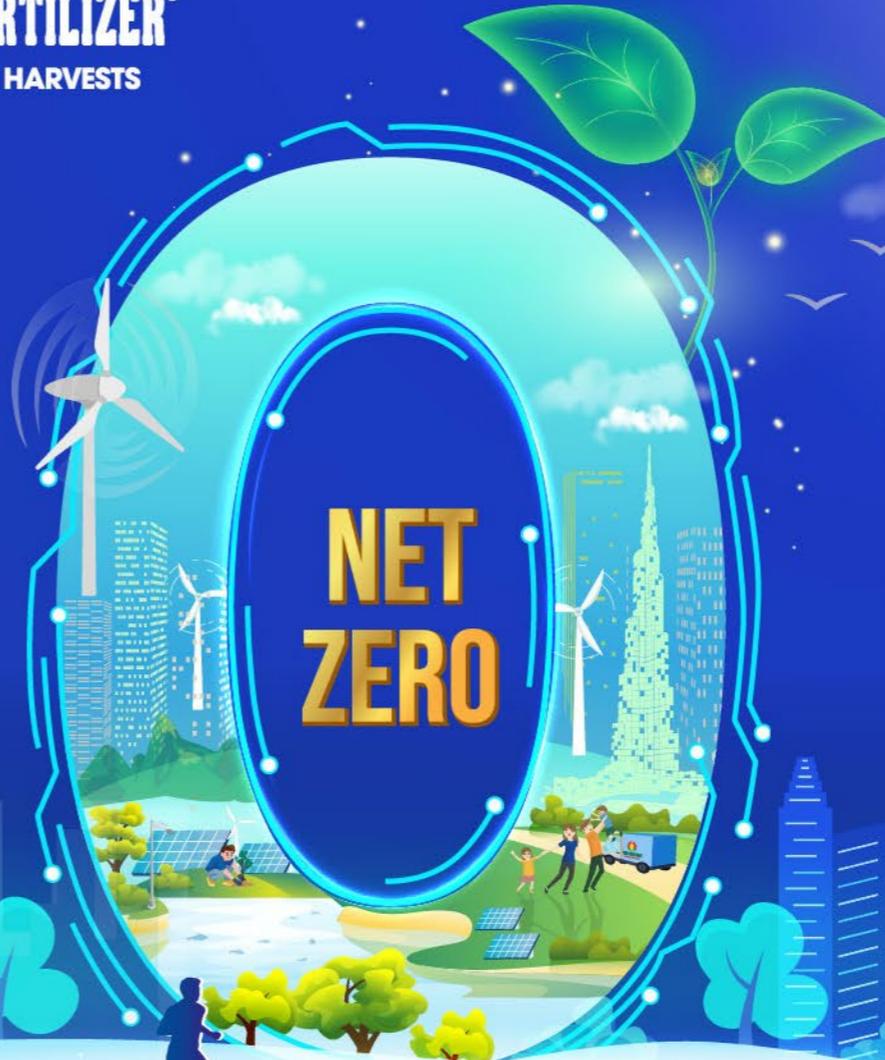




**CAMAU FERTILIZER®**  
FOR GOLDEN HARVESTS

Value Creation

**MORE SUSTAINABLE  
MORE PROSPEROUS**



SUSTAINABLE DEVELOPMENT REPORT **2023**

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# MESSAGE FROM THE CHAIRMAN OF THE BOARD



**"Creating sustainable and prosperous value" has been established as the guiding principle for all activities of PetroVietnam Ca Mau Fertilizer Joint Stock Company (PVCFC) in 2024. We are confident in our strong transformation, remarkable success, and our growing position as we aim to reach even greater heights.**

Production reached  
**955.6** thousand tons  
breaking the record in 2020

## Dear Shareholders, Partners, Customers, and all Employees!

On behalf of the Board of Directors, I am pleased to present the 2023 Sustainability Report of PVCFC. This report documents our continuous journey towards sustainable development since our establishment, transparently and comprehensively. It serves as a foundation for PVCFC to affirm our commitment to sustainable development for all stakeholders.

