our operations. By maintaining ZLD systems and ETPs with RO Recovery Systems, we treat effluents effectively, minimizing environmental impact and promoting resource reuse. These efforts have significantly reduced our dependence on groundwater, leveraging techniques like rainwater harvesting and effluent water treatment to ensure sustainable water management. Through these actions, we continue to demonstrate our commitment to environmental stewardship and operational efficiency.

400 KLD ETP, 100 KLD STP, and 200 KLD MEE capacities drive our efficient wastewater treatment and reuse systems

## 39%

Wastewater recycled and reused

## 55,083 KL

Wastewater recycled and reused

### Outlook

Along with the rest of our initiatives on the environmental front, we are also prioritizing water conservation and responsible wastewater disposal. To foster a structured approach towards conscious water management, we are planning to conduct a comprehensive water risk assessment by FY 25. We have crafted an incremental path towards water conservation, hoping to achieve a water intensity reduction of around 10% yearly. We also want to take our wastewater treatment efforts several notches higher by attempting to recycle 100% of our wastewater across all facilities, in the next few years.

Water & Wastewater	Unit	FY 24
<b>Water withdrawal by source</b>		
Surface water	KL	0
Ground Water	KL	0
Third Party Water	KL	3,68,002
Seawater/Desalinated Water	KL	0
Rainwater Harvesting	KL	0
<b>Total volume of water withdrawal</b>	KL	3,68,002
<b>Total volume of water consumption</b>	KL	2,26,083
<b>Water intensity in terms of physical output</b>	<b>MT/Tonnes of Production</b>	<b>6.070</b>
Wastewater Generated (LTDS+HTDS)	KL	1,41,919
Recycle of Wastewater Generated	KL	55,083
Percentage Generated Wastewater Recycled	KL	39%
<b>Water discharge by destination and level of treatment (in kiloliters)</b>		
To Surface water	KL	0
To Groundwater	KL	0
To Seawater	KL	0
Sent to third-parties	KL	79,216





# Waste Management



## Context

Responsible disposal of pharmaceutical waste is critical in preventing soil and water contamination. This could eventually cause antibiotic resistance to bacteria living in the sewage and other negative environmental impacts<sup>2</sup>. Furthermore, open disposal of pharmaceutical waste in landfills could lead to potential misuse and unauthorized resale<sup>3</sup>. Contamination of water due to irresponsible disposal could further damage aquatic life severely<sup>4</sup>.

In India, pharmaceutical waste-driven pollution is a significant cause of anti-microbial resistance, especially in children. 90% of APIs for generic medicines in the EU are chiefly sourced from India and China. This creates a lot of pressure for increased supply and rapid turnaround times on shipments, leading to burgeoning in unmonitored disposals of pharmaceutical waste.

Granules takes utmost care to ensure end-to-end waste management throughout our value chain, right from the material sourcing stage. Throughout all our operations, we work diligently to reduce waste generation by using resources responsibly and expanding our recycling and reuse initiatives. We have implemented several strategies aimed at minimizing waste and reducing the amount sent to landfills.

## Approach

Our waste management strategy is centered on minimizing waste generation, maximizing recycling and reuse, and reducing landfill contributions. We are dedicated to establishing baseline measurements and benchmarking waste reduction initiatives that align with our sustainability goals. By striving for a circular economy, we aim to limit waste and pollution while promoting practices that positively impact the climate and the environment.

To manage waste effectively, we prioritize waste avoidance and reduction and continuously seek to improve our recycling rates across all operations. Our commitment to sustainability is reinforced by our adherence to ISO 14001 standards, which guide our waste management practices.

A key aspect of our approach is engaging stakeholders throughout our value chain to foster a culture of sustainability. We work closely with suppliers to ensure responsible sourcing and minimize waste at the production stage. By integrating sustainability into every phase of our value chain, we aim to reduce resource consumption and implement effective waste management strategies contributing to a more sustainable future.

<sup>2</sup> [https://www.researchgate.net/publication/374865554\\_Pharmaceutical\\_Waste\\_Disposal\\_Current\\_Practices\\_and\\_Regulations\\_Review#:~:text=Improper%20disposal%20of%20these%20medications,resistance%20and%20other%20environmental%20issues](https://www.researchgate.net/publication/374865554_Pharmaceutical_Waste_Disposal_Current_Practices_and_Regulations_Review#:~:text=Improper%20disposal%20of%20these%20medications,resistance%20and%20other%20environmental%20issues).

<sup>3</sup> <https://iris.paho.org/bitstream/handle/10665.2/8837/1418.pdf;jsessionid=67E4D08A17858ED5F72DA12A343D3078?sequence=1>

<sup>4</sup> <https://www.oecd-ilibrary.org/sites/3854026c-en/index.html?itemId=/content/publication/3854026c-en>





## Our Goal

## Achieve Zero waste to landfill by 2030

88.1%

Hazardous Waste sent for Reuse  
(Co-processing)

100%

Non-hazardous Waste sent  
for Reuse/Recycle

## Actions &amp; Initiatives

## Disposing Mindfully

We are also highly conscious about the way we manage and dispose of our waste. We strictly adhere to national rules and regulations on waste disposal for the different categories of waste we generate:

## Disposal of different types of waste



## Plastic Waste

Recycling & disposal as per Central Govt. rules & Plastic Waste Management Rules



## E-waste

Disposed through a registered recycler



## Hazardous Waste

Sent to treatment, storage, disposal facility or cement industries for further treatment/reuse



## Biomedical Waste

Disposed through authorized common bio-medical waste facilities

## Generating Lesser Waste

We firmly believe that generating less waste is one of the central elements of an intelligent waste management system. Our industry inherently creates high volumes of solvents, hazardous waste, and non-hazardous waste. Through a combination of process optimization, co-processing, and clean manufacturing techniques, we are prioritizing the minimization of waste generation in our everyday operations. We also have a dedicated process flow for waste disposal.

Plastic waste is sent for recycling to an authorized third party. We are also committed to the proper management of construction waste in our journey toward achieving a platinum rating from IGBC. We have stringent monitoring mechanisms in place for waste segregation and diversion of at least 50% of construction waste from landfills.

Our non-hazardous waste volumes have remained stable over the years, reflecting consistent management practices. In FY 24, we observed an increase in hazardous and biomedical waste generation compared to FY 23, driven by our successful efforts to expand production capacity over the past three years. However, e-waste generation has dropped significantly. Additionally, our waste intensity per rupee of turnover has improved, reducing to 0.157 in FY 24 from 0.192 in FY 23, while waste intensity per metric tonne of production saw a slight increase.

## Weight of Recycled Waste (in Metric Tonnes)

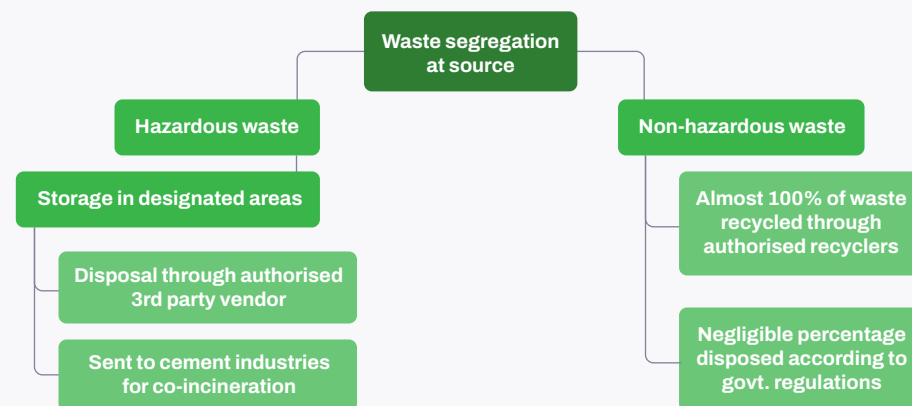
3,281

2023-24

3,034

2022-23

## Waste Stream Flowchart



Co-processing is our most preferred choice of waste disposal. We send a negligible share of waste to landfills and for incineration.







Waste	Unit	FY 23	FY 24
Haz. Waste disposed to Landfill	MT	406.32	398.373
Haz. Waste disposed to Incineration	MT	63.235	71.52
Haz. Waste disposed to Co-processing	MT	2,664.07	3,482.355
<b>Total Hazardous Waste</b>	<b>MT</b>	<b>3,133.6</b>	<b>3,952.2</b>
Plastic Waste	MT	1,081.7	1,106.6
Non-Hazardous Waste (Other than Plastic Waste)	MT	1,946.9	2,170.3
Biomedical Waste	MT	1.228	3.009
E-waste	MT	1.55	1.26
Waste Oil	MT	3.5	2.57
<b>Total Waste</b>	<b>MT</b>	<b>6,169</b>	<b>7,236</b>
Waste Intensity	MT/Tonnes of Production	0.108	0.119

## Granules Commit to Environmental Sustainability with CPCB-EPR Registration

In FY 24, Granules registered with the Central Pollution Control Board (CPCB) under the Extended Producers Responsibility (EPR) framework, aligning with Plastic Waste Management Rules, demonstrating commitment to waste management and sustainability.

The EPR framework holds producers accountable for their products' lifecycle, focusing on plastic waste. Granules' compliance not only meets legal requirements but reduces waste, promotes recycling, and enhances resource efficiency, reinforcing its dedication to minimizing environmental impact and supporting a circular economy.



## Outlook

Our goal is to enhance waste management by integrating circularity principles across the value chain and achieving 'Zero Waste to Landfill' status by 2030. We aim for a 13% annual reduction in landfill waste, with plans to co-process 90% of our waste by 2025 and 95% by 2026.

Our new subsidiary, Granules CZRO, is focused on rethinking the pharmaceutical value chain for decarbonization, with waste management as a key component. We aspire to lead in responsible consumption and production in our region, viewing effective waste management as a vital commitment.





# Policy Advocacy and Progress

## Granules at COP28

Granules India Limited was invited by the UNFCCC to participate in COP28 at the UN Climate Change Global Innovation Hub. Dr. Krishna Prasad Chigurupati, Chairman and Managing Director, addressed the session 'Showcasing Transformative Climate and Sustainability Solutions', highlighting the pharmaceutical industry's crucial role in achieving a sustainable, carbon-neutral future.

Dr. Chigurupati's presentation emphasized the pharmaceutical sector's dual responsibility for health and environmental well-being. He explored strategies and innovations for enhancing sustainability and decarbonization. The session provided an engaging forum for participants to gain insights and contribute to the sustainability dialogue.

## Granules' Commitment to Sustainability and Skilling at C4IR Telangana

**Granules is proud to be a founding member and anchor partner of the World Economic Forum - Centre for the Fourth Industrial Revolution (C4IR) Telangana, the only center in India dedicated to healthcare and life sciences.**

Granules focuses on enhancing sustainability in healthcare innovation, addressing the significant environmental impact of resource-intensive medical procedures and pharmaceutical manufacturing. We advocate for eco-friendly practices to reduce the healthcare sector's carbon footprint and support global climate change initiatives.

Granules prioritizes sustainability and skill development, especially for women in healthcare. Empowering women through specialized training is essential for promoting

gender equity in the industry. C4IR Telangana aims to equip women with vital skills, enhancing their roles and impact on growth and innovation. Granules is committed to advancing these initiatives benefitting society and the environment.

## Granules at Indonesia's 59<sup>th</sup> National Health Day: Climate Change as a Catalyst for Innovation

Dr. Krishna Prasad Chigurupati, Chairman and Managing Director of Granules India, delivered a keynote address at Indonesia's 59th National Health Day in Jakarta, highlighting the potential of climate challenges to drive innovation in green pharmaceuticals. He stressed the strong India-Indonesia ties and the urgent need to address the global climate crisis. Dr. Chigurupati proposed a strategic framework for both nations to lead in the green economy and introduced Granules CZRO, a subsidiary focused on decarbonizing the supply chain, particularly scope 3 emissions, with plans to produce

low-carbon medicines like Paracetamol and Metformin using 24/7 carbon-free energy and sustainable resources.

## Granules at Walmart Growth Summit in India

Granules India Limited participated in the Walmart Growth Summit in New Delhi in February 2024, where Walmart announced plans to increase sourcing from India to \$ 10 billion annually. Granules was recognized as one of five Indian partners and the only representative from the Health and Wellness sector. During the summit, Granules engaged with officials from the Department for Promotion of Industry and Internal Trade and Walmart's leadership team, highlighting its global presence and commitment to providing safe, effective, and affordable medicines. The company also shared its sustainability initiatives aimed at decarbonizing the pharmaceutical supply chain and expressed enthusiasm for collaborating with Walmart to tackle health challenges.



Granules at COP28



Granules is a founder member of WEF-C4IR Telangana



Granules at Indonesia's 59<sup>th</sup> National Health Day



Granules at Walmart Growth summit







# Tracking Progress

## Sustainability (Environmental) Performance

- ▶ 9M FY 25 (Apr-Dec'24)
- ▶ Calendar year 2024 (Jan-Dec'24)



Granules remain steadfast in its commitment to regularly monitoring and evaluating Environment performance as part of our broader sustainability journey. For the first nine months of FY 25 (April to December 2024), we have diligently tracked our GHG emissions, energy consumption, water usage, and waste generation across operations. Energy and Fuels Consumptions, Scope 1 and Scope 2 emissions, Water and Waste are tracked on a monthly basis to ensure consistent monitoring and management of our Environmental performance. However, due to the complexity and volume of data required, Scope 3 emissions are estimated and disclosed on an annual basis to provide a comprehensive and accurate assessment.

Our continuous tracking aligns with our sustainability targets, ensuring transparency and accountability in our environmental performance. This proactive approach helps us identify opportunities for improvement, reinforcing our commitment to responsible business practices, sustainable growth, and minimizing our environmental impact.

## Transitioning to Green Energy: Our Solar Commitment

In FY 25, We achieved a significant milestone in renewable energy, increasing its renewable energy share to 69.3%, up from 47.4% in the previous year. This achievement reflects our ongoing commitment to sustainability and reducing our carbon footprint.

We successfully achieved 1 MW of onsite rooftop solar capacity at our Gagillapur unit, with an additional 667 kW capacity, further strengthening our renewable energy infrastructure and contributing to our long-term sustainability goals.

# 69.2%

Renewable Energy Share in 9M FY 25

# 1 MW

Achieved on-site rooftop solar installation at Gagillapur unit







## Year to Date FY 25 Update

### Environmental Performance for 9M FY 25 (Apr-Dec'24)

Parameter	UOM	Performance for FY 25
<b>GHG Emissions</b>		
Scope-1 GHG Emissions from Solid Fuels	tCO <sub>2</sub> e	38,561
Scope-1 GHG Emissions from Liquid Fuels (HSD, FO, Petrol)	tCO <sub>2</sub> e	1086
Scope-1 GHG Emissions Fugitive Emissions	tCO <sub>2</sub> e	1857
<b>Total Scope 1 GHG Emissions</b>	<b>tCO<sub>2</sub> e</b>	<b>41504</b>
Scope 2 GHG Emissions (Market-Based)	tCO <sub>2</sub> e	13490
Scope 2 GHG Emissions (Location-Based)	tCO <sub>2</sub> e	43879
<b>Total Scope 1+Scope 2 GHG Emissions (Market-Based )</b>	<b>tCO<sub>2</sub> e</b>	<b>54994</b>
<b>Total Scope 1+Scope 2 GHG Emissions (Location-Based)</b>	<b>tCO<sub>2</sub> e</b>	<b>85384</b>
Production, MT Eq	MT Eq	37820
GHG Intensity (Scope 1+Scope 2) – Market-Based	tCO <sub>2</sub> e/MT Eq	1.45
Performance with Base Year (FY 23)		28.60%
Performance with Previous Year (FY 24)		5.23%
<b>Energy</b>		
Energy From Electricity	TJ	220.6
Energy From Fuels	TJ	422.2
<b>Total Energy</b>	<b>TJ</b>	<b>642.8</b>
<b>Water</b>		
Fresh Water Purchased	KL	2,63,012
Water Intensity	KL/MT of Production	6.954
<b>Waste</b>		
Waste (Hazardous) Waste Disposed	MT	2117
<b>Waste Intensity</b>	<b>MT/MT of Production</b>	<b>0.056</b>

Performance FY 25	FY 23	FY 24	FY 25
GHG (Scope 1&2) Intensity – tCO <sub>2</sub> e /MT of Production Eq	2.03	1.53	1.45
Water Intensity – KL of Water purchased /MT of Production Eq	6.188	6.07	6.95
Waste Intensity – MT of Waste (Hazardous) disposed /MT of Production Eq	0.055	0.065	0.058

GHG (Scope 1 & 2) intensity decreased from 2.03 tCO<sub>2</sub>e/MT in FY 23 to 1.45 tCO<sub>2</sub>e/MT in FY 25, reflecting significant improvements in operational efficiency and decarbonization efforts, in line with sustainability and net-zero targets. Water intensity reduced from 6.188 KL/MT in FY 23 to 6.070 KL/MT in FY 24, before increasing to 6.95 KL/MT in FY 25, with the increase attributed to changes in the product mix. Hazardous waste intensity rose from 0.055 MT/MT in FY 23 to 0.065 MT/MT in FY 24, then decreased to 0.058 MT/MT in FY 25. More than 85% of hazardous waste generated is diverted from landfill and sent for reuse as alternate fuel.

## Calendar Year Reporting

### Environmental Performance for Calendar Year 2023 Vs 2024

Parameter	UOM	Calendar Year 2023	Calendar Year 2024
<b>GHG Emissions</b>			
Scope 1 GHG Emissions	tCO <sub>2</sub> e	55,014	56,267
Scope 2 GHG Emissions (Market-Based)	tCO <sub>2</sub> e	41,843	21,016
<b>Total Scope 1+Scope 2 GHG Emissions (Market-Based)</b>	<b>tCO<sub>2</sub> e</b>	<b>96,857</b>	<b>77,283</b>
Production, MT Eq	MT Eq	62,419	55,088
GHG Intensity (Scope1+Scope 2) – Market-Based	tCO <sub>2</sub> e/MT Eq	1.55	1.4
<b>Energy</b>			
Energy From Electricity	TJ	299.9	295.9
Energy From Fuels	TJ	565.4	570.7
<b>Total Energy</b>	<b>TJ</b>	<b>865.3</b>	<b>866.6</b>
<b>Water</b>			
Fresh Water Purchased	KL	3,65,751	3,52,158
Water Intensity	KL/MT of Production	5.86	6.39
<b>Waste</b>			
Waste (Hazardous) Waste Disposed	MT	3854	3381
<b>Waste Intensity</b>	<b>MT/MT of Production</b>	<b>0.062</b>	<b>0.061</b>

# Note:

- The FY 24-25 data presented in this section pertains to the period from April 2024 to December 2024 (9 months) and has not been verified by a third party.
- Calendar Year 2023 means Jan 2023 –Dec 2023 & Calendar Year 2024 means Jan 2024 –Dec 2024



Our commitment to breaking barriers is reflected in fostering diversity, inclusion, and well-being at Granules. Our women-led production plant in Shamirpet, with 70% women in key roles, showcases our dedication to empowering women. Through initiatives like the Women Mentorship Program and prioritized recruitment, we build leadership opportunities. We also prioritize employee health with awareness sessions, mental health support, and comprehensive healthcare. With focused training and continuous learning, we create an environment where all employees can thrive.