## Dear our Valuable readers!

As stated in the 2023 Annual Report, the market has experienced rapid changes in supply and demand balance, with geopolitical factors where global and domestic economic fluctuations affect each other. Never before have fertilizer prices shifted that continuously and quickly.

Nevertheless, PVCFC has made relentless efforts to overcome challenges and achieve impressive, comprehensive results across all operational aspects in 2023. We have not only increased production but also consumption levels. Production reached 955.6 thousand tons, breaking the record in 2022, while consumption soared to 1.267 million tons, the highest ever.

PVCFC's efforts have been recognized with numerous awards from prestigious national and international organizations. These accolades include: Operating safely and steadily for over 350 days; Ranking among the top 10% of energy-efficient factories worldwide; Commitment from the Board of Directors to uphold good corporate governance practices; Recognition as a "Enterprise for the community" and "Exemplary enterprise for employees"; Receipt of the Gender Equality certification using the GEARS tool. These awards serve as motivation for the Company to remain steadfast and dedicated on the path of development, contributing to a more sustainable and prosperous Vietnamese agriculture.

We recognize that, alongside the positive impacts on crop productivity and national food security, the production and use of chemical fertilizers can also have environmental consequences. Throughout our development journey, PVCFC has been mindful of our role and responsibilities towards the environment and society.

We have always prioritized "Sustainable Development" as a strategic goal, integrating it with our economic growth objectives.

# MESSAGE FROM THE CHAIRMAN OF THE BOARD (Cont.)

To enhance the positive impacts of sustainable development activities, PVCFC has established an ESG (Environmental, Social, and Governance) strategic orientation. Based on this framework, we have built a portfolio of strategic initiatives aligned with our sustainability focus areas. The implementation of these strategic initiatives will adhere to guiding principles across four dimensions: strategy, operation, finance, and compliance.

Our approach is grounded in ensuring a harmonious balance of interests among stakeholders, fostering environmental sustainability, and striving for the prosperity of the community and society as a whole.

PVCFC aims to focus all efforts on developing the Company to become one of the leading enterprises in the production and trading of fertilizers in Vietnam and Southeast Asia by 2030. Our perspective and development principles include:

## Perspective

- Providing nutritional solutions for crops, contributing to ensuring national food security.
- Developing the Company with a governance model aligning with international standards, supporting the government's "Tam Nông" policy (Nông dân - Farmer; Nông thôn - Countryside; Nông nghiệp - Agriculture) to transform agriculture into a modern, sustainable, and environmentally friendly sector.
- Developing the clean chemical and energy sectors in line with global energy transition trends.
- Expanding business and production must always be aligned with environmental regulations, enhancing governance capabilities and contributing to societal development to ensure sustainable progress.
- Committing to continuous efforts in reducing greenhouse gas emissions and contributing to climate change adaptation through the research of eco-friendly products and initiatives aimed at decreasing energy and raw material consumption.

While consumption soared to  
**1.267** million tons  
the highest ever

## Development Principles

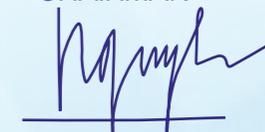
- Focus on sustainable development in the fertilizer sector, selectively invest in the agriculture value chain to create added value and enhance production efficiency.
- Commit to developing high-quality and eco-friendly products.
- Ensure trustworthiness to customers, positioning the Company as a trusted partner for farmers.
- Uphold social responsibility by harmonizing interests and sharing responsibilities with all stakeholders.

To enhance the positive impacts of sustainable development activities, PVCFC has established an ESG (Environmental, Social, and Governance) strategic orientation. Based on this framework, we have built a portfolio of strategic initiatives aligned with our sustainability focus areas. The implementation of these strategic initiatives will adhere to guiding principles across four dimensions: strategy, operations, finance, and compliance. Our sustainability solutions reflect PVCFC's commitment to responsibility towards the environment and society, contributing to the overarching goal of achieving Net Zero by 2050.