#### Material Topics Addressed

- Diversity and Inclusion
- Occupational Health and Safety
- Employee Well-being
- Human Capital Development
- Innovation, Research and Development
- Community Impact, Relations and Development

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# Breaking Barriers

100%

Return to work rate

Zero

Confirmed cases of discrimination

1400+

Students trained through Pharma Pathashala





# Championing Gender Empowerment

A low share of women in the workforce traditionally characterizes the Indian pharmaceutical industry. Only 15%<sup>5</sup> of India's sizeable pharmaceutical workforce comprises women, owing to several aspects primarily centered around the misconception and need for concentrated efforts that continue to keep the industry gender ratio skewed towards males. At Granules, the inspiration and commitment to breaking stereotypes and empowering women is driven from the apex, the CMD. The mission to empower women permeates every level of our organization, driving us to take the challenge of establishing a women-led facility.

Our new women-led green field formulations plant at Genome Valley, Hyderabad, will produce tablets and capsules in oral solid form. When fully operational, the plant will add 10 bn dosage formulation capacity per annum.

## Our Goal

**Achieve a 100% increase in women's employment by 2030 compared to FY 24**

**Achieve gender pay parity by FY 30**



<sup>5</sup> <https://www.livemint.com/Specials/jKz1yk1h94ECfQfgWtzkiO/Bridging-the-gender-inequality-gap-in-the-pharma-sector.html>







Our endeavor to establish a women-led production plant has highlighted the inherent challenges of hiring more women into the workforce. To overcome the limited availability of trained women resources within the sector, we have expanded the hiring of women with specific expertise beyond the pharmaceutical to other industrial sectors. The recruitment process has been rebooted, emphasizing identifying women's resources. Several freshers have been hired and trained at Granules, and a three-month technical training course encompassing theory and practice on everyday operations ensures they have the right skills and capability to deliver their duties. The program serves as a bridge course for women to adapt to their roles more efficiently, irrespective of the sectors of operations in the past. Inter-plant transfer of experienced female personnel helps bridge the gap in the availability of training professionals. The availability of talent in leadership roles has been the most challenging to address.

Through our efforts, we have hired 130 people at the GLS plant – of which 70% are women. Women occupy all key roles, including the plant head, safety head, engineering head, and technology transfer manager. We are also engaging in a detailed mapping exercise of all tasks and roles at the plant so that the hiring of women is prioritized at every stage. While announcing the hiring, we include clear communication on personnel requirements for a dedicated, female-led manufacturing plant. During recruitment, the hiring team follows rigorous guidelines on screening candidates with the required qualifications repeatedly until the role is filled.

# 70%

Women out of 130 new hires



At our Shamirpet plant, we are dedicated to fostering a supportive and empowering environment for our women workforce. We have implemented innovative solutions such as simulative, small-scale equipment to prioritize self-managed work with minimal material handling tasks. Additionally, we have established a creche to provide on-site childcare for working mothers, ensuring they have the support they need to balance their professional and personal lives.

Our human resource policies prioritize gender inclusivity across the organization, including Shamirpet. We regularly assess and enhance these policies to meet our workforce's evolving needs. We are adjusting operational practices, such as shift schedules, to support women and implementing a backup strategy to ensure smooth operations during maternity leave.

**While hiring for a women led plant is challenging, we are enthusiastic about the learning it brings. By navigating these challenges, we aim to make meaningful contributions to gender empowerment and share insights that can elevate women's representation in the pharmaceutical industry.**





# Fostering a Safe and Equal Workplace

## Context

India has a pharmaceutical industry workforce of around 49.5 million people. Women's share is generally around 10-15%. The share of females in the workforce is highest in R&D and lowest in sales and marketing functions<sup>6</sup>. This is due to a combination of reasons, including a need for more qualified female candidates, the working environment, and gaps in work policies<sup>7</sup>. While developing and ingraining a culture of thriving diversity is challenging, several studies and experiences suggest that a workplace with people from different environments, genders, and ethnicities creates a holistic and more productive work environment.

## Approach

Granules' leadership has consistently prioritized fostering a positive and friendly work environment, ensuring employees confidently approach their daily tasks. We are committed to promoting equality in the workplace and maintaining a strict policy against discrimination of all types. Any perception of an individual possessing discriminatory characteristics is prohibited and considered unlawful. Our anti-discrimination principle is integrated from the recruitment stage, reflecting our equal employment opportunity policy, which applies to all employees.

Our strategy focuses on achieving long-term gender diversity, as we believe a multicultural and inclusive environment fosters creativity and enhances employee potential.

**No cases of discrimination were reported during the current reporting period.**

## Our Goal

**Foster a safety-first culture and target zero workplace fatality**

## Actions and Initiatives

### Women at Work/Our Workforce

Incorporating women at various levels in our organization enhances operational effectiveness by bringing essential contributions and innovative ideas that improve decision-making for diverse stakeholders.

**Granules employs 6,524 staff, with about 12% being women. Among temporary workers, 18% are female, while 8% of permanent employees are women.**

### Women Mentorship Program

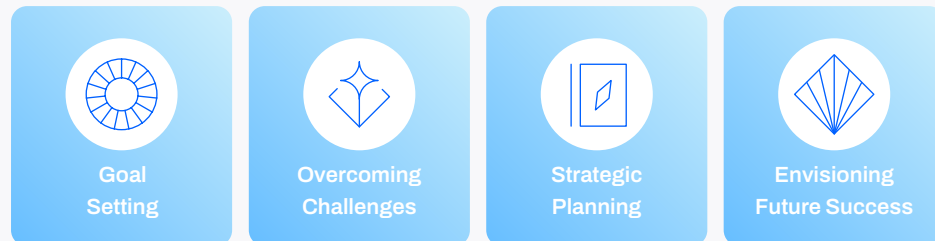
To boost female representation, we have the Women Mentorship Program, a six-month coaching initiative combining group sessions with personalized coaching to empower women as leaders in their fields.

<sup>6</sup> <https://timesofindia.indiatimes.com/blogs/voices/how-women-are-bridging-the-gap-in-the-pharmaceutical-industry/>

<sup>7</sup> <https://www.fortuneindia.com/enterprise/why-are-women-leaders-missing-in-indian-healthcare/114991>

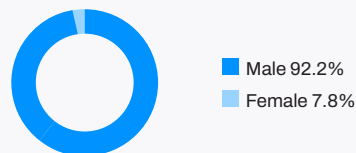


## Components of the Granules Women Mentorship Program



## Employee Diversity

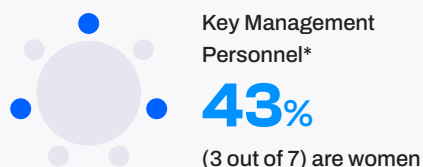
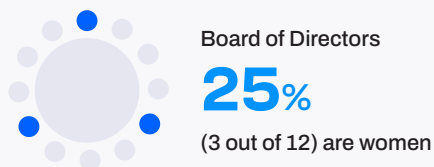
### Permanent Employees



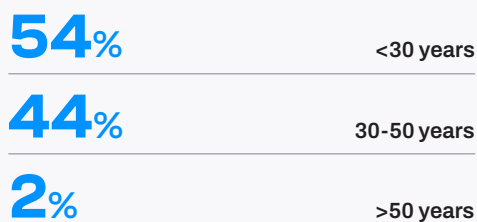
### Temporary Workers



## Key Management Personnel comprise of Managing Director, Executive Directors, Chief Financial Officer, and Company Secretary



## Employees by Age



\* Key Management Personnel comprise the Managing Director, Executive Directors, Chief Financial Officer, and Company Secretary.



**Atul Dhavle**  
 Chief Human Resources Officer

At Granules, we are committed to fostering a workplace that champions diversity, equality, and inclusivity. By creating an environment where every individual feels valued and empowered, we drive innovation and collaboration. Our focus on maintaining safe and conducive working conditions, alongside robust learning and development programs, ensures continuous growth and talent retention. Through our Performance Management System (PMS), we recognize and reward excellence, fostering a culture of accountability and achievement.

## Policy to Prevent Harassment and Discrimination against Women

Various systems, including the Prevention of Sexual Harassment (POSH) policy, committee, grievance mechanism, and Code of Conduct, help create a secure working environment. An Internal Complaints Committee addresses sexual harassment complaints per the Sexual Harassment of Women at the Workplace (Prevention, Prohibition, and Redressal) Act and Rules, 2013. We are committed to a transparent inquiry process with defined timelines for addressing grievances. Our organization maintains a strict zero-tolerance policy for violations of the POSH policy and Code of Conduct, encouraging employees to report any misconduct promptly and in good faith. We also offer an anonymous reporting channel to ensure confidentiality.

## Outlook

We are dedicated to fostering a respectful and collaborative workforce. Our long-term goal is to ensure equal opportunities for employee selection and promotion, regardless of gender or cultural background. We will implement strategies to increase women's representation in recruitment and aim for gender pay equity by 2030. Additionally, we will make our facilities accessible to individuals with physical disabilities in the coming years. We envision a diverse workforce that supports each other's professional growth while respecting India's regional values and incorporating global diversity and inclusion practices.





# Prioritizing Our People



## Context

Technology and automation improve our production efficiency and support our workforce. While innovation will keep transforming our operations, our personnel will embody the organization's vision. The pharmaceutical industry requires specialized skills, which are scarce due to rapid growth. Therefore, retaining, developing, and recruiting talent is a priority for Granules.

**People are at the core of Granules. We are committed to fostering an environment that encourages growth, collaboration, and empowerment. Our approach supports colleagues and communities in reaching their full potential, creating meaningful opportunities for engagement and impact.**

## Approach

At Granules, we prioritize innovation and creativity through open idea exchange and strong training initiatives. Engaging young talent is vital for building our future workforce and investing in their growth benefits both the company and society. Additionally, equipping our leadership with essential training fosters clear guidance and an inclusive workplace culture.

Our main goal is to implement talent retention strategies to keep skilled professionals while fostering an equitable environment for all

employees. We aim to be the employer of choice by promoting a positive workplace atmosphere and effective leadership, which boosts engagement and performance. Our dedicated learning and development team provides diverse training opportunities for various career stages within the organization.

## Actions and Initiatives

### Training and Development

A centralized training and development policy sets foundational principles for training all stakeholders, including employees, contractors, and consultants. The programs cover various topics such as quality assurance, safety, ethics, labor practices, human rights, pharmaceutical R&D, regulations, marketing, and customer relations. Employees also have opportunities for career growth through tailored training aligned with their roles.

All employees must complete at least 24 hours (three man-days) of training annually. We conduct a needs assessment to allocate training hours effectively across departments based on employee roles. Training is tailored to departmental needs, and we track participation. First-line managers in manufacturing receive industry-specific training. We assess training effectiveness through feedback and evaluations. In FY 24, an equal number of male and female employees participated in skill upgradation training.





## Types of Training Programs for Employees

### Leadership Skills

### Personal Development Skills

### Technical Skills

### Management Systems Skills

#### Employees

No. of training

**12**

Coverage

100% of employees

- ▶ Safety, Code of Conduct, POSH, Insider training, Quality, Compliance, Regulatory
- ▶ Soft skills training
- ▶ Regular emailers and awareness on mandatory training

#### Board of Directors

No. of training

**2**

Coverage

50% of Board of Directors

- ▶ Leadership training on various business dimensions, code of conduct, ethics, integrity
- ▶ EY-ISB Board Directors Program for Women
- ▶ Nomination & Remuneration Committee forum meetings by KPMG

#### Workers

No. of training

**3**

Coverage

100% of workers

- ▶ Good Manufacturing Practices
- ▶ Safety at Work
- ▶ Code of Conduct

#### Key Management Personnel

No. of training

**6**

Coverage

100% of KMP



### Vocational Studies Program

In partnership with the Tata Institute for Social Sciences (TISS), we offer a three-year vocational studies program, that combines classroom training with on-the-job training on pharmaceutical manufacturing for our shopfloor employees.

**228**

Employees currently enrolled in Vocational Studies Program

### Granules Learning Academy

The Granules Learning Academy, launched during the year, provides training to grassroots-level employees on the fundamentals of unit operation, manufacturing, and quality control.

### ESG focused training

A training program for employees has been launched, with 50 participants in FY 23 focusing on ESG development, business responsibility, and sustainability reporting, facilitated by a third-party consultant. This year, an awareness session on the Carbon Disclosure Project was held for relevant employees.

### E-Learning Platform

We are launching a new training initiative, 'e-learning Platform: LinkedIn Learning' to promote learning across the organization. A range of training topics has been mapped grade and function-wise for 500 employees, each required to complete at least 24 hours of mandatory training annually.

**24 hours**

Annual minimum training for all employees





## First-time Leaders Programme

FLTP is a flagship training programme at Granules slated to launch in FY 25.

The programme seeks to enable first time leaders across departments to help them engage in self-assessment, their alignment with company objectives, and in enabling teams to function effectively. Through a combination of in-person and online classes, the programme uses interactive tools such as books, movies and lives assignments. Around 800 employees are set to participate in this three-day workshop in two phases.



Trainings & Performance and Career Development Review	Unit	FY 23	FY 24
Performance and career development reviews	%	79.7%	83.7%
Provided training on human rights issues and policy	%	100%	100%
Training Hours – GMP	Man-hours	2,89,391	2,86,783
Training Hours – EHS Training	Man-hours	13,695	13,463
Other Trainings (External Technical & Behavioral)	Man-hours	3,425	9,761

## Performance Management

We have a dedicated performance improvement policy to guide the process of employee performance assessment and management. The performance management process involves setting clear objectives and performance standards for employees, regularly reviewing progress against the identified goals, and providing feedback. Our performance review system helps identify high achievers and specific employees needing support, enhancing performance improvement planning and career management.

In FY 24, around 83.7% of eligible 413 employees received performance and career development reviews. Over the past three years, the percentage of employees receiving such reviews has consistently increased. Notably, the rate of women employees undergoing performance and career development reviews has risen to 74.6% in FY 24.

Category	FY 24			FY 23		
	Total (A)	No. (B)	% (B/A)	Total (C)	No. (D)	% (D/C)
<b>Employees*</b>						
Male	3,741	3,162	84.5%	3,410	2,740	80.3%
Female	316	236	74.6%	240	171	71.2%
<b>Total</b>	<b>4,057</b>	<b>3,398</b>	<b>83.7%</b>	3,650	2,911	79.7%

\* The Company considers employees joined till December of every year for the purpose of performance evaluation. Hence, the above data includes employees joined till December 2023.

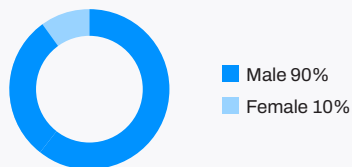




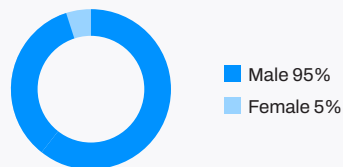
## Talent Attraction and Retention

This year, of 1,406 new employees, 90% were male and 10% female. Among 1,020 exits, 95% were male and 5% female, with many departures among employees under thirty. To address gender imbalance, we are enhancing the identification of female candidates in recruitment.

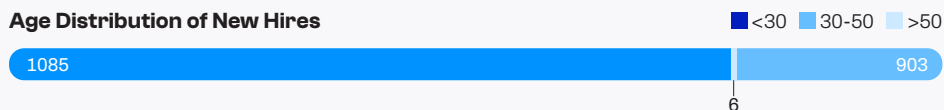
### New Hires



### Attrition



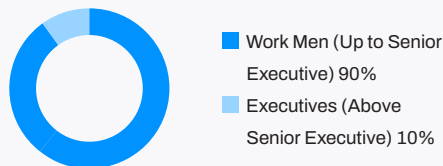
### Age Distribution of New Hires



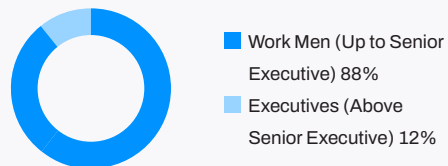
### Age Distribution of Employees Who Have Left



### New Hires



### Attrition



## Outlook

In the coming years, we aim to enhance employee engagement by implementing measurable metrics to evaluate our programs' impact. For FY 25, we are launching the Built to Last leadership training initiative, focusing on transparency, accountability, and continuous learning to foster sustainable growth through innovative ideas. We are also dedicated to achieving full compliance with mandatory training requirements and ensuring every employee completes 24 hours of required training annually.

We are set to enhance our sustainability integration by launching broad and specialized ESG training programs. Our dual strategy of refining employee engagement and training, along with improvements from ESG initiatives, aims to develop a skilled workforce. We believe these efforts will help our employees adapt to evolving trends over time.





# Caring for Our People



## Context

Occupational health and safety have been of foremost importance in the pharmaceutical industry for many years. Studies on preventive measures in this regard started gaining prominence in the 1940's when chemicals started replacing herbs as ingredients<sup>9</sup>. The use of chemicals in processing and manufacturing poses several hazards by releasing toxins into the environment during storage, transportation, and handling<sup>10</sup>. Besides this, the pharmaceutical industry requires employees to respond promptly to changing regulations, patent expiries, and other challenges<sup>11</sup>. The inherent nature of jobs in the industry is demanding, and engaging with employees in as many ways as possible is vital to understanding and meticulously addressing their well-being needs.

## Approach

Our purpose as a company is to 'heal lives'. Moreover, one of our core values is to "empower our employees" to reach their true potential and climb the ladder of success—whether within Granules or outside. We view employee well-being as a fundamental obligation, going beyond regulatory compliance to actively promote their health and satisfaction.

<sup>9</sup> <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1035910/?page=1>

<sup>10</sup> <https://www.certificationeurope.com/insights/pharmaceutical-risk-management-health-safety-checklist/>

<sup>11</sup> [https://pharmatimes.com/web\\_exclusives/employee\\_mental\\_health\\_in\\_the\\_pharma\\_industry\\_1255170/](https://pharmatimes.com/web_exclusives/employee_mental_health_in_the_pharma_industry_1255170/)

## Types of Health Programs



### Physical Health

The Company has partnered with the Ekincare integrated platform, offering a wide range of healthcare services including 24/7 doctor consultations, discounted health checkups, medicine purchases and delivery, and access to gyms. This initiative supports our management's goals of creating a conducive work environment and helping employees reach their full potential.



### Mental Health

Meditation and stress management sessions by eminent speakers for employees (throughout the year).







## Performance

### Employee Benefits

We offer a comprehensive benefits package for all employees, including health insurance, accident insurance, and parental leave. Notably, 92.9% of qualified male employees have access to childcare services, reflecting our commitment to family support. We continually seek to enhance these benefits, though they currently do not extend to contractual workers.