PVCFC warmly welcomes sharing, feedback and collaboration from our esteemed shareholders, customers, partners, employees, and the community to build the Company more sustainable and prosperous.

Best regards,

ON BEHALF OF THE BOARD OF DIRECTORS,  
CHAIRMAN



TRAN NGOC NGUYEN

# MESSAGE FROM THE GENERAL DIRECTOR

Entering 2024, we have focused on three strategic priorities: **Investment, Sustainable Development, and Digital Transformation**. With a solid foundation already in place, we believe that these development directions will lead to new breakthroughs, further enhancing PVCFC's position not only domestically but also in the international market.

## Dear Shareholders, Partners, Customers, and all Employees!

The year 2023 marked a year full of volatility and challenges for the global fertilizer market. We witnessed rapid changes in the supply-demand balance, impacts from geopolitical factors, as well as fluctuations in the global and domestic economy. These changes posed many challenges but also provided PetroVietnam Ca Mau Fertilizer Joint Stock Company (PVCFC) with opportunities to assert its position and core values.

“**Creating more sustainable and prosperous value**” is not just a slogan but a guiding principle throughout all our activities. PVCFC continually strives to turn this motto into reality, while committing to our shareholders, partners, and society for long-term sustainable and prosperous development.

Throughout the past year, amidst market fluctuations, we applied a volatility management mindset, closely following developments and flexibly adjusting strategies to ensure effective business operations. As a result, PVCFC has achieved impressive accomplishments, breaking all records in production and consumption. As of December 31, 2023, our production output reached 955.6 thousand tons, and consumption volume soared to 1.267 million tons—figures that are not only the result of the relentless efforts of all our employees but also evidence of the trust from our shareholders and partners placed in us.

One of the most outstanding highlights of 2023 was our significant expansion in the export market, which not only increased revenue but also reduced inventory pressure in a subdued domestic market. PVCFC's financial results showed total revenue reaching VND 13,172 billion, achieving 98% of the plan, and pre-tax profit of VND 1,255 billion, reaching 122.2% of the plan. These are results of perseverance and sound management strategy.

We understand that sustainable success comes not only from figures but also from our responsibility to society and the environment. Over 13 years of establishment and development, PVCFC has invested more than VND 500 billion in social projects, ranging from building houses, schools, and health stations to planting tens of thousands of trees to protect the environment. These efforts not only reflect our commitment to the community but are also part of PVCFC's sustainable development strategy.

Entering 2024, we have focused on three strategic priorities: **Investment, Sustainable Development, and Digital Transformation**. With a solid foundation already established, we believe that these development directions will lead to new breakthroughs, further enhancing PVCFC's position not only domestically but also in the international market.



On behalf of the Management Board, I would like to sincerely thank all our shareholders, partners, customers, and organizations for their continued support and companionship. I also extend my deepest gratitude to all employees for their dedication to the Company's development.

**Wishing you all health, happiness, and success.**  
**Best regards,**

GENERAL DIRECTOR

VAN TIEN THANH

# NOTABLE FIGURES IN 2023

## ECONOMY



Consolidated Profit Before Tax

Consolidated Total Revenue

Contribution to State Budget  
**426.81** Billion VND

Total Social Responsibility Budget  
**80** Billion VND

## ENVIRONMENT

Greenhouse Gas Emission Intensity Reduction  
**2.47%**  
Compared to 2022

“Top 10% Lowest Energy Consuming Factories in the World”  
Recognized by Haldor Topsoe

Energy Intensity Reduction  
**0.22%**  
Compared to 2022

## SOCIAL

**35.04%**  
Percentage of Local Workforce

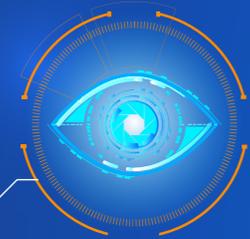
Total Training Hours  
**30,993**  
hours

Average Training Hours  
**23.5**  
hours/person/year

**0**  
Hours of Unsafe Labor

**0**  
Patients with Occupational Diseases

# VISION - MISSION - CORE VALUES



## VISION

Become a leading regional enterprise in the field of fertilizer production and trading.



## MISSION

Contribute to ensuring the supply of fertilizers and food security by pioneering the provision of nutritional solutions for crops.

## CORE VALUES

Every effort to conquer and develop, always preserving the complete value chain of "Pioneering - Responsibility - Care - Harmony."

Ensuring credibility, maintaining the trust and support of customers and the community on all fronts through social welfare activities, standing alongside farmers.

A working environment full of enthusiasm, attraction, professionalism, and dynamism, along with a strategy to develop production, business, selective investment, and optimal efficiency.



# 01

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**NET  
ZERO**

# OVERVIEW INFORMATION

## PETROVIETNAM CA MAU FERTILIZER JOINT STOCK COMPANY

<b>Stock code</b>	<b>DCM</b>
<b>Company name</b>	PETROVIETNAM CA MAU FERTILIZER JOINT STOCK COMPANY
<b>Abbreviation</b>	PVCFC
<b>Charter capital</b>	5,294,000,000,000 VND
<b>Business registration certificate number</b>	2001012298
<b>Website</b>	www.pvcfc.com.vn



### Headquarter



Block D, Industrial Zone Ward 1, Ngo Quyen Street, Ward 1, Ca Mau City, Ca Mau Province



(84 - 290) 3.819.000



(84 - 290) 3.590.501



### Ho Chi Minh City office



173-179 Truong Van Bang Street, Thanh My Loi Ward, Thu Duc City, Ho Chi Minh City



(84 - 28) 54.170.555



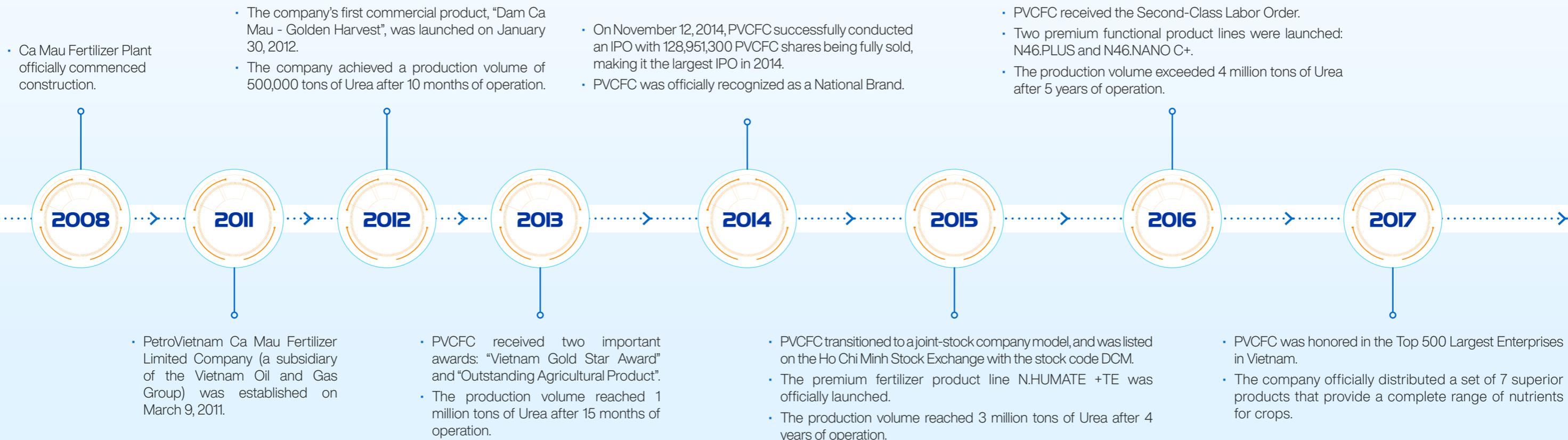
(84 - 28) 54.170.550



# THE PROCESS OF FORMATION AND DEVELOPMENT



From the early days of its establishment until now, after more than a decade of hardship to mature “**MORE SUSTAINABLE - MORE PROSPEROUS**”, PVCFC has increasingly affirmed its position as a leading brand in the field of fertilizer production and trading nationwide, contributing to ensuring food security and enhancing the value of Vietnamese agricultural products. The journey of more than a decade in building and developing PVCFC is a glorious journey with many proud historical milestones.