Granules offers essential benefits and organizes annual health camps for eye, dental, and cardiac screenings. We implement quarterly health awareness initiatives to promote preventive care and enhance health education. Additionally, we provide expert-led sessions on meditation and stress management for mental well-being. To encourage physical fitness, we host various activity-based programs like Zumba classes, Walkathons, and Stepathons, fostering a healthy lifestyle and a supportive workplace atmosphere.

All employees receive 100% coverage for pension funds and gratuities. In India, retirement benefits under the Employee State Insurance Scheme are available to 20% of employees and 99% of workers earning up to ₹ 21,000 monthly, a trend stable for the past three years. Employees nearing retirement are notified six months in advance to complete necessary formalities, and a severance payment of three months' gross salary is provided upon retirement or termination.

**100% employees returned back after parental leave and continue to work during the year 2023-24.**

### Occupational Health

Our occupational health centers at Gagillapur, Jeedimetla, Bonthapally, and Vishakapatnam are staffed with full-time doctors and 24/7 nursing assistants and function like primary healthcare centers. Each center, equipped with at least two beds, treats minor ailments and supports employees with chronic illnesses. Additionally, we conduct annual medical examinations for all employees to ensure their well-being.

#### Medical Examinations Conducted

##### Pre-screening Health Checkups:

Comprehensive medical evaluation for all new employees before onboarding to ensure fitness for the role.

**Annual Medical Checkups:** Routine health assessments conducted yearly for all employees, including age-based risk assessments and specialized tests for early detection of potential health issues.

**Half-Yearly Health Checkups for Hazardous Area Employees:** Specialized medical examinations every six months for employees working in hazardous environments, including targeted tests based on occupational exposure and age-related risk factors.

Any discomfort that impedes an employee/worker from performing their everyday tasks is considered an instance of ill health, and we aim to address these immediately.

## Women's Health

We have specific programmes on women's health, considering the specific needs of this group of employees:

- ▶ Annual breast cancer awareness programmes
- ▶ Bone mineral density camp on the importance of bone health
- ▶ Awareness on menstrual hygiene for women employees and workers during POSH sessions
- ▶ Post-pregnancy medical examinations for assessing readiness to work

We prioritize accessible, high-quality healthcare services and regular health awareness sessions for our employees. Quarterly, specialists, including gynecologists and orthopedists, engage with staff across various units. On the first working day of each month, we send health awareness emails highlighting significant events like World Tobacco Day. Granules has also established a comprehensive HIV/AIDS management program, supported by an HIV policy that promotes understanding, offers counseling, and provides free antiretroviral therapy in collaboration with the National AIDS Control Organization, while ensuring patient confidentiality.



We implement various initiatives to ensure a comfortable work environment, including adequate break times, canteen services, access to drinking water, and clean restrooms. Our annual health assessments analyze common health concerns like hypertension and cardiovascular issues, ensuring consistent care for all employees, including contractual staff and trainees. Additionally, we provide mental health support through the Ekincare app, which offers a toll-free number for employees to address their mental health needs and reduce stigma.

We maintain strict confidentiality of employee health records, allowing access only to our occupational health center staff. Medical records are retained for three years for reference as needed.







## 'Granules Cares - People & Planet'

Every year, Granules celebrates its annual day with a theme, and this year's is Green Science.



We promote positivity, wellness, and community among employees and their families through various initiatives. Our Family Fest exemplifies our commitment to strong relationships and a supportive work environment, with this year's theme, 'Granules Cares - People & Planet', reflecting our unwavering dedication to our employees, customers, and the environment. In FY 24, we launched a comprehensive health program, providing psychological counseling to enhance resilience and overall well-being.

## Safety

Granules India has implemented the ISO 45001: 2018 occupational health and safety management system for all employees and contract workers. We prioritize identifying and managing safety hazards and are committed to continuously improving our health and safety practices. A dedicated policy is in place to protect our workforce's well-being and is communicated to all contract employees.

All units have a safety committee, with at least 25% worker representation, and engage in Hazard Identification and Risk Assessment (HIRA) to identify work-related hazards. In FY 24, we conducted 51 risk assessment studies to minimize hazardous substance releases and identify hidden risks. We regularly evaluate control and energy systems to prevent minor issues from escalating into major incidents, and we assess mitigation safeguards by estimating potential incident severity.

# 51

Risk assessment studies conducted in FY 24

**In FY 24, 100% of our male and female employees and workers underwent health and wellness training.**

Our Process Hazard Analysis (PHA) identifies and evaluates potential incident causes, such as fires, explosions, and hazardous material spills. We have established fire safety management and safety procedures across all facilities. Preventive measures include



specific procedures for operational parameters to detect deviations from design. Health and safety risk assessments help us evaluate our control measures' effectiveness. Employees receive regular updates on standard operating procedures (SOPs) for safe chemical handling. We conduct periodic safety inspections and audits to monitor compliance, including third-party monitoring for noise, dust, and odor. Our work permit systems ensure safe task execution, under controlled risk conditions.

We aim to engage our employees and workers with our Occupational Health and Safety (OHS) guidelines through extensive training programs on hazard identification, risk assessment, and mitigation strategies. Emergency evacuation

drills are conducted to train employees to use emergency equipment and ensure their safety.

To promote a culture of health and safety, we prioritize daily awareness at all organizational levels. We use visual communication in English and local languages to highlight safety hazards and prevention methods, along with site-specific personal protective equipment matrices. The unit's EHS head communicates essential safety protocols for specific work areas. We are developing an integrated contract worker management system to ensure each contract worker stays in one area for at least a quarter gaining valuable experience in safety bottlenecks and practices.





Our organization has developed a comprehensive emergency response plan for the entire company, with tailored strategies for individual units based on factors like location, operations, and materials used. In FY 24, we achieved a lost-time injury frequency rate of zero. Although total recordable work injuries increased due to challenges in enforcing safety guidelines, we are dedicated to continuous improvement. The tragic loss of two employees has prompted us to implement several proactive measures to enhance safety and prevent future incidents.

- ▶ Introduction of managers on night duty (the time during which these incidents occurred)
- ▶ Launch a 'Safety Observations and

Interactions' program providing the right behavioral nudges to ensure workers' 100% adherence to safety clauses

- ▶ Monthly Apex Committee Meetings at a corporate level to review and prevent safety-related issues
- ▶ Engagement with Chola MS Risk Services and Sparrow Services in 2023 to conduct electrical and fire safety audits
- ▶ Provide higher priority to bridge infrastructure gaps, driving focused attention on correcting unsafe behavior by contractual workers
- ▶ Enhancing accountability within line functions to ensure careful handling of safety-related matters
- ▶ Engaged a third-party for specialized safety assessments and improvements

Given our constant efforts to prevent safety-related hazards, there were no instances of high-consequence work-related injuries or ill health in the last two years.

Our main goal for employee safety is to achieve zero incidents in our workplace facilities by monitoring safety lead indicators for continuous improvement. We aim for a 10% annual reduction in lost time injury frequency rate reduction by implementing guidelines for incident classification, safety violations, Environmental Safety Initiatives, Process Hazard Analysis, Management of Change, pre-startup Safety Review, and Incident Investigations. We are developing nine specific guideline documents, expected to launch in FY 25.

## Outlook

We are dedicated to enhancing employee well-being, especially in mental health through a dedicated policy and increased access to counseling services. Our initiatives focus on improving occupational health and safety (OHS) while applying sustainability and green chemistry principles to reduce manufacturing hazards. We recognize that environmental, social, and governance (ESG) considerations involve adopting more responsible operational methods. This approach to OHS will help us become a desirable employer, committed to fostering a healthy and thriving workforce.



# Creating a Culture of Safety, Committed to an Incident-free Workplace







# Empowering Change, Impacting Society



We are committed to shaping a better society through impactful healthcare, education, and community development initiatives. From empowering rural youth, supporting critical healthcare services, promoting education, and fostering sports excellence, our efforts aim to uplift communities and contribute to a brighter future.

By FY 30, we aim to reach

# 1 million lives

through our CSR programs, fostering sustainable development and positive societal change.

## Context

Granules is dedicated to improving health outcomes and actively seeks diverse ways to enhance societal well-being, particularly by supporting communities near our operations. We recognize the connection between business growth and societal progress, which drives our community initiatives in these areas. We take pride in witnessing tangible improvements in quality of life and work closely with our partners to ensure the long-term success of our social impact programs. For us, corporate social responsibility is not just about compliance; it's an opportunity to address the everyday challenges people face.

We prioritize health in our corporate social responsibility initiatives. Telangana faces significant healthcare challenges, with only one hospital for every 34,282 people. Improving educational outcomes is also crucial, as 22.1% of students aged 14-18 in the region are disengaged from education, compared to the national average of 13.2%. Additionally, we provide financial and material support to youth for sports participation and environmental conservation efforts.



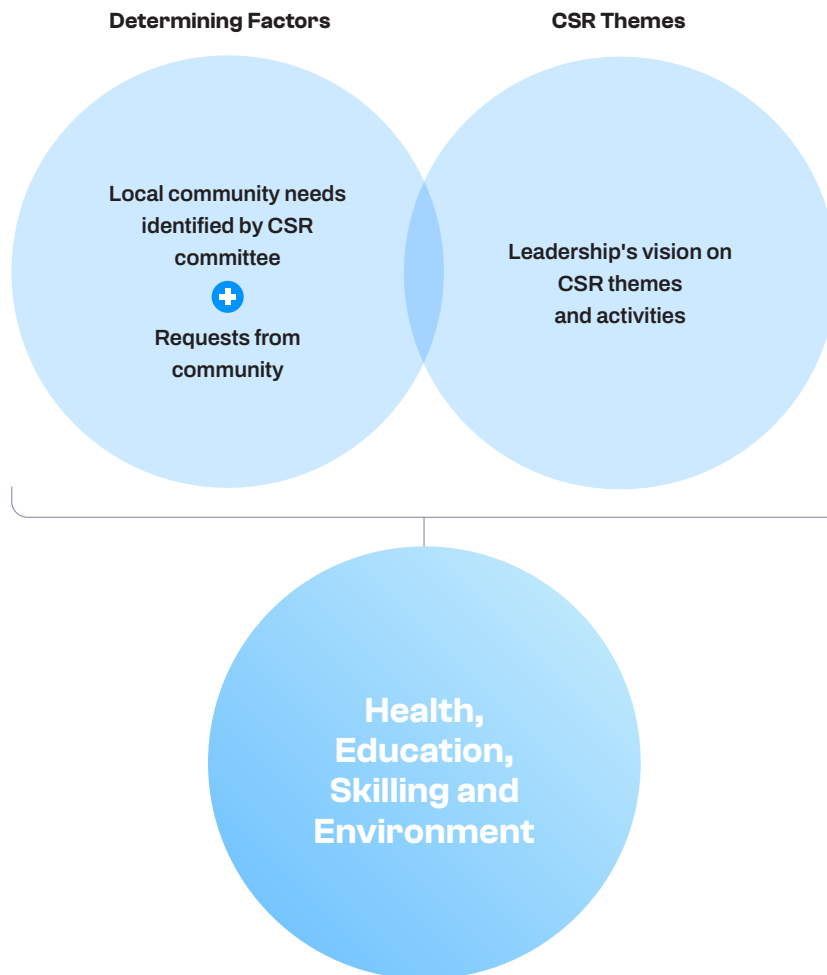




## Approach

To implement our CSR activities effectively, we maintain a publicly accessible CSR policy on our website. A Board-level CSR Committee oversees and monitors the CSR activities and fund allocation using local health, literacy, and demographic data to identify relevant themes.

The committee also conducts random audits of project partners. The Board of Directors reviews CSR activities quarterly and assesses the policy annually. Community project decisions are made after consulting local Panchayat leaders and relevant government departments alongside input from the CSR Committee.



At Granules, we believe our true strength lies in our people and the communities we serve. We are committed to fostering a culture of care, inclusivity, and innovation that empowers our employees to thrive. Our focus on gender diversity, employee well-being, and professional growth ensures that every individual feels valued, supported, and inspired to excel.

We actively promote learning, development, and skilling opportunities, nurturing talent to meet future challenges. Beyond our workplace, our CSR initiatives prioritize health, skilling, and well-being, driving impactful programs that uplift communities. By integrating these values into our operations and strengthening our bonds with stakeholders, we remain dedicated to healing lives responsibly and sustainably while creating a positive, enduring impact on society.

### Mrs. Uma Devi Chigurupati

Executive Director





# Pharma Pathashala

Pharma Pathashala is a designed skill development and vocational training program for high school students in rural Telangana. A brainchild of Granules' leadership aimed to provide practical knowledge in pharmaceutical operations, including production, quality control, and research and development. It serves as a beacon of hope for young individuals seeking to improve their lives through skill acquisition.

## Vision and Objectives

The primary vision of Pharma Pathashala is to empower rural youth by equipping them with essential skills for the pharmaceutical industry.

The program focuses on:

- **Skill Development:** Providing training in various pharmaceutical manufacturing aspects.
- **Holistic Education:** Incorporating physical training, discipline, and soft skills into the curriculum.
- **Career Opportunities:** Facilitating job placements within the industry, including potential employment at Granules.

## Challenges

The initiative has encountered challenges, particularly in engaging marginalized communities and ensuring their continued participation. Resource accessibility has also been a significant issue, necessitating adequate facilities and training materials. To address these challenges, targeted outreach programs and curriculum improvements have been implemented, with local organizations like the Swarna Bharat Trust enhancing the program's reach and effectiveness.

## Current Progress

Since its inception, Pharma Pathashala has trained approximately 1,200 students, with nearly all participants securing employment in the pharmaceutical sector. Graduates benefit from job placements at Granules, receiving support such as accommodation, food, and transportation for the first three years. The program has fostered a buddy system, pairing new employees with experienced colleagues to promote faster learning and skill development.

**Pharma Pathashala is a transformative initiative, that significantly impacts the lives of young individuals by providing valuable skills and facilitating job opportunities, fostering sustainable community development and personal growth.**



Lavanya's participation in the program was driven by her determination to rise above her intermediate studies and secure a future that seemed out of reach due to economic hardships. The training equipped her with the skills and confidence to secure employment as a Senior Technical Associate at Granules India. Her financial stability became a cornerstone for her family's welfare, exemplifying how targeted skill development can transform lives.



Sai's enrollment in the program came at a critical juncture, following his father's untimely death and the sudden financial instability that ensued. The training offered him not just the skills but also the opportunity to step into a role as a Senior Technical Associate at Granules India. His story illustrates the initiative's pivotal role in providing a safety net for families facing unforeseen challenges.



For Madhu Latha from Kolluru village, the program was a gateway to broader horizons. It facilitated her entry into the pharmaceutical sector and enabled her to pursue higher education at the Tata Institute of Social Sciences (TISS). Her story highlights the dual impact of the initiative on both professional and personal growth, offering a model for how skill development can pave the way for holistic success.



Hanumanth, a 26-year-old from Miryalaguda, saw the Pharma Patashala as a beacon of hope amid financial turmoil. His family's struggle to make ends meet, compounded by the responsibility to contribute to his sister's marriage, necessitated a stable income. Post-training, his role as an Executive at Granules India, not only stabilized his family's financial situation but also highlighted the program's role in enabling rural youth to support their families significantly.







# Performance

## CSR Projects in FY 24

Some initiatives in our Corporate Social Responsibility (CSR) framework aim to provide long-term community benefits through tailored facilities, while others focus on addressing urgent issues for immediate impact.

~100%

Beneficiaries are from marginalized communities

### Number of People Benefited from CSR Projects

⊛ Percentage of beneficiaries from vulnerable and marginalized groups



1,200  
students

⊛ 90%

Placement linked skill development program for rural youth who have completed their 10+2

3,500  
runners

⊛ NA

Granules serves as the title sponsor for the Granules Green Kanha Run, organized by the Heartfulness Institute

1,507  
students

⊛ 100%

In association with LVPEI (L V Prasad Eye Institute), Granules India has undertaken a significant initiative by organizing free eye screening camps in seven schools around its unit

180  
students

⊛ 100%

Granules India actively supports the 'Talent Hunt Program' by the Egra Agriculture and Rural Development Society, focusing on tribal students in West Bengal

560  
students

⊛ 100%

5,000  
residents

⊛ 80%

Two overhead water tanks have been constructed to address the drinking water needs of Bonthapally and Veerannagudem villages. With capacities of 150 KL and 100 KL respectively

284  
people

⊛ 100%

Granules India has funded Helping Hands of Rotary for the acquisition of equipment dedicated to providing affordable dialysis services for economically disadvantaged individuals

600  
students

⊛ 80%

To suffice the teaching staff in ZP High School and MPP School, Bonthapally

180

⊛ NA

Sponsorship for conducting Telgana State Championships 2023

Granules has provided valuable support by appointing five dedicated Vidya Volunteers. These volunteers are crucial in assisting the teaching staff, enhancing the learning environment, and contributing to the student's academic growth







## Projects in Health

- **Granules Mobile Women's Cancer Screening Unit:** This bus features advanced mammography technology on mammography and travels to underserved rural areas to offer free breast cancer screenings for women. It also spreads awareness of the importance of early detection, dispels myths about the disease. Granules has partnered with AIG hospitals, Asian Medical Foundation and UC Breast Foundation to conduct Medical camps and further treat the people who got positive.

### Beneficiaries

**300+**

- **Dr. Chigurupati Nageswara Rao Rotary Dialysis Centre:** A dialysis center has been set up in Guntur to provide affordable services to the local population in partnership with Helping Hands of Rotary. Managed by St. Joseph Hospital and the Red Cross Society, it can offer up to 750 monthly treatments at a reasonable cost. Most of the patients treated so far are from marginalized communities. Granules' CSR committee and employees engaged directly with the beneficiaries to improve the program's efficacy.

### Beneficiaries

**900+**





- **Free Eye Screening:** Granules, in association with LV Prasad Eye Institute, has conducted free eye screening camps in seven government schools around our manufacturing units. So far, about 1,507 students have benefitted from this program of which 715 boys and 792 girls. The students found with vision impairments were supported with spectacles. The initiative aims to help students continue their education without interruptions due to vision problems.

## Beneficiaries

1,500+

- **Support to Children Battling Cancer:** Granules has collaborated with St. Jude India Childcare Centre by providing essential non-medical assistance. Our contributions include free accommodation, nutritional meals, transportation to treatment facilities, and holistic support, for educational and recreational activities. This initiative aims to instill hope and resilience in children and their families facing cancer challenges.

## Beneficiaries

60+

- **Primary Health Center:** The center, which was established in Gagillapur village and is managed by the Health Department of the Government of Telangana, serves over 8,000 residents of Gagillapur and surrounding villages.

## Beneficiaries

8,000+

## Residents

- **Supporting Disabilities:** For nearly two decades, Granules partnered with Ashray Akruti, a non-profit organization dedicated to uplifting marginalized communities, including individuals with disabilities. This enduring collaboration, established well before CSR became a regulatory mandate, focuses on transformative initiatives in healthcare and education, fostering meaningful change and strengthening lives year after year.
- **Dr. Chigurupati Nageswara Rao Ocular Research Center:** Granules has collaborated with the Hyderabad Eye Research Foundation of LV Prasad Eye Institute. The Institute's Eye Health Research Initiative focuses on Research into vision-threatening diseases. This five-year project, launched in 2022-23, explores genetic, molecular, and Microbiological aspects of eye disorders, conducting clinical trials and epidemiological studies on blindness

prevalence. Key activities include developing new eye care drugs, studying their pharmacokinetics, and advancing them to clinical application. The center also aims to train emerging scientists in ocular pharmacology, with findings shared through scientific publications and presentations for the wider community.

- **Support to Heart Surgeries:** Heart disease is difficult enough when it strikes adults but can be tragic in the case of children. Granules has collaborated with the Hrudaya Cure a Little Heart Foundation to fund the treatment cost of poor children with heart problems. So far our support has benefitted 31 children who are suffering from severe heart illness.

## Beneficiaries

31

- **Multi-specialty Health Camps:** Granules India Limited, in partnership with the Sarvejana Foundation, organized a free multispecialty health camp in Church Gagillapur village. This initiative provided essential healthcare services, including consultations and surgeries, benefiting the local community.

## Beneficiaries

120+

## Empowering Communities and Supporting Disabilities for Over 20 Years



For nearly two decades, we have proudly partnered with Ashray Akruti, a non-profit organization dedicated to uplifting marginalized communities, including individuals with disabilities. This enduring collaboration, established well before CSR became a regulatory mandate, focuses on transformative initiatives in healthcare and education, fostering meaningful change and strengthening lives year after year.







## Projects in Skilling and Education

At Granules India Limited, we promote education through various initiatives to support underprivileged students and enhance learning outcomes in the students.

- **Vidya Volunteers:** An external needs assessment in two Bonthapally schools has initiated a program to address basic amenity deficiencies. Additionally, Granules has deployed five dedicated Vidya Volunteers to support teachers, enhancing the educational environment and boosting students' academic performance.
- **Education Kit Donation Drives:** This initiative aims to support government school students lacking essential resources such as bags, writing instruments, textbooks, and stationery. The goal is to boost student attendance, reduce academic disparities, promote holistic development, and help students gain vital life skills.
- **Granules Education Center at Bonthapally:** Established in collaboration with PSS Trust, the Granules Education Center at Bonthapally provides educational support to the government school children. This initiative focuses on improving learning outcomes in the students from classes 6<sup>th</sup> to Graduation through specialized tuition classes. Along with tuition classes nutritional refreshments were also provided to the students.
- **Zilla Parishad High School and Mandal Parishad Primary School in Gagillapur:** Granules India has taken a significant step towards enhancing educational support by distributing shoes to students of Zilla Parishad High School and Mandal Parishad Primary School in Gagillapur. This initiative aims to improve students' overall well-being by providing comfortable footwear, reducing health risks, and boosting their confidence. By alleviating the financial burden on families and ensuring better attendance and focus in the classroom.

Beneficiaries

600



Beneficiaries

1,110



Beneficiaries

80+

Beneficiaries

380







- **Talent Hunt Program with EGRA**  
**Granules:** India has expanded its CSR efforts by supporting the Talent Hunt Program initiated by Egra Agriculture and Rural Development Society in West Bengal. This program focuses on underprivileged tribal students, providing them with opportunities for sports training. By backing this initiative, Granules India aims to promote personal growth and development among these students through sports, fostering discipline, teamwork, and self-confidence. The program emphasizes physical fitness and overall well-being, contributing to social inclusion and a more equitable society.

Beneficiaries

180+



- **School Transformation Project:**  
Granules India in association with the Nirmaan organization has transformed a government school in the Gagillapur Village. This project has improved the infrastructure facilities such as repairs, painting of the building, main gate, etc. The objective of this project was to create an encouraging learning space to the students which further enhances the learning outcomes of the students.
- We actively support sports and cultural development through initiatives that enhance infrastructure and promote community engagement. Sponsorship for Telangana State Championships 2023. In collaboration with Heartfulness Education Trust, we proudly sponsored the **Telangana State Championships 2023**, celebrating athletic prowess and promoting sportsmanship across various disciplines. With this sponsorship, we supported young athletes by providing competitive platforms and, fostering discipline, teamwork, and resilience through sports participation.

Beneficiaries

480

## Drinking Water



- **Overhead Water Tanks:** Granules has funded two water tanks (150 KL and 100 KL) in Bonthapally and Veerannaguddem, serving the drinking water needs of about 5,000 residents, primarily from marginalized groups. These tanks are also expected to support local agriculture and improve community health by reducing waterborne diseases.

Beneficiaries

5,000







## Projects on Environment & Biodiversity

- As part of the Green Heartfulness Run initiative, Granules successfully completed the plantation of 15,000 native tree saplings at Kanha Shanti Vanam, Telangana. This initiative underscores Granules' commitment to restoring biodiversity and enhancing the green cover, contributing to a healthier and more sustainable environment.



# 15,000

Native tree saplings planted

To know more about Green Heartfulness Run, visit <https://greenheartfulnessrun.com/>



### ► Organizing Granules Green Kanha Run – A Leap towards Health and Ecology:

We partnered with the Heartfulness Institute to organize the Granules Green Kanha Run, promoting health and environmental sustainability. This event engages participants in physical fitness activities while fostering environmental consciousness. 3500 Participants engaged physically and 16,000 virtually, promoting health and ecological awareness.

Beneficiaries

## 480

- **Green Heartfulness Run:** As part of the Green Heartfulness Run initiative, Granules successfully completed the plantation of 15,000 native tree saplings at Kanha Shanti Vanam, Telangana. This initiative underscores Granules' commitment to restoring biodiversity and enhancing the green cover, contributing to a healthier and more sustainable environment.

### ► Distribution of Clay Ganesha Idols:

Promoting Eco-friendly practices in a novel approach to environmental conservation. Granules collaborated with the Telangana State Pollution Control Board (TSPCB) for the distribution of 7,500 clay Ganesha idols. This initiative, centered around the Vinayaka Chaturthi festival, aimed to encourage the adoption of eco-friendly practices and minimize the ecological celebrations. By promoting the traditional use of biodegradable materials for idol making, this initiative sought to address the environmental concerns associated with the immersion of nonbiodegradable idols in water bodies.

Beneficiaries

## 7,500





# Trailblazing Cutting-edge Pharmaceutical Research



## Context

Our sector is characterized by rapidly evolving trends and advancements, highlighted by the recent pandemic and the impact of climate change on health risks. We recognize the need to adapt swiftly to these changes.

For four decades, our commitment to excellence in research and development has defined us as a leading pharmaceutical manufacturer. Moving forward, we are dedicated to integrating sustainability into our R&D strategy.

India is the third-largest pharmaceutical industry globally, with a market size of around \$ 50 billion, contributing about 3.3% of the country's foreign direct investment. To capitalize on this potential, the Government of India has launched the National Policy and Scheme on Research, Development, and Innovation in the Pharma-Med Tech Sector, aiming to improve the quality, accessibility, and affordability of medicines. This initiative aligns with Granules' mission and seeks to position India as a leading hub for advanced pharmaceutical research through industry-academia partnerships.

## Approach

A few months before this policy announcement, Granules established dedicated, flagship R&D centers across locations to conduct industry-leading research underlining our focus, commitment, and dedication towards continuous innovation:

- We have an integrated product development facility at Genome Valley for API and formulation R&D, with a capacity of around 170 staff, to fast-track our product development through seamless coordination and shared analytical resources

- Center of Excellence (CoE) for expanding our research endeavors on Controlled Substances APIs and KSM development at Pragathi Nagar
- Bio-Lab at Pragathi Nagar for fermentation, biotransformation, and enzyme-led projects
- R&D Center in Pune for identifying new technologies for product development and for KSM & backward integration

Apart from our in-house research centers, we have partnered with the National Institute for Pharmaceutical Education and Research to set up a Centre for Innovative and Sustainable Pharmaceutical Research. Granules prioritizes investment in R&D, enhancing our capabilities, improving portfolio quality, and increasing regulatory submissions despite recent developments.

**We received – ANDA approvals and – dossiers during the year. Every one of our plants holds certifications from top drug and pharmaceutical certification authorities across the world (including HALAL).**

## Sustainability at the Forefront of R&D-EcoScale

Sustainability integration is critical to our R&D strategy. Our under-development greenfield facility and Granules CZRO are envisaged as supreme sustainability in high-quality research and innovation in the pharmaceutical industry.

In our R&D activities, we apply Atom Economy, Atom Efficiency, and the E-factor principles, using the Eco-Scale Concept to evaluate process efficiency. We also utilize eco-friendly enzymes and biotransformation techniques.







An E-factor score helps analyze the hydrogen, nitrogen, and carbon content of production molecules, guiding us to the most efficient processes. Molecules with low E-factor scores are rejected, regardless of financial potential, as we prioritize sustainability over cost efficiency.

### Green Score in R&D Development

Implementation of Green card and Eco scale initiatives from the early stages of development.



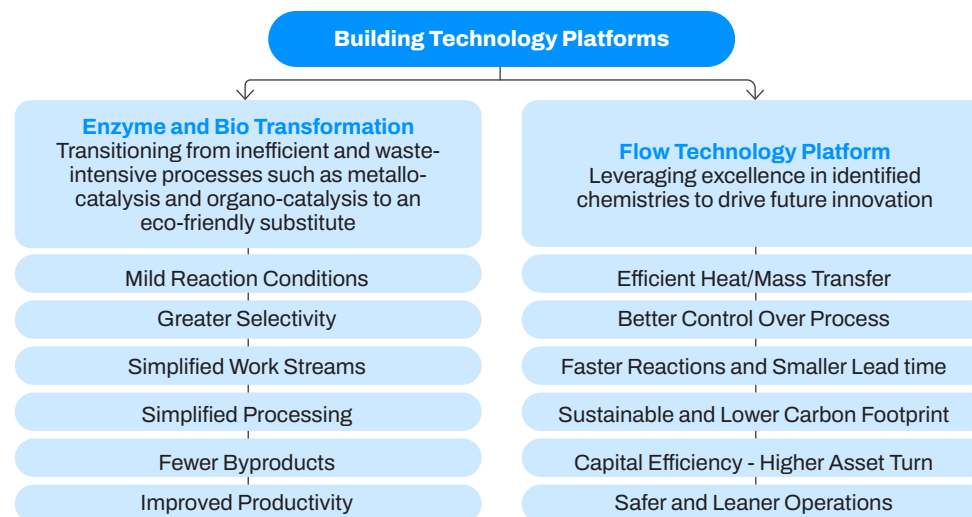
We ensure product sustainability through a strict inventory control policy. All expired products are disposed of before scaling up manufacturing, resulting in minimal losses due to effective collaboration between our R&D and production teams. Additionally, Granules India has not faced any product recalls in the past two years.

At Granules, we prioritize the safety and quality of our products throughout their lifecycle. During R&D, we conduct thorough evaluations of active pharmaceutical ingredients (APIs) and formulations through toxicological studies and dosage assessments to ensure compliance with high safety standards. In manufacturing, we implement strict quality control protocols following Good Manufacturing Practices (GMP), focusing on contamination monitoring, accurate labeling, and formulation consistency to safeguard patient health.

Our commitment to safety extends beyond production. We carefully evaluate packaging materials and methods to prevent contamination, degradation, and tampering, including child-resistant packaging and clear usage instructions. Our secure distribution practices ensure products are stored and transported under controlled conditions. We maintain ongoing pharmacovigilance to monitor safety and efficacy in the market, addressing any adverse events promptly. Our comprehensive quality systems help prevent issues, resolve customer complaints quickly, and ensure compliance with health and safety regulations, reinforcing our dedication to customer trust and satisfaction.

**No incidents of non-compliance with health and safety regulations and voluntary codes were recorded during the reporting period.**

Our current R&D focus is on building technology platforms that improve the efficiency of our manufacturing processes:



### Collaborative Partnerships for Innovation and R&D

Granules is a founding member and anchor partner of the World Economic Forum's Centre for the Fourth Industrial Revolution (C4IR) Telangana, India's only centre focused on healthcare and life sciences. This partnership aims to leverage technology for global improvements, positioning C4IR Telangana as a catalyst for transformative change and responsible growth. Granules promotes sustainability in healthcare innovation, reducing the carbon footprint of medical procedures and pharmaceutical manufacturing while supporting climate change initiatives.

Granules prioritizes skill development and policy advocacy, particularly for women in healthcare. Empowering women through specialized training enhances their participation, promoting

gender equity. C4IR Telangana aims to equip women with skills for diverse roles, boosting their contributions to growth and innovation. Granules is committed to advancing these initiatives for societal and environmental impact.

### Outlook

In the coming years, we aim to support the Government of India's vision of making India a global hub for pharmaceutical research. Our goal is to advocate for policies promoting sustainable supply chains and eco-friendly molecules. Through our green science initiatives, we seek to drive ongoing innovation and education, ultimately establishing ourselves as a leading manufacturer of clean, green pharmaceutical products in India.



Our commitment to integrity drives ethical practices and transparency across Granules. Our Code of Conduct ensures compliance with business ethics, environmental responsibility, and human rights across all interactions. Through our Supplier Sustainability Program, we work with suppliers to reduce emissions and promote sustainability. With regular audits and a robust grievance mechanism, we maintain the highest standards of integrity, fostering trust and accountability throughout our operations.

#### Material Topics Addressed

Business Ethics and Integrity Sustainable Governance Data Privacy and Cybersecurity

### Inside this Section

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# Integrity in Action

## 25%

Women on the Board

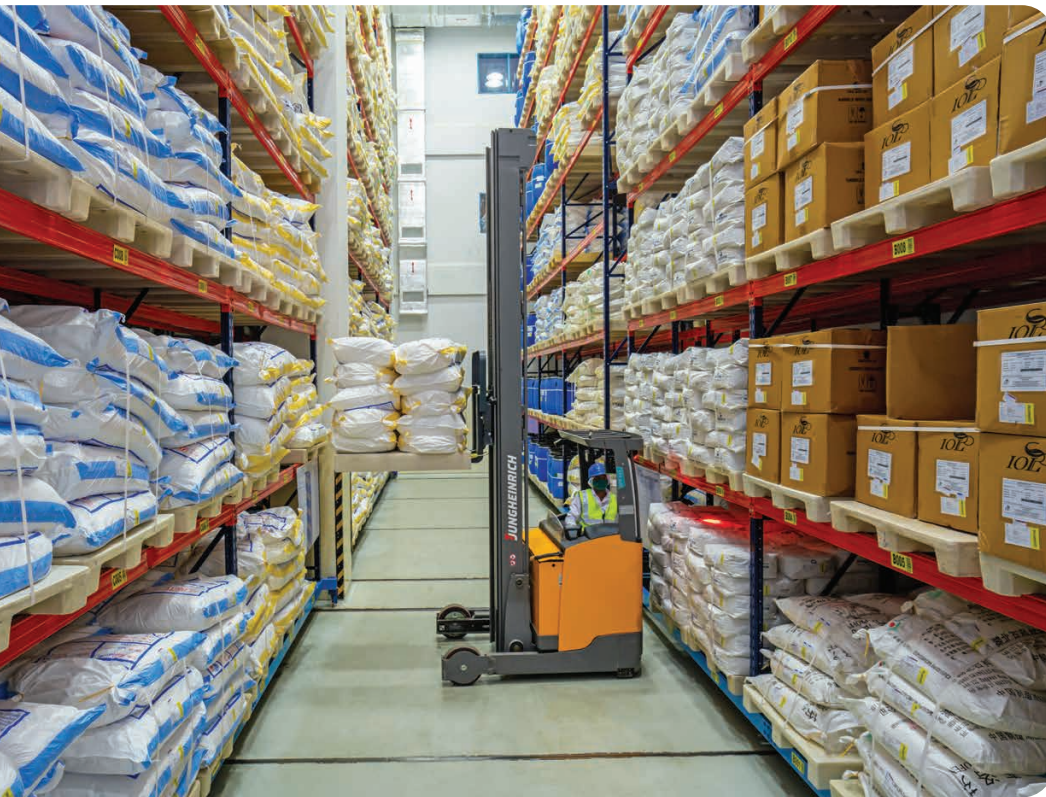
## 100%

Of our employees received  
the code of conduct training





# Extending Our Sustainability Commitment across the Supply Chain



The present scenario necessitates an unprecedented urgency to address climate change underscored by IPCC research, calling for immediate transformative actions. Scope 3 emissions from supply chains contribute significantly, with eight key sectors responsible for about 50% of global greenhouse gas emissions, according to the World Economic Forum. To combat this, solutions like circularity, renewable energy, and improved efficiency are crucial. At Granules, we are dedicated to integrating these strategies into our supply chain operations.

At Granules, over 80% of our greenhouse gas emissions are Scope 3. To address this, we launched the Supplier Sustainability Program last year to engage our suppliers in reducing emissions linked to our procurement:

## Key expected commitments from suppliers in the Supplier Sustainability Program

Disclose Scope 1, 2, 3 emissions pertaining to Granules' business by the end of 2024

Disclose product carbon footprint of products sold to Granules

Develop & submit Science-Based Targets to the Science-Based Targets Initiative by the end of 2025

Increase renewable energy share in electricity purchased and shift to 100% renewable energy in the next five years







We launched the program with a webinar for our suppliers to raise awareness about greenhouse gas emissions disclosure and our climate action commitment and we have developed Supplier Sustainability Standards outlining key clauses for suppliers to follow, organized by major themes.

### Labor & Human Rights

- ▶ Child Labor
- ▶ Modern Trafficking, Human Slavery, and Forced Labor
- ▶ Wages and Remuneration
- ▶ Freedom of Association and Collective Bargaining
- ▶ Fair Treatment and No Discrimination
- ▶ Working Hours
- ▶ Health and Safety

### Environment & Sustainability

- ▶ Compliant with Legal and Regulatory Guidelines
- ▶ Climate Change
- ▶ Water Management
- ▶ Waste Management
- ▶ Pollution Prevention
- ▶ Environmental Responsibility
- ▶ Resources Management
- ▶ Handling of Hazardous and Toxic Materials
- ▶ Ethical Business Practices
- ▶ Data Privacy
- ▶ Information Security

Our Supplier Code of Conduct applies to all contractors, suppliers, partners, and internal procurement teams, outlining a comprehensive set of guidelines to mitigate environmental impact. It also defines key expectations in environmental aspects, ensuring responsible and sustainable practices across our supply chain.