# THE PROCESS OF FORMATION AND DEVELOPMENT (Cont.)

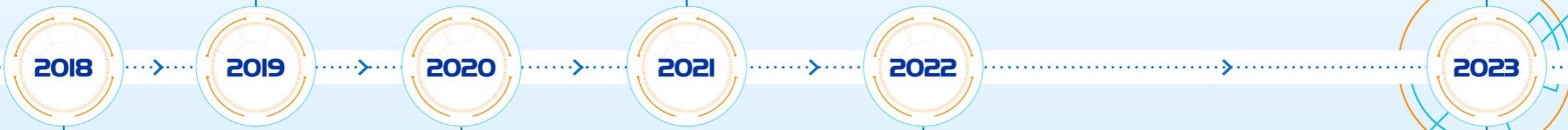
- PVCFC was awarded the “Prestigious Export Enterprise” title.
- PVCFC was honored in the Top 100 Sustainable Enterprises in Vietnam in 2019.
- A production record was set, reaching the target 36 days early with a total volume of 870,000 tons, reaching the 6 million ton Urea milestone.
- The DMS system was officially operated, helping to digitize business transactions.
- Celebrating the 10th anniversary of the company's establishment from 2011 to 2021.
- Recognized as one of the Top 50 best listed companies in Vietnam in 2021 by Forbes Vietnam magazine.
- Achieved the Top 500 Largest Enterprises in Vietnam (VNR500).
- For the first time, produced and launched the organic fertilizer product named OM CAMAU.
- Impressive business results with a record total revenue of VND 10,041.67 billion, achieving 110% of the plan. Profit before tax reached VND 1,956.27 billion, achieving 212% of the plan.

PVCFC successfully penetrated and developed the NPK market, with sales volume reaching **138.61 thousand tons**, in the year, equivalent to **166%** of 2022.

Overcoming numerous difficulties and economic fluctuations in 2023, PVCFC achieved impressive business results, exceeding the annual plan targets

with total revenue reaching VND **13,172 billion** and profit before tax reaching VND **1,255 billion**.

The Ca Mau Fertilizer Plant reached the milestone of **10 million tons of urea** production on December 7, 2023.



- The “Experience the High-Tech Products” program was first introduced to cooperatives and farmers.
- Urea production volume reached the 5 million ton milestone.
- Sales volume increased significantly for the first time. Self-sales exceeded the plan by 10%.

- The brand was expanded from “Dam Ca Mau” to “Phan bon Ca Mau”.
- Awarded the Vietnam National Brand Award 2020.
- Revenue reached a record of 7,700 billion VND.
- Export volume reached a record of over 300,000 tons, reaching the 7 million tons Urea milestone.

- Honored to receive the Vietnam Gold Star Award for the 4<sup>th</sup> time.
- Ranked in the Top 50 Best Listed Companies in Vietnam for the 2<sup>nd</sup> consecutive year according to the Forbes Vietnam announcement.
- Awarded the National Brand Award for the 5<sup>th</sup> consecutive year.
- The Ca Mau Fertilizer Plant reached the milestone of 9,180,800 tons of urea production.
- Revenue and profit recorded the highest levels ever:
  - Total revenue reached VND 16,240.76 billion, achieving 112% of the plan.
  - Profit before tax reached VND 4,596.31 billion, achieving 118% of the plan.

PVCFC launched the first artificial human project in the Vietnamese agricultural sector called “Anh Hai Ca Mau”, strongly affirming PVCFC's innovation and creativity to meet sustainable development goals in the new era.

The Ca Mau Fertilizer Plant was honored for the 2<sup>nd</sup> time with the Certificate of Safe and Stable Operation for more than 350 days at high capacity, recognized as being in the “Top 10% of plants with the lowest energy consumption worldwide” by Haldor Topsoe, and is one of the few high-capacity plants globally that did not undergo major renovation.

The Board of Directors of PVCFC was awarded the title “Board of Directors Committed to Good Corporate Governance Practices”

# BUSINESS LINES AND BUSINESS AREA

## BUSINESS LINES

Established on 09/03/2011, PVCFC is an enterprise with the main business lines and activities in: Manufacturing, trading and import-export of fertilizers, petrochemicals, primarily serving the agricultural sector with the mission of serving millions of farmers with high-nutrient fertilizer products suitable for various crops and soil types. Applying technology based on the petrochemical industry, PVCFC has enhanced its business efficiency, while contributing to transforming the agricultural economy of the country towards green and sustainable development.

Additionally, Petrovietnam Packaging Joint Stock Company (PPC), in which PVCFC holds a 51.03% stake, is a company operating in the manufacturing of plastic products, mainly producing and trading PP, PE packaging products; manufacturing and trading fertilizers and nitrogen compounds.



# BUSINESS LINES AND BUSINESS AREA (Cont.)

## BUSINESS OPERATING AREAS

With a vision to become a leading enterprise in the fertilizer production and trading sector, PVCFC always focuses on developing its business operations in an organic, safe and sustainable manner, contributing value to society and bringing benefits to the community. PVCFC brand is now present nationwide and has expanded its exports to international markets.

PVCFC's strategic target markets include the Mekong Delta region, the Southeast and Central Highlands regions of Vietnam, and Cambodia. Additionally, PVCFC is proactively expanding and penetrating domestic markets in the Central and Northern regions, as well as Southeast Asian, South Asian, and Latin American markets.



A notable highlight for PVCFC in 2023 is the expansion of fertilizer exports, contributing to increased revenue. PVCFC has intensified its export and international business activities as the domestic market has been sluggish with declining demand, in order to alleviate inventory pressure. As of 2023, PVCFC is present in 18 countries worldwide, with an export volume of 344,000 tons in 2023, accounting for around 26% of total sales volume; the export value reached \$136 million, making up about 25% of total fertilizer product revenue. Cambodia is the largest export market, accounting for over 60% of the export volume and value.



PRESENCE IN  
**18** countries

EXPORT VOLUME  
**344** thousand tons

EXPORT VALUE  
**136** million USD

# BUSINESS LINES AND BUSINESS AREA (Cont.)

## DISTRIBUTION NETWORK


**PVCFC currently owns an extensive distribution network that spans along the country from North to South, while also establishing a significant market share in Cambodia. In the coming years, PVCFC continues to actively expand its distribution network, increase brand recognition, enhance competitiveness, and contribute to the prosperous and sustainable development of the national agriculture sector.**



# PRODUCTS

## FOUR MAIN PRODUCT LINES UNDER THE CA MAU FERTILIZER BRAND

(Refer to the detailed content in the Annual Report, pages 29-33)

Link: <https://www.pvcfc.com.vn/Data/Sites/1/media/bao-cao-thuong-nien/2023/b%CAo-c%CAo-th%C6%B0%E1%BB%9Dng-ni%C3%AAn-2023.pdf>



After more than a decade of growth through challenges, with the mission of perfecting a comprehensive nutritional product line for crops, PVCFC is now a leading reputable brand in the field of fertilizer production and business across the country. PVCFC brings superior high-quality products to farmers, serving national agriculture, contributing to food security, and enhancing the value of Vietnamese agricultural products.

The current product lines under the PVCFC brand include single fertilizers, NPK fertilizers, and high-quality organic fertilizers with high nutrient content, applying modern technology with numerous superior benefits. These products have always been the top choice of farmers in every crop season, bringing them **"Golden harvest"** while aiming for sustainable and prosperous development for the community.