- ▶ **Sustainable Sourcing:** Prioritizing suppliers demonstrating environmental sustainability commitment, encouraging natural resource conservation, and minimizing waste
- ▶ **Environmental Compliance:** We expect our suppliers to comply with environmental laws and implement effective environmental management systems.
- ▶ **Carbon Footprint Reduction:** Committed to reach Net Zero Emissions by 2050, we requested our suppliers to disclose their Scope 1, 2, and 3 emissions
- ▶ **Resource Efficiency:** Encouraging suppliers to improve resource efficiency through material, energy, renewable energy and water optimization, waste reduction, recycling, and responsible disposal
- ▶ **Sustainable Packaging:** We encourage our suppliers to use environmentally friendly packaging materials, minimize packaging, use recycled or biodegradable material
- ▶ **Supplier Evaluation and Engagement:** We plan to organize regular environmental sustainability training for suppliers, periodically evaluating their sustainability performance
- ▶ **Transparency and Reporting:** Suppliers are expected with highest transparent and accurate standards, especially in ESH data disclosure.

We are dedicated to creating an environmentally responsible value chain by collecting data on our supply chain's sustainability performance and providing regular updates. We are implementing targeted measures for sustainable procurement to ensure high resource efficiency. Our sustainable sourcing and procurement policy applies to both our procurement team and all suppliers and contractors.

### Elements of the Supplier Engagement Program

#### Labor and Human Rights

- Fair Labor Practices
- No Child Labor
- No Forced Labor
- Freedom of Association

#### Ethics

- Integrity and Transparency
- Fair Competition
- Compliance

#### Environment

- Sustainable Materials
- Resource Efficiency
- Environmental Impact

#### Supplier Engagement and Development

- Supplier Code of Conduct
- Capacity Building
- Monitoring & Auditing

#### Community and Social Impact

- Local Sourcing

To ensure successful policy implementation, we plan various training programs for employees with regular audits of suppliers implementing our envisaged sustainability goals.

We are committed to sustainable sourcing and maintain high-quality standards in our supplier management processes. We conduct regular training for 90% of our value chain partners on our supplier business code of conduct, which includes the following elements:

- ▶ Ethical conduct and integrity in all business dealings
- ▶ Compliance with human rights standards, ensuring dignity and employee protection
- ▶ Adherence to all environmental regulations and maintain necessary permits and licenses
- ▶ Providing a safe and conducive work environment aligning local and national regulations on Health and Safety Policies/Guidelines
- ▶ Implementing a compliant management system to ensure regulatory laws, manage operational risks, and drive continuous improvement

We have implemented a rigorous quality assessment process for materials sourced through our vendor management system, with tailored qualification questionnaires for each material category. Our vendor management system includes a CSR questionnaire that covers all ESG aspects, ensuring alignment with our sustainability standards. This questionnaire is an integral part of the vendor qualification process, allowing us to assess suppliers on their environmental, social, and governance practices before on-boarding.

In summary, our supply chain sustainability initiative is a collaborative effort between Granules' procurement department and our suppliers to minimize our carbon footprint. We acknowledge the challenges in achieving net zero but are committed to overcoming them through innovative solutions.





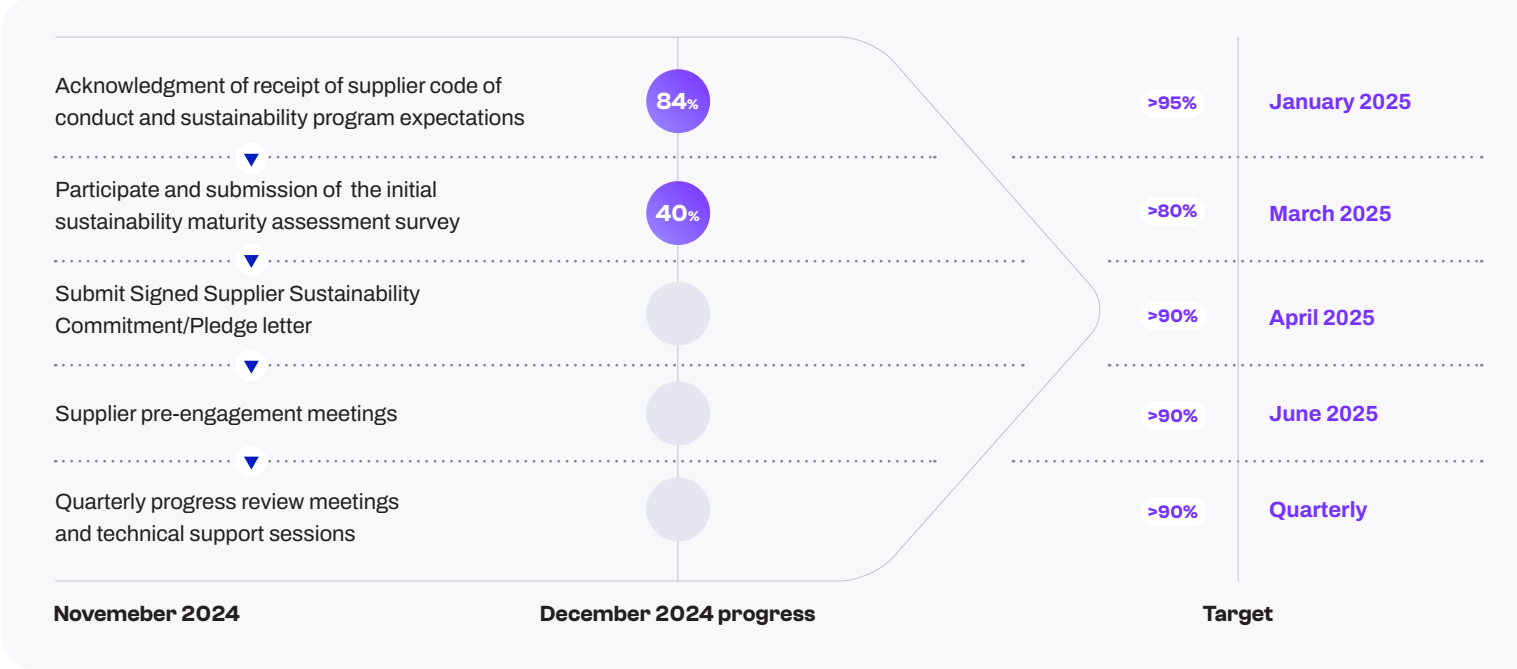
# Supplier Sustainability in Action: Progress and Insights

We have rolled out the Supplier Sustainability Program, covering more than 80% of suppliers based on purchase value, to pledge their commitment to shared sustainability goals.

Of these, 84% have acknowledged the initiative and designated a Single Point of Contact (SPOC) to facilitate collaboration.

As part of this program, a survey was launched to assess the current maturity of suppliers across various ESG aspects, including policies, governance structures, sustainability goals, actions, certifications, and compliance.

Approximately 40% of suppliers actively participated in the survey, providing valuable insights into their ESG readiness.



## Key Highlights of Supplier Survey





# Business Ethics and Integrity

## Context

The pharmaceutical industry is intrinsically characterized by several compliance requirements, especially at the licensing, inspection, and procurement stages.<sup>12</sup> All pharmaceutical products must meet stringent quality standards mandating regulatory governments and certification body approvals. Beyond compliance, displaying ethics and transparency at various stakeholder interaction points is crucial for ensuring product safety.<sup>13</sup> Moral principles are to be upheld in all communication touchpoints with investors, employees, customers, peers, the government, and the environment – ensuring consistent adherence to product quality and safety standards. In conclusion, the pharmaceutical sector must address significant ethical challenges by developing specialized codes of conduct. Empathy and compassionate leadership are essential for fostering a culture of integrity. Companies must remain vigilant in promoting honesty at all levels. Granules is committed to upholding high standards of corporate governance and complying with SEBI regulations.

We operate within complex value chains where ethical practices and compliance are essential. It's vital to align our intentions with our actions, ensuring that every interaction with Customer, employees, suppliers, investors, and regulators adheres to the Granules code of conduct.

## Approach

Granules' code of conduct applies to all stakeholders, including employees, suppliers, and contractors. We urge them to avoid unfair trading practices, irresponsible advertising, corruption, and anti-competitive behavior. Granules actively monitor unethical conduct and has a grievance redressal mechanism to address non-compliance. This policy provides a structured way for employees and workers to report code violations.

The Board of Directors' Code of Conduct outlines principles of integrity, conflict of interest management, media interaction protocols, regulatory compliance, and consequences for violations. Similarly, the Code of Business Conduct for Suppliers defines responsibilities for ethical business practices. Compliance is ensured through systematic audits by our procurement and quality teams.

Our commitment to acting with respect for ourselves, our customers, diversity, and inclusion while ensuring quality and future sustainability is deeply rooted in our values and the strategic pillar of Strengthening Core Capabilities.

<sup>12</sup> [https://ti-health.org/wp-content/uploads/2017/05/Business\\_Principles\\_Pharma\\_TIUK.pdf](https://ti-health.org/wp-content/uploads/2017/05/Business_Principles_Pharma_TIUK.pdf)

<sup>13</sup> <https://www.slideshare.net/slideshow/ethics-in-pharma-industry/80487472>







# Legal Compliance Tool – Ensuring Compliance through Technology

The Legal Compliance Manager Tool, designed by Ernst & Young was launched by Granules India Limited during May, 2023 and implemented effective from July 1, 2023.

The said Tool covers around 6,000 list of compliances as part of Indian legislations and tracks the progress of compliances applicable to Granules and assesses the compliance health of the organisation. This is an automated mandatory Tool wherein the Users are responsible to report the status of filings as prescribed by statute, report compliances

on a monthly, quarterly, yearly or time based as prescribed under relevant laws. This is a completely automated Tool and the Tool auto generates the Compliance Reports.

Users of the Tool includes HR, EHS, IT, Taxation (Direct and Indirect), Secretarial, Regulatory, Quality, Engineering and others. While Legal Team manages the Tool, trains, and guides the Users, updates the Tool with latest legislations and presents the autogenerated report to the Management and Internal Auditors.

We are extending this Tool to Granules CZRO Private Limited and Granules Life Sciences Private Limited, 100% subsidiaries of Granules India Limited.

## Compliance tool implementation in numbers

8

Tracking across  
8 compliance categories

8

Tracking across  
8 Legislative groups

179

Tracking across  
179 Legislations/Acts

6,254

Tracking of 6,254 lime items  
for compliance







# Board of Directors




Integrating sustainability into organizational culture relies heavily on a leadership framework that actively supports it. A strong governance structure reflects a company's commitment to its relationships and market position. At Granules, our Board of Directors ensures compliance with the highest standards of ethics, transparency, integrity, and accountability.




## Profiles of Board Members

Name & Designation	Brief Profile	Experience Relevant to ESG	Contribution to Relevant UNGC Principles
 <b>Dr. Krishna Prasad Chigurupati</b>  Chairman & MD	<p>Experience in manufacturing high-quality paracetamol for global markets since 1984</p> <p>Pioneer of innovations, including commercialization of PFIs as a cost-effective product for global FD manufacturers</p> <p>33 patents filed in process chemistry, of which five have been granted</p> <p>Ventured into new markets, China and the US</p> <p>Contribution to science &amp; society recognized through an honorary doctorate provided by GITAM Deemed University</p>	<p>President of the Hyderabad Chapter of Swarna Bharat Trust, an NGO working towards the holistic development of rural India (focus areas: Health, Education, Employment, and Rural Development)</p>	<p>Principle 6: Elimination of discrimination in employment and occupation</p> <p>Principle 8: Undertake initiatives to promote greater environmental responsibility</p>
 <b>Dr. K.V.S. Rama Rao</b>  Joint MD & CEO	<p>Master's and PhD in Chemical Engineering, IISC, Bangalore</p> <p>30 years' experience in Manufacturing, R&amp;D, Business Development, and Commercial operations</p> <p>Expertise in stake business decisions, handling complex challenges, and building leadership teams</p>	<p>Has spearheaded best practices on environment, health, safety, diversity, and inclusion</p> <p>Upholds the highest standards of integrity and ethics in all decisions</p>	<p>Principle 7: Businesses should support a precautionary approach to environmental challenges</p> <p>Principle 8: Undertake initiatives to promote greater environmental responsibility</p> <p>Principle 9: Encourage the development and diffusion of environmentally friendly technologies</p>






Name & Designation	Brief Profile	Experience Relevant to ESG	Contribution to Relevant UNGC Principles
 <b>Mrs. Uma Devi Chigurupati</b>  Executive Director	Heads Corporate Social Responsibility and Human Resource functions  Postgraduate in Soil Microbiology from Nagarjuna University  Three decades of experience in cross-functions in the pharmaceutical sector	Ex-FICCI FLO head in Hyderabad leading women empowerment initiatives at grassroots and white-collar levels	Principle 6: Elimination of discrimination in employment and occupation
 <b>Ms. Priyanka Chigurupati</b>  Executive Director	Responsible for Global Sales & Marketing  Heading multiple divisions, including sales & marketing, portfolio, strategy, and investor relations  Bachelor of Science in Business Management from Case Western Reserve University in Cleveland, Ohio  Executive Leadership degree from Harvard Business School, Boston, Massachusetts  Executive Director of Granules USA & Granules Pharmaceuticals Inc from 2017 – 2024  Global partnerships and collaborations – responsible for filing and commercialization of 30+ ANDAs abroad	Interlacing customer insights into high-quality medicine manufacturing to ensure product affordability  Fostering a diverse, inclusive, and friendly workplace culture where employees thrive	Principle 6: Elimination of discrimination in employment and occupation  Principle 9: Encourage the development and diffusion of environmentally friendly technologies
 <b>Mr. Harsha Chigurupati</b>  Executive Director	Bachelor of Science in Business Administration from Boston University, USA  18 years of entrepreneurial experience in marketing, product development, customer relationship management, operations  Commercialization of FD Division; transitioning Company's customer base towards brand loyalists  Responsible for standalone operations and P&L	In-depth knowledge of R&D, clinical trials, regulatory and legal framework navigation, patents, peer-reviewed journal publications  Driving customer loyalty	Principle 10: Businesses should work against corruption in all its forms, including extortion and bribery


Name & Designation	Brief Profile	Experience Relevant to ESG	Contribution to Relevant UNGC Principles
 <b>Mr. K.B. Sankara Rao</b>  Non-Executive, Non-Independent Director	Three decades of experience in manufacturing, projects, supply chain, quality, R&D, and business strategy  Experience in systems strengthening, process efficiency	Deployment of a self-managed team concept to empower the workforce while fostering productivity  Employment of the 'Theory of Constraints' in operations	Principle 3: Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining  Principle 4: The elimination of all forms of forced and compulsory labor
 <b>Mr. Arun Sawhney</b>  Independent Director	Bachelor's degree in commerce from the University of Mumbai, Postgraduate Diploma in Management from IMI, New Delhi  Four decades of experience in the pharmaceutical and chemical industries  Experience in corporate strategy, business development, sales and marketing, and new product planning to commercialization	Founder member of the Indian Pharmaceutical Export Promotion Council (Pharmexcil)  Chairman of the Pharmaceutical Committee of the Confederation of Indian Industries (CII) from 2012 to 2014  Visiting faculty at IIM Lucknow for Leadership and Organisation Behavior	
 <b>Dr. Saumen Chakraborty</b>  Independent Director	Graduate in Physics from Visvabharati University-Santiniketan, a Postgraduate in Management from the Indian Institute of Management (IIM)-Ahmedabad, and is an Executive Fellow in Management from the Indian School of Business (ISB)-Hyderabad  39 years of rich experience in Corporate Finance, Human Resources, IT& BPE, Manufacturing Operations and Quality functions  Recipient of best CFO award from CNBC, IMA, and BW - Yes Bank	Building robust financial systems  Establishing robust governance systems  Building contemporary business processes and systems to foster a friendly work environment  Speaker at multiple global & national conferences, academic institutes	Principle 10: Businesses should work against corruption in all its forms, including extortion and bribery






Name & Designation	Brief Profile	Experience Relevant to ESG	Contribution to Relevant UNGC Principles
 <b>Mrs. Sucharita Rao Palepu</b>  Independent Director	<p>Chartered Accountant with 30 years of experience in information technology and financial services</p> <p>Specialisation in organisation an HR transformation</p> <p>HR Strategy, Talent Management, Learning &amp; Development, Global Reward programs and Diversity initiatives</p>	<p>Transformation programs on diversity and talent management</p> <p>Certified leadership coach, involved in a lot of NGOs</p> <p>Awarded the Exemplary Woman in Leadership Award (APAC) in HR Branding Awards 2015-16</p>	<p>Principle 1: Businesses should support and respect the protection of internationally proclaimed human rights</p> <p>Principle 2: Make sure that they are not complicit in human rights abuses</p> <p>Principle 6: The elimination of discrimination concerning employment and occupation</p>

 <b>Mr. Kapil Kumar Mehan</b>  Independent Director	<p>Managerial and strategic expertise in Agri-tech, green ammonia, business strategy, performance improvement, and strategic investments in manufacturing/agribusiness. Extensive global experience across fertilizers, chemicals, consumer products, and agriculture industries. Holds degrees in Veterinary Sciences, Management (IIM Ahmedabad), and Advanced Management Program from Harvard Business School.</p>	<p>Expertise in policy and regulatory dynamics of Agri and green chemistry industries. Actively engaged with bodies like the Fertilizer Association of India, International Fertilizer Association, and CII. Led industry-wide advocacy on sustainability, growth, and multi-stakeholder engagement, emphasizing ease of doing business in fertilizers.</p>	<p>Principle 7: Support a precautionary approach to environmental challenges.</p> <p>Principle 8: Undertake initiatives to promote greater environmental responsibility.</p> <p>Principle 9: Encourage the development and diffusion of environmentally friendly technologies.</p>
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Name & Designation	Brief Profile	Experience Relevant to ESG	Contribution to Relevant UNGC Principles
 <b>Dr. Sethurathnam Ravi</b>  Independent Director	<p>Doctorate in finance and is a practising Chartered Accountant</p> <p>Over 34 years of experience</p> <p>Diploma in Information System Audit (DISA) and is an Associate Member of the Association of Certified Fraud Examiners (CFE), USA</p> <p>Registered as an Insolvency Resolution Professional</p> <p>Specialisation in Forensic and Insolvency assignments, Finance &amp; Management, Turnaround Strategies, Business Valuations, Brand and Share Valuation, Assurance, Audit, and Taxation</p> <p>Chairman of Tourism Finance Corporation of India Limited and Spacenet Enterprises India Limited</p>	<p>Ex-chairman and Director of BSE Ltd. and Chairman and Director of UTI Trustee Company Private Limited</p> <p>Ex-member of SEBI's Takeover Panel as well as its Mutual Fund Advisory Committee</p> <p>Ex-member of the Working Group formed by the Reserve Bank of India for the preparation of the Draft Government Securities Regulations within the Framework of the Government Securities Bill 2004</p>	<p>Principle 10: Businesses should work against corruption in all its forms, including extortion and bribery</p>

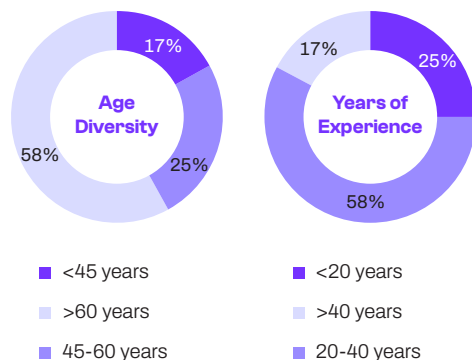
 <b>Mr. Rajiv Pritidas Kakodkar</b>	<p>40 years of experience in the pharmaceutical industry</p> <p>Bachelor of Pharmacy degree from the University of Mumbai</p> <p>MBA from the Stuart School of Business - Illinois Institute of Technology, USA</p> <p>Experience in global sourcing, indenting, trading, and distribution of pharmaceutical ingredients</p> <p>Sourcing of drug substances from India on behalf of multiple innovators and generic pharmaceutical Companies, as well as worldwide distributors of APIs</p>	<p>First-hand view of the pharma industry's evolution from technocrat-driven single-product factories to world-class, multi-workshop facilities with all the requisite regulatory approvals</p>	<p>Principle 10: Businesses should work against corruption in all its forms, including extortion and bribery</p>
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## Board Diversity

### Board Composition



### Actions & Initiatives

We provide comprehensive training on business ethics and integrity for our leadership team and employees. The Board of Directors engages in leadership training that includes business integrity and ethical practices. Our personal development programs focus on essential skills like communication, emotional intelligence, email etiquette, and negotiation, helping employees uphold the Code of Conduct. Additionally, our leadership programs cover behavioral and ethical topics such as accountability, problem-solving, conflict resolution, teamwork, and stakeholder engagement.

The Board is supported by able committees responsible for the effective implementation of various strategies across the Company.<sup>14</sup>

<sup>14</sup> The details on the Committees can be accessed through the Annual Report.

#### Corporate Social Responsibility & Sustainability Committee

Formulates and oversees the CSR policy, action plans, and budget, ensuring alignment with corporate goals. It also provides leadership on sustainability initiatives, integrating them into the company's strategy

#### Nomination and Remuneration Committee

Execution of aspects outlined in the Performance Evaluation and Remuneration Policy for senior management personnel and above; and for implementing the stock option scheme

#### Risk Management Committee

Oversight on all organisational risks such as financial, operational, sectoral, sustainability, information, or cybersecurity risks

#### Audit Committee

Oversight of the financial reporting and disclosure process

#### Internal Complaints Committee

Constituted under The Sexual Harassment of Women at Workplace (Prohibition, Prevention and Redressal) Act, 2013 for awareness on conduct and handling grievances

#### Share Transfers and Stakeholders Relationship Committee

Ensuring regular communication with shareholders, addressing of shareholder grievances

#### Business Review Committee

Strategisation and review of operational and financial matters in the Company

#### Growth Opportunities Evaluation & Investment Committee

To explore inorganic growth opportunities

Alongside the committees, a comprehensive pocket of policies defines rules and regulations for the Board of Directors: a Whistleblower Policy, a Code of Conduct, a Prohibition on Insider Trading, and a Performance Evaluation and Remuneration Policy. Our annual report provides more information on corporate governance policies and practices, including information on 'Our Sustainability Strategy' section in the governance mechanism. During the year, there were no complaints about restrictive or unfair trade practices.

### Achieves High Global Compliance with C-TPAT Certification

Granules Gagillapur site has recently achieved a significant milestone globally by passing the Customs-Trade Partnership Against Terrorism (C-TPAT) audit with an impressive score of 84%. Conducted by U.S. Customs and Border Protection, this certification highlights Granules India's commitment to stringent security protocols and the safe transportation of its products internationally.





## Anti-Corruption

We are committed to the ten principles of the UN Global Compact regarding human rights, labor, environmental protection, and anti-corruption. Our Code of Conduct and Anti-Bribery and Anti-Corruption (ABAC) policy apply to all stakeholders, ensuring fair and responsible business practices. This policy is shared with all employees and board members, prohibiting the solicitation or acceptance of bribes, gifts, or favors that could influence decision-making. Our commitment underscores our dedication to ethical standards and transparency.

**No enforcement agency took disciplinary action on bribery/ corruption charges during the reporting year. No fines, penalties, or actions were taken on account of corruption or conflicts of interest.**

## Human Rights

At Granules, we are committed to protecting the rights of everyone we engage with. Our agreements include human rights clauses to ensure all communication meets high human rights standards, covering rights such as life, liberty, freedom of opinion, and expression, as well as those outlined in national employment and immigration laws. We firmly oppose child and forced labor and do not engage in such practices.

**We have established a channel for communicating and handling human rights grievances.**

Granules has implemented a whistleblower policy and vigilance system to report unethical conduct and fraud, reinforcing its commitment to high ethical and legal standards. The policy ensures open communication for legitimate concerns and protects employees from retaliation when reporting in good faith. Additionally, human rights standards are included in Granules' contracts with suppliers, requiring their commitment to ethics and integrity.

### Human Rights Grievance Handling Process

Raising Concerns with potential supervisor



It is ensured that no retaliation happens against individuals who filed reports on alleged violation



Raising concerns with Head of Department/Unit HR Manager/ Compliance Manager if not satisfied



Reporting violations promptly to manager or supervisor, Unit HR, CFO, CHRO, or Compliance Officer



Based on the nature of the violation, disciplinary, corrective, and preventive action is recommended by the investigation committee



Investigation by the Code of Business Conduct Committee as per applicable law and procedures

## Outlook

We aim to strengthen our focus on ethics and integrity by implementing year-round mandatory training on the code of conduct for all employees. Our commitment to ethical business practices will be reinforced through a strong organizational culture and ongoing training initiatives. We will also use a data-driven approach to assess our governance performance.







# Data Privacy and Cyber Security

## Context

Recently, the pharmaceutical industry experienced a considerable functional shift with hybrid work, digital workplaces, and other trends. Further, automation and digitalization are becoming significant parts of R&D, manufacturing, and supply chain management,<sup>15</sup> inevitably creating a need for focused cyber-attack prevention. In our industry, intellectual property loss and operational disruptions are the two most significant cybersecurity risks resulting in reputation damage. Such incidents lead to severe compliance breaches as health-sensitive data is involved.<sup>16</sup> In 2022 alone (until the 28<sup>th</sup> of November), there were 1.9 million cyberattacks on India's healthcare sector.<sup>17</sup> Unpatched vulnerabilities and fundamental misconfigurations were responsible mostly, mandating a new security approach with a dedicated vulnerability management strategy.<sup>18</sup>

## Approach

Our IT initiatives are guided by our Information Security Management System, which provides a framework for managing IT operations. We employ robust, multi-layered data privacy and security systems, including advanced encryption, secure access controls, and regular audits to ensure data integrity and confidentiality. We follow strict protocols for data handling, storage, and disposal meeting regulatory requirements, and offering comprehensive employee training and awareness programs.

We are strengthening data security and making structural changes to our operations. Notably, our API facilities are undergoing a digital transformation, allowing finance, marketing, production, and supply chain teams to use a unified data platform for improved information transparency.

## Actions & Initiatives

### Information Security

We maintain 24/7 security and network operation centers that quickly isolate systems affected by cyber-attacks, managed by an external third party. To reduce cyber threat risks, we use micro-segmentation for tailored security measures and conduct Vulnerability Assessment and Penetration Testing (VAPT) to identify vulnerabilities. Our endpoint detection and response (EDR) tool allows for rapid threat neutralization at endpoints, and we employ multiple firewalls, ensuring they are regularly updated for enhanced security.

<sup>15</sup> <https://www2.deloitte.com/in/en/pages/risk/articles/Indian-pharma-takes-the-digital-leap.html>

<sup>16</sup> <https://www.pharmaceutical-technology.com/comment/cybersecurity-in-pharma-qa-with-globaldata-thematic-analyst/>

<sup>17</sup> <https://www.livemint.com/technology/tech-news/indian-healthcare-sector-suffers-1-9-million-cyberattacks-in-2022-11669878864152.html>

<sup>18</sup> <https://www.businesstoday.in/industry/pharma/story/indias-pharma-firms-need-strong-cyber-defenses-says-cybersecurity-expert-389514-2023-07-13>



We regularly update our IT Policy procedures, fully automate data backups, and enhance storage capabilities. We are implementing cloud backup for critical applications and establishing disaster recovery sites for essential systems, having also conducted a third-party gap assessment for GxP systems per 21 CFR Part 11. Additionally, we have increased cybersecurity and information security awareness sessions for employees, including exams and certifications, and conducted phishing simulations to assess responses to fraudulent emails.



During the reporting period, we faced a ransomware attack impacting certain IT assets. While a group claimed responsibility, we regard it as a grave concern. Our response involved a significant effort to address regulatory standards, achieve recertifications, and system enhancements. We strengthened our cybersecurity by establishing a 24/7 Security Operations Center (SOC), implementing micro-segmentation, deploying advanced spam filters, and improving endpoint detection and response. We also enhanced vulnerability assessments and configured Data Loss Prevention (DLP) systems to mitigate data loss risks. All employees receive regular training on cybersecurity, data protection, and privacy.

## 24/7

Security Operation Center

### Green Practices

We have refined our device-sourcing procedures to ensure all devices have green certifications and reduce our overall device consumption. While we monitor printer paper usage, some departments still print for legal reasons, resulting in about 250,000 printouts monthly. Electronic waste disposal is handled by a certified third-party vendor.

## Outlook

Each year, we aim to significantly enhance our data security practices, targeting zero data privacy and cybersecurity breaches. To achieve this, we will conduct a third-party vulnerability assessment and evaluate IT and OT security gaps. We also plan to implement an annual cyber safety training program for specific Granules staff to ensure full participation. As part of our digital transformation, we are adopting innovative methods that are already yielding positive results. Following a thorough assessment of our operational technology systems, we aim to achieve ISO 27001 certification by the end of 2024.





# Sustainability in Subsidiaries

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# Sustainability Insights in Granules' Subsidiaries

Employee perceptions of sustainability could be quite diverse among organizations with multiple manufacturing units across a range of geographies. A combination of intrinsic aspects driven primarily by self-motivation and extrinsic aspects due to compliance requirements leads to the adoption of sustainability as a culture. Addressing varied perspectives on sustainability and tracking sustainability performance across all our units becomes paramount in this scenario.

We are making focused efforts to track the sustainability performance of our subsidiaries. Our renewed focus on sustainability in the last two years has also led us to start monitoring our subsidiaries' performance on ESG with more enthusiasm. As of date, Granules maps the key ESG performance indicators of our subsidiaries, wherever possible, to achieve organization-wide synthesis on our net zero goal.

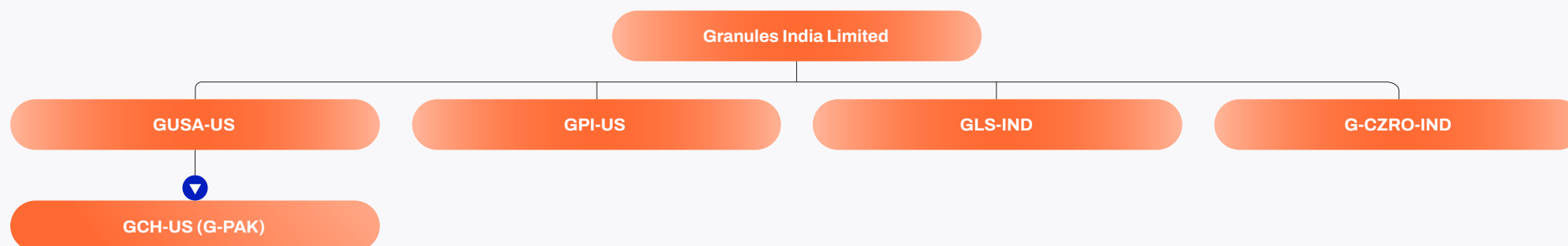
Granules' subsidiaries—Granules USA Inc., Granules Pharmaceuticals Inc., Granules Life Sciences, and Granules CZRO Private Limited—collectively contribute to the Company's global presence in the pharmaceutical industry. These entities are strategically aligned to support the development, manufacturing, and distribution of generic medicines, APIs, and pharmaceutical formulations. Their collaborative efforts ensure an integrated supply chain and enhance Granules' commitment to delivering high-quality, cost-effective healthcare solutions across key markets.

## Granules Pharmaceuticals Inc. (GPI)

Granules Pharmaceuticals Inc. (GPI) is a 100% subsidiary of Granules India located in Chantilly, Virginia. GPI is a US FDA, DEA-approved facility which spreads over 100,000 sqft area, with established R&D Manufacturing capabilities for low volume, oral solid dosage forms. GPI also distributes its products through a front-end under the GPI label. Our portfolio consists of low volume complex products to manufacture tablets, capsules, oral solutions and powder for oral solutions that are manufactured at our facility in Chantilly, medium to high volume, integrated products that are manufactured in our Finished Dosage sites in India and products that are Trade Agreement Act (TAA) compliant at the facility in Chantilly, VA.



## Granules' Subsidiaries





## Granules USA (GUSA)

Granules USA (GUSA) is a 100% subsidiary of Granules India, located in New Jersey. GUSA is the sales & Distribution division arm of Granules India incorporated in the year 2003, to cater to the real time needs of our customers in North America. We offer high-quality APIs, PFIs and bulk tablets to branded players, leading generics customers and other partners with whom we continue to have deep rooted relationships.

Granules Consumer Health (GCH) is Step down subsidiary of GUSA is Granules' front-end products division for private label over the counter (OTC) products in the US products. GCH was established in 2014, to offer OTC generics that meet the highest level of quality at an affordable cost that is much more affordable than brand name products. Granules is well established on bulk supply through efficiencies garnered through manufacturing, integration, and a high level of regulatory compliance. GCH builds on the efficiencies on Granules India's manufacturing, packages product in the US and supplies products to our store brand partners.



## Granules Life Sciences Private Limited (GLS)

Granules Life Sciences Private Limited is a wholly-owned Indian subsidiary of the Company located in Hyderabad, Telangana, India. This facility will add 10 billion dosages to our finished dosage capacity.



## Granules CZRO Private Limited (G-CZRO)

Granules CZRO Private Limited, a wholly-owned subsidiary in India was incorporated for manufacturing green chemicals. The pilot plant for DCDA has been set up at Visakhapatnam, Andhra Pradesh and process stabilization of the plant is in progress.

## Driving Green: Free EV Charging for Employees

Granules US facilities now feature complimentary electric vehicle (EV) charging stations, highlighting our commitment to sustainable transportation and reducing greenhouse gas emissions. By offering easy access to clean energy for daily commutes, we promote EV use and support environmental stewardship for a more sustainable future.







## Sustainability Performance

### Social & Governance

Granules has a diverse and talented workforce across its various divisions, each contributing to our vision of becoming a leader in sustainable pharmaceuticals. Our commitment to fostering an inclusive and innovative work environment is reflected in the dynamic teams that drive our operations and initiatives forward.

#### Number of Employees (FY 24)

**200**

GPI

**83**

GLS

**78**

GUSA\*

**20**

G-CZRO

### Environmental Performance

We strive actively to track our subsidiaries' environmental performance and make stringent efforts to map our data per more than one international framework to unify our overseas monitoring mechanism.

#### Water Withdrawal

Water is used mainly for manufacturing, cleaning, drinking, and other essential purposes at our subsidiaries.

#### Freshwater Withdrawal in KL (FY 24)

**12,774**

GPI

**5,468**

GLS

**368**

GUSA\*

**12,506**

G-CZRO

### Emissions

Scope	Emission Category	GPI	GUSA	GLS	G-CZRO	Total
Scope 1	Direct emissions from sources owned or controlled by a company (Coal, Fuels)	1,673	196	57	74	2,001
Scope 2 (Market-Based)	Indirect emissions from the generation of purchased energy (Electricity)	1,679	386	808	13	2,886
<b>Scope 1+2</b>	<b>Total</b>	<b>3,352</b>	<b>582</b>	<b>866</b>	<b>87</b>	<b>4,887</b>
Scope 3	Category 1 - Purchased Goods & Services	3,836	1,408	5	43	5,292
	Category 2 - Capital Goods	-	-	17,195	1,370	18,565
	Category 3 - Fuel- and Energy-Related Activities	652	122	80	21	875
	Category 4 - Upstream Transportation & Distribution	47	35	0	0	83
	Category 5 - Waste Generated from Operations	129	20	1	0	150
	Category 6 - Business Travel	28	20	4	29	81
	Category 7 - Employee Commuting	361	151	6	1	518
	Category 8 - Upstream Leased Assets	5,511	641	-	-	6,153
	Category 9 - Downstream Transportation & Distribution	5	1,091	1	0	1,097
	Category 10 - Processing of Sold Products	NA	NA	NA	1	1
	Category 11 - Use of Sold Products	-	-	-	-	-
	Category 12 - End of Life Treatment of sold products	43	NA	0	0	43
	Category 13 - Downstream Leased Assets	-	-	-	-	-
	Category 14 - Franchises	-	-	-	-	-
	Category 15 - Investments	-	-	-	-	-
<b>Scope 3</b>	<b>Total</b>	<b>10,612</b>	<b>3,489</b>	<b>17,291</b>	<b>1,465</b>	<b>32,857</b>
<b>Total Emissions - Scope 1,2 and 3</b>		<b>13,964</b>	<b>4,070</b>	<b>18,157</b>	<b>1,553</b>	<b>37,744</b>

### Energy Consumption

Natural gas and electricity are the primary sources of energy consumption at GPI and GUSA. In our Indian subsidiaries, high-speed diesel is used for our DG sets.

#### Energy Consumption in TJ (FY 24)

**51.12**

GPI

**4.84**

GLS

**8.40**

GUSA\*

**1.07**

G-CZRO

### Waste Management

Data on hazardous waste management has been recorded for the GPI unit.

#### Hazardous Waste Disposal in MT (FY 24)

**9.82**

GPI

**0**

GLS

**0**

GUSA\*

**0**

G-CZRO

Note: \*All performance data disclosed under the name GUSA includes Granules Consumer Healthcare (GCH).