**BIO-MINERALS & MICROBIOLOGY**



**SINGLE FERTILIZERS**



**COMPLEX FERTILIZER**



**HIGH-GRADE NPK FERTILIZER**

# PRODUCTS (Cont.)

## FOUR MAIN PRODUCT LINES UNDER THE CA MAU FERTILIZER BRAND (Cont.)

### KEY PRODUCTS OF EACH LINE

(Refer to the detailed content in the Annual Report, pages 29-33)

Link: <https://www.pvcfc.com.vn/Data/Sites/1/media/bao-cao-thuong-nien/2023/b%C3%A1o-c%C3%A1o-th%C6%B0%E1%BB%9Dng-ni%C3%AAn-2023.pdf>



N.HUMATE+TE



UREA BIO CA MAU



PREMIUM ORGANIC FERTILIZER OM CAMAU



CA MAU FERTILIZER



N46.PLUS CA MAU NITROGEN



DAP CA MAU



SA CA MAU (AMMONIUM SULPHATE)



POTASSIUM CA MAU



# PRODUCTS (Cont.)

## FOUR MAIN PRODUCT LINES UNDER THE CA MAU FERTILIZER BRAND (Cont.)

### KEY PRODUCTS OF EACH LINE (Cont.)



**NPK CA MAU GROWTH**



**CA MAU NPK PRODUCTIVITY - QUALITY**



**NPK CA MAU FOR RICE PLANTS**



**NPK CA MAU MULTI-PURPOSE**



**CA MAU NPK FOR FRUIT TREES**



Ca Mau NPK Polyphosphate, featuring a high nitrogen content of over 20%, is suitable for various growth stages of many crops and different soil types. Ca Mau NPK Polyphosphate is produced using liquid urea and advanced technology from the Espindesa licensor (Spain). With this technology, each fertilizer granule contains uniform nutritional components, including a full range of macro, secondary, and micronutrients, suitable for all growth stages of crops, ensuring even and effective absorption. Notably, it guarantees quick solubility without compaction or caking, allowing for complete dissolution after application, leaving no residue and thereby optimally reducing soil pollution.

The introduction of the NPK CaMau product lines - Polyphosphate technology - marks a significant milestone in PVCFC's mission as a pioneer in the fertilizer production and business sector. It completes the company's nutritional solutions for crops, contributes to diversifying the supply of high-quality fertilizers, and accompanies farmers in sustainable farming, creating prosperous values for Vietnam's agriculture.





Despite facing many difficulties and challenges due to market fluctuations, 2023 was considered a year of effective operation for Ca Mau Fertilizer, with impressive and comprehensive results. These achievements are summarized in the following 10 standout events:

## HIGHLIGHT EVENTS OF 2023



# 10 HIGHLIGHT EVENTS OF 2023 (Cont.)



## PVCFC REACHES 10 MILLION TONS OF UREA PRODUCTION



PVCFC continues to affirm its position as a leading reputable fertilizer producer in Vietnam as the Ca Mau Fertilizer Plant officially reached a production milestone of 10 million tons of urea on December 7, 2023.

Each year, PVCFC steadily supplies the market with 860,000 tons of urea for both domestic consumption and export. PVCFC is currently the only domestic producer capable of manufacturing granular urea, suitable for a wide range of crops and soil types, making a significant contribution to the goal of ensuring national food security.



## PVCFC SUCCESSFULLY PENETRATES AND DEVELOPS THE NPK MARKET



In 2023, despite facing numerous challenges, PVCFC successfully achieved all assigned targets and tasks. Notably, PVCFC made significant strides in penetrating and developing the NPK fertilizer market, with annual sales reaching 138.61 thousand tons, representing 166% of the volume sold in 2022.

Aiming to maintain its market share in key markets and expand into new ones, PVCFC continuously adjusted its sales policies and implemented various sales promotion programs throughout 2023. Among these efforts, the "Golden Harvest" program played a crucial role in spreading NPK products widely across cultivation areas and reaching farmers throughout the country.