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# Performance Tables

## Business Performance

Production & Revenues	Unit	FY 23	FY 24
Total Production	MT	56,906	60,626
Revenues - Consolidated	Million INR	45,119	45,064
Revenues - Standalone	Million INR	39,312	37,550

## Climate & Environment Performance

Energy	Unit	FY 23	FY 24
Total Electricity consumption	MWh	77,078	84,066
Electricity from Renewable Sources (PPA+On-site+I-RECs)	MWh	7,565	39,885
% of Renewable Energy share of Consumed Electricity	%	9.8%	47.4%
<b>Fuels Consumption</b>			
Coal Consumption	MT	22,149	21,732
HSD consumption	KL	742	508
Furnance Oil Consumption	MT	64.50	63.62
Petrol Consumption	KL	0.76	3.26
<b>Energy by Source</b>			
Energy From Electricity Consumption	TJ	277.5	302.6
Energy From Fuels Consumption	TJ	592.2	573.3
Total Energy in TJ	TJ	869.7	875.95
Energy Intensity -TJ/Production	TJ/MT	0.01528	0.01445

GHG Emissions	Unit	FY 23	FY 24
Scope 1	tCO <sub>2</sub> e	56,265	56,254
Scope 2 (Market-Based)	tCO <sub>2</sub> e	56,306	31,632
Scope 2 (Location-Based)	tCO <sub>2</sub> e	62,433	60,191
<b>Scope 1+2 (Market-Based)</b>	<b>tCO<sub>2</sub>e</b>	<b>1,12,571</b>	<b>87,886</b>
<b>Scope 1+2 (Location-Based)</b>	<b>tCO<sub>2</sub>e</b>	<b>1,18,698</b>	<b>1,16,445</b>
<b>Scope 3 GHG Emissions</b>			
Category 1 - Purchased Goods & Services	tCO <sub>2</sub> e	4,95,807	5,14,516
Category 2 - Capital Goods	tCO <sub>2</sub> e	4,705	10,265
Category 3 - Fuel- and Energy-Related Activities	tCO <sub>2</sub> e	26,788	22,579
Category 4 - Upstream Transportation & Distribution	tCO <sub>2</sub> e	8,392	8,557
Category 5 - Waste Generated from Operations	tCO <sub>2</sub> e	2,992	3,571
Category 6 - Business Travel	tCO <sub>2</sub> e	295	850
Category 7 - Employee Commuting	tCO <sub>2</sub> e	1,476	1,571
Category 8 - Upstream Leased Assets	tCO <sub>2</sub> e	587	1,628
Category 9 - Downstream Transportation & Distribution	tCO <sub>2</sub> e	22,381	24,827
Category 10 - Processing of Sold Products	tCO <sub>2</sub> e	46,658	41,187
Category 11 - Use of Sold Products	tCO <sub>2</sub> e	-	-
Category 12 - End of Life Treatment of sold products	tCO <sub>2</sub> e	4,031	4,287
Category 13 - Downstream Leased Assets	tCO <sub>2</sub> e	-	-
Category 14 - Franchises	tCO <sub>2</sub> e	-	-
Category 15 - Investments	tCO <sub>2</sub> e	-	-
<b>Total Scope 3 emissions</b>	<b>tCO<sub>2</sub>e</b>	<b>6,14,113</b>	<b>6,33,837</b>
<b>Total Scope 1, 2 &amp; 3 emissions</b>	<b>tCO<sub>2</sub>e</b>	<b>7,26,684</b>	<b>7,21,723</b>

<b>Total Scope 1 and Scope 2 emission intensity in terms of physical output</b>	<b>tCO<sub>2</sub>e/Tonnes of Production</b>	<b>1.98</b>	<b>1.45</b>
<b>Scope 3 emission Intensity in terms of physical output</b>	<b>tCO<sub>2</sub>e/Tonnes of Production</b>	<b>10.79</b>	<b>10.45</b>



Air emissions	Unit	FY 23	FY 24
No <sub>x</sub>	MT	124.1	65.3
So <sub>x</sub>	MT	230.9	198.56
Particulate Matter (PM)	MT	89.3	82.08
Persistent Organic Pollutants (POP)	MT	0	0
Volatile Organic Compounds (VOC)	MT	0	0
Hazardous Air Pollutants (HAP)	MT	0	0
Water & Wastewater	Unit	FY 23	FY 24
<b>Water withdrawal by source</b>			
Surface water	KL	0	0
Ground Water	KL	0	0
Third Party Water	KL	3,41,008	3,68,002
Seawater/ Desalinated Water	KL	0	0
Rainwater Harvesting	KL	11,143	0
<b>Total volume of water withdrawal</b>	<b>KL</b>	<b>3,52,151</b>	<b>3,68,002</b>
<b>Total volume of water consumption</b>	<b>KL</b>	<b>1,93,125</b>	<b>2,26,083</b>
<b>Water intensity in terms of physical output</b>	<b>KL/Tonnes of Production</b>	<b>6.19</b>	<b>6.070</b>
Waste Water Generated (LTDS+HTDS)	KL	1,59,026	1,41,919
Recycle of Waste Water Generated	KL	81,804	55,083
Percentage generated Waste Water Recycled	%	51%	39%
<b>Water discharge by destination and level of treatment (in kilolitres)</b>			
To Surface water	KL	0	0
To Groundwater	KL	0	0
To Seawater	KL	0	0
Sent to third-parties	KL	68,821	79,216
Waste	Unit	FY 23	FY 24
Haz.Waste disposed to Landfill	MT	406.32	398.373
Haz.Waste disposed to Incineration	MT	63.235	71.52
Haz.Waste disposed to Co-processing	MT	2,664.07	3,482.355
<b>Total Hazardous Waste</b>	<b>MT</b>	<b>3,133.6</b>	<b>3,952.2</b>
Plastic waste	MT	1,081.7	1,106.6
Non-Hazardous Waste (Other than Plastic Waste)	MT	1,946.9	2,170.3
Bio Medical Waste	MT	1.228	3.009
E-Waste	MT	1.55	1.26
Waste Oil	MT	3.5	2.57
<b>Total Waste</b>	<b>MT</b>	<b>6169</b>	<b>7236</b>
Waste Intensity	MT/Tons of Production	0.108	0.119

## Social Performance

Employees and workers	Unit	FY 23	FY 24
No.of Employees	No's	3,650	4,057
No. of Males	No's	3,410	3,741
No.of Females	No's	240	316
New Hires	No's	1,588	1,406
Attrition	No's	1,387	1,020
Work Men (Upto Sr. Executive)	No's	3,058	3,377
Executives (Above Sr. Executive)	No's	592	680
<30 Yrs	No's	1,938	2,178
30-50 Yrs	No's	1,630	1,792
>50 Yrs	No's	82	87
No.of Contract Work Employees	No's	2,223	2,467
No. of Males	No's	1,806	2,022
No. of Females	No's	417	445
<b>Total Workforce</b>	<b>No's</b>	<b>5,873</b>	<b>6,524</b>
% of Female Employees	%	6.6%	7.8%
% of Female Workforce (Overall)	%	11.2%	11.7%
% of Attrition	%	38.0%	25.1%
Return to Work and Retention Rates	%	97%	100%
Women representation on Board of Directors	%	20%	25%
No. of complaints made by employees and workers	Unit	FY 23	FY 24
Working Conditions	No's	0	0
Health & Safety	No's	0	0
Sexual Harassment	No's	1	0
Discrimination at Workplace	No's	0	0
Child Labor	No's	0	0
Forced Labor/Involuntary Labor	No's	0	0
Wages	No's	0	0
Complaints on POSH as a % of female employees/workers	%	0.15%	0%
Number of customer complaints	Unit	FY 23	FY 24
Data privacy	No's	0	0
Advertising	No's	0	0
Cyber security	No's	0	0
Delivery of essential services	No's	0	0
Restrictive Trade Practices	No's	0	0
Unfair Trade Practices	No's	0	0
Instances of corruption and bribery	No's	0	0





No. of Complaints/Grievances	Unit	FY 23	FY 24
Communities	No's	0	0
Investors (other than shareholders)	No's	0	0
Shareholders	No's	0	0
Employees and workers	No's	0	0
Customers	No's	414	486
Value Chain Partners	No's	0	0
Product Quality & Safety	Unit	FY 23	FY 24
Instances of product recalls on accounts of safety issues	No's	0	0
Fines/Penalties/Punishment/Compounding fees/Settlement	Unit	FY 23	FY 24
Penalty/ Fine (Monetary)	INR	0	0
Settlement (Monetary)	INR	0	0
Compounding fee (Monetary)	INR	0	0
Imprisonment (Non-Monetary)	No's	Nil	Nil
Punishment (Non-Monetary)	No's	Nil	Nil
% Of employees covered by	Unit	FY 23	FY 24
Health insurance	%	100	100
Accident insurance	%	100	100
Maternity benefits	%	100	100
Paternity benefits	%	100	100
Daycare facilities	%	100	92.3
Median remuneration/wages	Unit	FY 23	FY 24
Median remuneration/salary/wages - Male	INR Lakh/Annum	4.5	4.77
Median remuneration/salary/wages - Female	INR Lakh/Annum	3.74	3.74
Gross wages paid to females as % of total wages paid by the entity, in the following format:	%	7.17	6.69
minimum wages paid to employees and workers			
Equal to minimum wage	%	0%	0%
More than minimum wage	%	100%	100
Equal to minimum wage	%	95%	99%
More than minimum wage	%	5%	1%
Complaints with regard to conflict of interest	Unit	FY 23	FY 24
Number of complaints received in relation to issues of Conflict of Interest of the Directors	No's	0	0
Number of complaints received in relation to issues of Conflict of Interest of the KMPs	No's	0	0

Complaints with regard to conflict of interest	Unit	FY 23	FY 24
Number of complaints received in relation to issues of Conflict of Interest of the Directors	No's	0	0
Number of complaints received in relation to issues of Conflict of Interest of the KMPs	No's	0	0
% of employees covered by retirement benefits	Unit	FY 23	FY 24
PF	%	100%	100%
Gratuity	%	100%	100%
ESI - No. of employees covered (as a % of total employees)	%	23%	20%
ESI - No. of workers covered (as a % of total workers)	%	99%	99%
Trainings & Performance and Career Development Review	Unit	FY 23	FY 24
Performance and career development reviews	%	79.7%	83.7%
provided training on human rights issues and policy	%	100%	100%
Training Hours - GMP	Man-hours	2,89,391	2,86,783
Training Hours - EHS Trainings	Man-hours	13,695	13,463
Other Trainings (External Technical & Behavioral )	Man-hours	3,425	9,761
Safety Performance	Unit	FY 23	FY 24
Reportable Incidents - Employees	No's	1	0
Reportable Incidents - Workers	No's	0	2
Lost Time Injury Frequency Rate for Employees (LTIFR) (per one million-person hours worked)	LTI-FR	0.12	0
Lost Time Injury Frequency Rate for Workers (LTIFR) (per one million-person hours worked)	LTI-FR	0	0.30
Total recordable work-related injuries - Employees	No's	7	23
Total recordable work-related injuries - Workers	No's	11	15
High consequence work-related injury or ill-health - Employees (excluding fatalities)	No's	1	0
High consequence work-related injury or ill-health - Workers (excluding fatalities)	No's	0	0
No. of fatalities -Employees	No's	0	0
No. of fatalities -Workers	No's	0	2
Man-hours Worked - Employees	Man-hours	8,081,100	8,982,198
Man-hours Worked - Workers	Man-hours	7,302,555	6,642,270
Lost time injury (LTI) severity rate for Employees - (number of days lost due to injuries) x 1,000/total hours worked	LTI-SR	0.67	0
Lost time injury (LTI) severity rate for Workers - (number of days lost due to injuries) x 1,000/total hours worked	LTI-SR	0	1.81



# Advancing Global Principles through UNGC Commitment

Since 2023, Granules has proudly participated in the United Nations Global Compact (UNGC), reaffirming our commitment to its ten principles covering human rights, labor, environment, and anti-corruption. Through this commitment, we actively contribute to the advancement of the UN Sustainable Development Goals (SDGs) and uphold transparency in our sustainability efforts by submitting an annual Communication on Progress (CoP), highlighting our initiatives and achievements.



	Principle	Statement	Page Number
 Human Rights	Principle 1	Businesses should support and respect the protection of internationally-proclaimed Human Rights	73 – 82, 98, 104
	Principle 2	Businesses should make sure that they are not complicit in Human Rights abuses	Annual Report Page no 91 - 94
 Labour Rights	Principle 3	Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining	73 -82, 98, 104  Annual Report Page no 91 -94
	Principle 4	Eliminate all forms of forced and compulsory labor	
	Principle 5	The effective abolition of child labor	
	Principle 6	The elimination of discrimination in respect of employment and occupation	
 Environment	Principle 7	Businesses should support a precautionary approach to environmental challenges	35 – 67
	Principle 8	Businesses should undertake initiatives to promote greater environmental responsibility	Annual Report Page no 95 – 102
	Principle 9	Businesses should encourage the development and diffusion of environmentally friendly technologies	
 Anti-Corruption	Principle 10	Businesses should work against corruption in all its forms, including extortion and bribery	98, 104  Annual Report Page no 76 - 79



# GRI Index

<b>Statement of use</b>	Granules India has reported the information cited in this GRI content index for the period 1 <sup>st</sup> April 2023- 31 <sup>st</sup> March 2024 with reference to the GRI Standards.
<b>GRI 1 used</b>	GRI 1: Foundation 2021

GRI Standard/ Other Source	Disclosure	Location	Remarks
GRI 2: General Disclosures 2021	2-1 Organizational details	2 & Back Cover	
	2-2 Entities included in the organization's sustainability reporting	2, 123	
	2-3 Reporting period, frequency and contact point	2 & Cover Page	
	2-4 Restatements of information	2	
	2-5 External assurance	2, 120, 123	
	2-6 Activities, value chain and other business relationships	11 – 12 Annual Report Page 8-11	
	2-7 Employees	113	
	2-8 Workers who are not employees	113	
	2-9 Governance structure and composition	24 Annual Report Page 49, 140 - 144	
	2-10 Nomination and selection of the highest governance body	Annual Report Page 119, 141	
	2-11 Chair of the highest governance body	24	
	2-12 Role of the highest governance body in overseeing the management of impacts	24	
	2-13 Delegation of responsibility for managing impacts	24	
	2-14 Role of the highest governance body in sustainability reporting	24 Annual Report 140-141	
	2-15 Conflicts of interest	Annual Report Page 78	
	2-17 Collective knowledge of the highest governance body	100 – 103	
	2-18 Evaluation of the performance of the highest governance body	Annual Report 140-144	
	2-19 Remuneration policies	Annual Report Page 141	
	2-20 Process to determine remuneration	Annual Report Page 141	
	2-22 Statement on sustainable development strategy	3 – 5, 16, 30 - 34	
	2-23 Policy commitments	30 - 34	

GRI Standard/ Other Source	Disclosure	Location	Remarks
	2-24 Embedding policy commitments	25 - 29	
	2-25 Processes to remediate negative impacts	25 - 29	
	2-26 Mechanisms for seeking advice and raising concerns	104	
	2-27 Compliance with laws and regulations	Annual Report Page 146	
	2-28 Membership associations	14	
	2-29 Approach to stakeholder engagement	17 – 18	
GRI 3: Material Topics 2021	3-1 Process to determine material topics	19 – 20 & 21 - 23	
	3-2 List of material topics	20	
GRI 3: Material Topics 2021	3-3 Management of material topics	19 – 20 & 21 - 23	
GRI 205: Anti-corruption 2016	205-2 Communication and training about anti-corruption policies and procedures	94 – 104	
	205-3 Confirmed incidents of corruption and actions taken	133 Annual Report 77-78	
GRI 3: Material Topics 2021	3-3 Management of material topics	19 – 20, 21	
GRI 302: Energy 2016	302-1 Energy consumption within the organization	60 – 61	
	302-3 Energy intensity	60 – 61	
	302-4 Reduction of energy consumption	60 – 61	
	302-5 Reductions in energy requirements of products and services	60 – 61	
GRI 3: Material Topics 2021	3-3 Management of material topics	62 - 63	
GRI 303: Water and Effluents 2018	303-1 Interactions with water as a shared resource	62 – 63	
	303-2 Management of water discharge-related impacts	62 – 63	
	303-3 Water withdrawal	62 – 63	
	303-4 Water discharge	62 – 63	
	303-5 Water consumption	62 – 63	
GRI 3: Material Topics 2021	3-3 Management of material topics	36 – 41	
GRI 305: Emissions 2016	305-1 Direct (Scope 1) GHG emissions	42 – 47	
	305-2 Energy indirect (Scope 2) GHG emissions	42 – 47	
	305-3 Other indirect (Scope 3) GHG emissions	42 – 47	
	305-4 GHG emissions intensity	47	
	305-5 Reduction of GHG emissions	49 – 58	
	305-7 Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions	113	





GRI Standard/ Other Source	Disclosure	Location	Remarks
GRI 3: Material Topics 2021	3-3 Management of material topics	64	
GRI 306: Waste 2020	306-1 Waste generation and significant waste-related impacts	64 - 66	
	306-2 Management of significant waste-related impacts	64 – 66	
	306-3 Waste generated	64 – 66	
	306-4 Waste diverted from disposal	64 – 66	
	306-5 Waste directed to disposal	64 – 66	
GRI 3: Material Topics 2021	3-3 Management of material topics	73	
GRI 401: Employment 2016	401-1 New employee hires and employee turnover	78	
	401-2 Benefits provided to full-time employees that are not provided to temporary or part-time employees	80	
	401-3 Parental leave	80	
GRI 3: Material Topics 2021	3-3 Management of material topics	79	
GRI 403: Occupational Health and Safety 2018	403-1 Occupational health and safety management system and incident investigation	80 – 82 Annual Report 84 -86	
	403-2 Hazard identification, risk assessment,	81 Annual Report 84 -86	
	403-3 Occupational health services	80 Annual Report 84 -86	
	403-4 Worker participation, consultation, and communication on occupational health and safety	81	
	403-5 Worker training on occupational health and safety	114	
	403-6 Promotion of worker health	80 – 82	
	403-7: Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	80 – 82	
	403-8: Workers covered by an occupational health and safety management system	80 – 82	
	403-9 Work-related injuries	114	
	403-10 Work-related ill health	114	

GRI Standard/ Other Source	Disclosure	Location	Remarks
GRI 3: Material Topics 2021	3-3 Management of material topics	75	
GRI 404: Training and Education 2016	404-1 Average hours of training per year per employee	7, 114	
	404-2 Programs for upgrading employee skills and transition assistance programs	75 – 76	
	404-3 Percentage of employees receiving regular performance and career development reviews	77	
GRI 3: Material Topics 2021	3-3 Management of material topics	73-74	
GRI 405: Diversity and Equal Opportunity 2016	405-1 Diversity of governance bodies and employees	74	
GRI 3: Material Topics 2021	3-3 Management of material topics	73	
GRI 406: Non-discrimination 2016	406-1 Incidents of discrimination and corrective actions taken	73, 74	
GRI 3: Material Topics 2021	3-3 Management of material topics	83-84	
GRI 413: Local Communities 2016	413-1 Operations with local community engagement, impact assessments, and development programs	83 -91	
	413-2 Operations with significant actual and potential negative impacts on local communities	83 -91	
GRI 3: Material Topics 2021	3-3 Management of material topics	Annual Report 31	
GRI 416: Customer Health and Safety 2016	416-1 Assessment of the health and safety impacts of product and service categories	Annual Report Page 105 – 107	
	416-2 Incidents of non-compliance concerning the health and safety impacts of products and services	114	
GRI 3: Material Topics 2021	3-3 Management of material topics	105	
GRI 418: Customer Privacy 2016	418-1 Substantiated complaints concerning breaches of customer privacy and losses of customer data	105 & 113	



# GHG Quantification Methodology

## Scope 1 - Quantification Methodology

For calculating scope 1 emissions, we have included data pertaining to three categories:

### Fugitive Emissions from Refrigerants

A 'purchase-based approach' has been used to arrive at the activity data for the consumption of refrigerants. To calculate fugitive GHG emissions, the Intergovernmental Panel on Climate Change (IPCC) and DEFRA emission factors have been referenced.

### Stationary Combustion

The key fuel sources considered for arriving at the activity data are furnace oil, coal, HSD, natural gas, and gasoline. To quantify emissions, the relevant guidelines from IPCC and Department for Environment, Food and Rural Affairs (DEFRA) have been referenced for emission factors.

### Wastewater

Most of our manufacturing units sending the Wastewater to third-party CETPs (Common Effluent Treatment Plants) for treatment and disposal. Hence, emissions from transportation and treatment of effluents is captured at relevant category of Scope 3, i.e., Category 5: Waste Generated in Operations

## Scope 2 - Quantification Methodology

Scope 2 emissions data encompasses activity data from grid electricity consumption. We have adopted a location-based approach for selecting the emission factors, due to unavailability of source-specific emission factors. For the Estimation of Scope 2 emissions, we have adopted emission factors published by the Central Electricity Authority of India.

## Scope 3 Quantification Methodology

We have aligned our methodology to GHG Accounting Standard and ISO 14064 (Guidance on quantification and reporting of greenhouse gas emissions). Due to variation in data availability and nature of category, we have used different methodologies for different categories.

Scope 3 Category No	Scope 3 Category Description	Methodology
1	Purchased Goods and Services	Supplier-specific method (~85%) Hybrid method (~15%)
2	Capital Goods	Hybrid method Average-product method
3	Fuel- and Energy-Related Activities	Average-data method
4	Upstream Transportation and Distribution	Distance-based method
5	Waste Generated in Operations	Waste-type-specific method
6	Business Travel	Distance-based method
7	Employee Commuting	Fuel-based method
8	Upstream Leased Assets	Lessor-specific method
9	Downstream Transportation and Distribution	Distance-based method
10	Processing of Sold Products	Average-data method
11	Use of Sold Products	Not Applicable, as this category is not relevant
12	End-of-Life Treatment of Sold Products	Average-data method
13	Downstream Leased Assets	Not Applicable, as this category is not relevant
14	Franchises	Not Applicable, as this category is not relevant
15	Investments	Not Applicable, as this category is not relevant

### Category 1 - Purchased Goods and Services

At Granules, the majority of our purchased goods and services emissions originate from Active Pharmaceutical Ingredients (APIs), Key Startup Materials (KSMs). Solvents and Packaging Materials. Key raw materials include PAP, Acetic Anhydride, DCDA, Ibuprofen and Metformin HCL, etc.

**Methodology Used:** Supplier-specific method & Hybrid method using the Primary and Secondary data.

### Category 2 - Capital Goods

At Granules, the majority of our capital goods emissions originate from purchase of pharma manufacturing equipment. Granules procures many capital goods that aid its operations of producing API, PFI and finished dosages. Key capital goods include compression machines, tablet printing machines, coating granulators, air receiver tanks, etc.

**Methodology Used:** Hybrid method and Average-product method using the Primary and Secondary data.

### Category 3 - Fuel- and Energy-Related Activities

At Granules, we consume the electricity and fuels like Coal, HSD, Furnace oil, etc. in the manufacturing operations of pharmaceutical products. Hence, the majority of our Fuel and Energy-related activities emissions originate from generation and transmission of electricity from grid and extraction, exploration, production and transportation of fuels like Coal, Diesel, and Furnace oil.

**Methodology Used:** Average-data method using the Primary data.

**Calculation formula Upstream CO<sub>2</sub>e emissions of purchased fuels (extraction, production, and transportation of fuels:**  

$$\sum (\text{fuel consumed (e.g., kWh)} \times \text{upstream fuel emission factor (kg CO}_2\text{e)/kWh)})$$

**Source of Emission Factors Used:** India Specific Road Transport Emission Factors, India GHG Program, 2015 & EcoInvent

### Category 4 - Upstream Transportation and Distribution

At Granules, the majority of our upstream transportation and distribution emissions generated during the transportation of all materials like APIs, RM, KSMs, Packaging materials, etc., used in our pharmaceutical product manufacturing. Majority of the suppliers of raw materials, packing materials and MRO (Maintenance, Repair & Operations) items used in the manufacturing of our products are situated



in India and China. RM and PM are usually transported from the suppliers/traders' site by sea and road with air shipments constituting a small share of the inbound shipments.

**Methodology Used:** Distance-based method using the Primary data.

#### Calculation Formula Distance-based method (transportation):

**Sum across transport modes and/or vehicle types:**  $\sum (\text{mass of goods purchased (tonnes or volume)} \times \text{distance traveled in transport leg (km)} \times \text{emission factor of transport mode or vehicle type (kg CO}_2\text{e/tonne or volume/km)})$

**Source of Emission Factors Used:** India Specific Transport Emission Factors, India GHG Program, 2015 & DEFRA

#### Category 5 - Waste Generated in Operations

At Granules, the majority of our 'Waste generated in operations' emissions generated during the transportation, treatment, disposal of Waste and Wastewater generated in the pharmaceutical manufacturing process.

As a company that produces pharmaceutical APIs, PFIs and finished dosages, we generate and dispose waste under two categories namely liquid waste (effluent) and solid waste. Solid waste is further divided into sub-categories basis the chosen disposal methods.

Effluent waste undergoes primary treatment within Granules' premises and is then disposed to Central Effluent Treatment Plants (CETPs). The methods of treatment of various solid wastes are described below.

All the figures for absolute emissions include both emissions due to transportation of the waste to respective 3rd party treatment facilities and emissions due to treatment of the waste in such facilities

**Methodology Used:** Waste-type-specific method using the Primary Data

**Calculation formula Waste-type-specific method:**  $\sum (\text{waste produced (tonnes or m}^3) \times \text{waste type and waste treatment specific emission factor (kg CO}_2\text{e/tonne or m}^3))$

**Source of Emission Factors Used:** EcolInvent, USEPA and other Emission factors from Secondary Research Reports

#### Category 6 - Business Travel

At Granules, the majority of our 'business travel emissions generated during the traveling (by road, by train, by air, including local travel by bus, car, auto, etc.) and staying during the business visits like meetings, conferences, site visits, and training sessions.

Primary modes of transportation used by employees during business travel are flights and cars for which Company-authorized travel service partners are available. Employees also use trains, buses and hotels during business travel for which they are reimbursed at actuals basis rules outlined in the Company travel policy guidelines

**Methodology Used:** Distance-based method using the Primary data

**Calculation formula Distance-based method:**  $\sum (\text{distance traveled by vehicle type (vehicle-km or passenger-km)} \times \text{vehicle specific emission factor (kg CO}_2\text{e/vehicle-km or kg CO}_2\text{e/passenger-km)})$

**Source of Emission Factors Used:** India Specific Transport Emission Factors, India GHG Program, 2015 & DEFRA

#### Category 7 - Employee Commuting

At Granules, the majority of our 'employee commuting' emissions are generated through employees' travel between home and work places by various modes of transportation used by employees such as Company-provided bus, employee-owned vehicles like two-wheeler, car and public transport like bus, metro, train, auto, etc.

**Methodology Used:** Fuel-based method & Distance-based method using the Primary data

**Calculation Formula Distance-based method:** total distance traveled by vehicle type (vehicle-km or passenger-km)  
 $= \sum (\text{daily one-way distance between home and work (km)} \times 2 \times \text{number of commuting days per year})$

**Source of Emission Factors Used:** India Specific Transport Emission Factors, India GHG Program, 2015 & DEFRA

#### Category 8 - Upstream Leased Assets

At Granules, the majority of our 'upstream leased assets' emissions are generated from Leased Warehouses, Guest house/Hostels, Laptops, etc. Granules has taken warehouses,

hostels and IT assets on lease basis. The emissions from the utilization of these assets for operations of Granules been estimated in this category.

**Methodology Used:** Lesser-specific method using the Primary data

**Calculation Formula Lesser-specific method:**  $\sum (\text{Scope 1 and Scope 2 emissions of lessor (kg CO}_2\text{e) area, volume, quantity, etc., of the leased asset/total area, volume, quantity, etc., of lesser assets)})$

**Source of Emission Factors Used:** India Specific Transport Emission Factors, India GHG Program, 2015, DEFRA & EcolInvent

#### Category 9 - Downstream Transportation and Distribution

At Granules, The majority of our downstream transportation and distribution emissions generated during the transportation of Finished dosage formulations, Pharmaceutical formulation Ingredients (PFIs) and Active Pharmaceutical Ingredients (APIs). Majority of the customers of Granules India Limited are concentrated in Europe, Americas and Australia. Typical products include API (Active Pharmaceutical Ingredient), PFI (Pharmaceutical Formulation Intermediate) and Finished Dosage (FD) that are primarily shipped to customers via sea and air. For domestic customers, sales primarily comprise of API with a small portion of PFI which are transported via road.

**Methodology Used:** Distance-based method using the Primary data.





### Calculation Formula Distance-based method (transportation):

**Sum across transport modes and/or vehicle types:**  $= \sum (\text{mass of goods purchased (tonnes or volume)} \times \text{distance traveled in transport leg (km)} \times \text{emission factor of transport mode or vehicle type (kg CO}_2\text{e/tonne or volume/km)})$

**Source of Emission Factors Used:** India Specific Transport Emission Factors, India GHG Program, 2015 & DEFRA

### Category 10 - Processing of Sold Products

Granules India Limited Manufactures Active Pharmaceutical Ingredients (API) and Pharmaceutical Formulation Intermediates (PFIs) which are sold to other pharma companies that transform them further into Finished Dosage (FD) for use by end customer.

**Methodology Used:** Average-data method using the Secondary data

### Calculation Formula Average-data method:

$\sum (\text{mass of sold intermediate product (kg)} \times \text{emission factor of processing of sold products (kg CO}_2\text{e/kg of final product)})$

### Category 12 - End-of-Life Treatment of Sold Products

Granules India Limited sells a mix of Active Pharmaceutical Ingredients (API), Pharmaceutical Formulation Intermediates (PFI) and Finished Dosages (FD) to its customers. We have accounted for treatment of

waste from processing of sold APIs/PFIs to FD by our customers. We have further accounted for the packaging waste disposed once finished dosages, produced by Granules India Ltd., are consumed by our customers.

**Methodology Used:** Average-data method using the Secondary data

**Source of Emission Factors Used:** US EPA Emissions Factors Hub, 2023

### Exclusions:

#### Category 12 - Use of Sold Products:

This category is not relevant to Granules operations, all the final products are consumed by the end users.

#### Category 13 - Downstream Leased Assets:

This category is not relevant to Granules as there are no downstream leased assets.

**Category 14 - Franchises:** This category is not relevant to Granules as there are no Franchises.

**Category 15 - Investments:** This category is not relevant to Granules as there are no Investments.

### Uncertainty:

The GHG emissions reported for Scope 1, Scope 2, and Scope 3 include inherent uncertainties due to estimation methodologies and data limitations. For Scope 1 and Scope 2 emissions, which cover direct and energy-related emissions under our operational control, uncertainties are minimized through direct measurement and utility data; however, minor variability may occur due to the accuracy of fuel and electricity data collection methods

Scope 3 emissions reporting for Granules involves inherent uncertainties due to the complexity and variability of the data sources across the value chain. Since these emissions largely depend on activities outside Granules' direct control—such as supplier operations, product transport, and end-of-life treatment—estimating them accurately presents significant challenges. Data reliability issues, varying supplier reporting practices, limited primary data availability, and the use of industry averages or estimation models contribute to this uncertainty.

Granules recognizes these limitations and is committed to continuously refining its data collection and estimation processes. Through engagement with suppliers, adoption of advanced calculation methodologies, and leveraging of more accurate data sources, Granules aims to improve the accuracy of its Scope 3 inventory over time, thereby enhancing its alignment with the GHG Protocol requirements and supporting its broader sustainability goals.

# Independent Assurance Statement



## INDEPENDENT ASSURANCE OPINION STATEMENT

To: Board Committee – Sustainability and CSR of Granules India Limited.

Holds Statement No.: **769272-2**

The British Standards Institution (**BSI**) has conducted a limited assurance engagement on the sustainability information (described in the "Scope") in the **Granules Sustainability Report 23-24 of Granules India Limited**.

### Scope

The scope of engagement agreed upon with Granules India Limited includes the following:

The assurance covers the information of ESG matters in the Granules Sustainability Report 23-24, for the reporting period 1st April 2023 to 31st March 2024.

The reported information is reported in accordance "with reference reporting" to GRI Standards 2021.

[The details of subject matters and their boundaries within the scope is described in Appendix A and Appendix B in this independent assurance opinion statement].

### Opinion Statement

We have conducted a limited assurance engagement on the sustainability information described in **Granules Sustainability Report 23-24 for the reporting period 1st April 2023 to 31st March 2024**.

Based on the procedures we have performed and the evidence we have obtained, nothing has come to our attention that causes us to believe that the accompanying Sustainability Information is not prepared, in all material respects, with reference reporting to GRI Standards 2021.

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Registered in India: CIN U74899DL1999PTC101381





## Methodology

Our assurance engagements were carried out in accordance with ISAE3000 (Revised). Our work was designed to gather evidence on which to base our conclusion. We undertook the following activities:

- a top-level review of issues raised by external parties that could be relevant to Granule's policies to provide a check on the appropriateness of statements made in the report.
- discussion with managers and staffs on Granule's approach to stakeholder engagement. However, we had no direct contact with external stakeholders.
- interviews with staffs involved in sustainability management, report preparation and provision of report information were carried out.
- document review of relevant systems, policies, and procedures where available
- review of supporting evidence for claims made in the reports.
- review of key organizational developments

## Responsibility

Granules India Limited is responsible for the preparation and fair presentation of the sustainability information and report in accordance with the agreed criteria. BSI is responsible for providing an independent assurance opinion statement to stakeholders giving our professional opinion based on the scope and methodology described.

## Independence, Quality Control and Competence

BSI is independent to Granules India Limited and has no financial interest in the operation of Granules India Limited other than for the assurance of the sustainability statement contained in the report.

This independent assurance opinion statement has been prepared for the stakeholders of Granules India Limited only for the purposes of verifying its statements relating to its environmental, social and governance (ESG) more particularly described in the Scope above.

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This independent assurance opinion statement is prepared on the basis of review by BSI of information presented to it by Granules India Limited. In making this independent assurance opinion statement, BSI has assumed that all information provided to it by Granules India Limited is true, accurate and complete. BSI accepts no liability to any third party who places reliance on this statement.

BSI applies its own management standards and compliance policies for quality control, in accordance with ISO/IEC 17021-1:2015 and accordingly maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

BSI is a leading global standards and assessment body founded in 1901. The BSI assurance team has extensive experience in conducting verification over environmental, social and governance (ESG), and GRI Universal Standard 2021, ISO 14001, ISO 45001, ISO 14064, ISO 50001, and ISO 9001, etc.

Issue Date: 24-09-2024

For and on behalf of BSI:

*Srinivasa Babu Nagaraj*

Lead Assurer

*Theuns Kotze*

Theuns Kotze, Managing Director – IMETA Assurance

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#### Appendix A: [Data of subject matters within the scope].

##### List of material topics:

GRI 2: General Disclosures 2021 – 2-1, 2-2, 2-3, 2-4, 2-5, 2-6, 2-7, 2-8, 2-9, 2-10, 2-11, 2-12, 2-13, 2-14, 2-15, 2-16, 2-17, 2-18, 2-22, 2-23, 2-24, 2-25, 2-26, 2-27, 2-28, 2-29  
 GRI 3: Material Topics 2021 3-1 Process to determine material topics, 3-2 List of material topics, 3-3 Management of material topics.  
 GRI 205: Anti-corruption 2016 - 205-1, 205-2, 205-3  
 GRI 302: Energy 2016 - 302-1, 302-3, 302-4, 302-5  
 GRI 303: Water and Effluents 2018- 303-1, 303-2, 303-3, 303-4, 303-5  
 GRI 305: Emissions 2016- 305-1, 305-2, 305-3, 305-4, 305-5, 305-7  
 GRI 306: Waste 2020 - 306-1, 306-2, 306-3, 306-4, 306-5  
 GRI 401: Employment 2016- 401-1, 401-2, 401-3  
 GRI 403: Occupational Health and Safety 2018 - 403-1, 403-2, 403-3, 403-4, 403-5, 403-6, 403-7, 403-8, 403-9, 403-10,  
 GRI 404: Training and Education 2016 - 404-1, 404-2, 404-3  
 GRI 405: Diversity and Equal Opportunity 2016 - 405-1  
 GRI 406: Non-discrimination 2016 - 406-1  
 GRI 413: Local Communities 2016 - 413-1  
 GRI 416: Customer Health and Safety 2016 - 416-1, 416-2  
 GRI 418: Customer Privacy 2016- 418-1

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#### Appendix B: List of locations from the boundaries of Granules sustainability report 23-24

Plants in India	Location
<b>Corporate office</b>	2nd Floor, 3rd Block, My Home Hub, Madhapur, Hyderabad- 500 081 - Telangana State, India.
Finished Dosage Unit	160/A, 161/E, 162 & 174/A, Gagillapur Village, Dundigal Gandimaisamma Mandal, Medchal-Malkajgiri District – 500 043, Telangana State, India.
API Unit – I	Sy. No. 533, 535, 536, 537 Temple Road, Bonthapally Village, Gummadidala Mandal, Sangareddy District – 502 313, Telangana State, India
API Unit – II	Plot No. 15A/1, Phase III, IDA Jeedimetla, Qutubullapur Mandal, Medchal-Malkajgiri District, Hyderabad – 500 055, Telangana State, India.
API Unit – III	Sy.No.216, Bonthapally Village, Gummadidala Mandal, Sangareddy District – 502 313, Telangana State, India.
API Unit – IV	Plot No 8, J.N. Pharma City, Tadi Village, Parawada Mandal, Anakapalli District – 531 019, Andhra Pradesh, India.
API Unit – V	Plot No. 30, J. N. Pharma City, Parawada Mandal, Anakapalli District – 531 019, Andhra Pradesh, India

R&D Centers	Location
1	Plot No. 56, Road No. 5, ALEAP Industrial Area, Pragathi Nagar, Gajularamaram Village, Qutubullapur Mandal, Medchal-Malkajgiri District, Hyderabad – 500 072, Telangana State, India.
2	Survey Nos. 234/1 to 4 and 6 to 7, 235 /6 to 9 and 245/1 to 3, India Land Global Industrial Park, Hinjewadi Phase -1, Mulshi Taluka, Pune District – 411 057, Maharashtra State, India
3	H.No.5-33, Sy No.352, Plot No. 8, Road No. 2, ALEAP Industrial Area, Pragathi Nagar, Gajularamaram village, Qutubullapur Mandal, Medchal- Malkajgiri District, Hyderabad – 500 072, Telangana State, India.
4	Lab No: 11 & 13, Building No:1800, Sy No. 101,101/2 & 340, M. N. Park, Genome Valley, Lalgadi Malakpet Village, Shameerpet Mandal, Medchal- Malkajgiri District, 500 078, Telangana State, India.

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