## PVCFC RECEIVES SECOND CERTIFICATE FOR STABLE CONTINUOUS OPERATION FOR OVER 350 DAYS



On October 31, 2023, the Ca Mau Fertilizer Plant was officially awarded the Certificate of Record for Safe and Stable Operation for over 350 days at high capacity by Haldor Topsoe. This marks the second time that the Ca Mau Fertilizer Plant has received this record certificate from the European licensor.

Throughout its 12 years of operation, the Ca Mau Fertilizer Plant has been honored by the European licensor, Haldor Topsoe, as being among the "Top 10% of plants with the lowest energy consumption in the world." It is also part of the elite 10% of high-capacity plants globally that have not undergone major renovations.



## PVCFC SIGNED AGREEMENT TO ACQUIRE STAKE IN HAN-VIET FERTILIZER COMPANY (KVF)



PVCFC successfully completed the acquisition (M&A) of Han-Viet Fertilizer Company from TKG Taekwang & Huchem Group (South Korea) and officially took over from April 1, 2024.

With the addition of KVF, the company will gain access to a highly competitive source of raw materials to supply the Plant. In addition, the company will have a new NPK brand associated with KVF, with a projected NPK production capacity of 360,000 tons per year, thereby diversifying the products supplied to the market, expanding the market, and increasing market share.

# 10 HIGHLIGHT EVENTS OF 2023 (Cont.)

05

## PVCFC BOARD OF DIRECTORS WAS AWARDED "BOARD OF DIRECTORS COMMITTED TO GOOD CORPORATE GOVERNANCE PRACTICES"



At the annual forum (AF6) of the Vietnam Institute of Directors (VIOD) organized on November 22, 2023, the Board of Directors of PVCFC was honored with the award for "Board of Directors Committed to Good Corporate Governance Practices." VIOD recognized Boards of Directors with outstanding achievements, meeting strict criteria, and PVCFC was among the Top 12 exceptional companies, surpassing over 500 other listed companies' boards in the Vietnamese market.

This set of criteria evaluates the most effective Board of Directors' performance through their role in safeguarding shareholders' interests, creating value for stakeholders, adhering to principles of effective corporate governance, and contributing to sustainable development and climate change mitigation.

07

## TWO CONSECUTIVE YEARS PVCFC ACHIEVED "ENTERPRISE FOR THE COMMUNITY" AWARD



On November 15, 2023, for the second consecutive time, Ca Mau Fertilizer was honored as a "Community-Oriented Enterprise" at the Saigon Times CSR 2023 program. This award has provided motivation for the company to remain steadfast and committed on its path of development, contributing to a more sustainable and prosperous Vietnamese agriculture.

With 12 years in the market, PVCFC is recognized as one of the most proactive enterprises, leading in the fulfillment of social and community responsibilities, and caring for its employees. Throughout its development journey, PVCFC has dedicated over VND 400 billion to community-focused activities.

06

## THREE CONSECUTIVE TIMES PVCFC RANKED AMONG THE "TOP 50 BEST LISTED COMPANIES"



With its brand position and outstanding capabilities, PVCFC was listed among the "Top 50 Best Listed Companies in 2023" by Forbes Vietnam. This marks the third time PVCFC has been honored on this list.

To achieve this result, PVCFC passed several evaluation stages by Forbes Vietnam. In the preliminary round, PVCFC met the conditions of profitability in 2022, with a minimum revenue and market capitalization of 500 billion VND. In the subsequent round, PVCFC was quantitatively scored on five criteria: compound growth rate of revenue, profit, ROE, ROC, and EPS growth. Forbes Vietnam then conducted qualitative research to assess PVCFC's sustainability level. In 2022, PVCFC achieved record revenue and profit levels, with 16,241 billion VND and 4,596 billion VND, representing increases of 62% and 135%, respectively, compared to 2021.

08

## PVCFC HONORED WITH GENDER EQUALITY CERTIFICATION USING TO GEARS TOOL



As an active member of the Vietnam Business Coalition for Women's Empowerment (VBCWE), and with practical achievements in promoting gender equality, PVCFC has become one of the first Vietnamese companies to receive gender equality certification using the GEARS tool. This tool and certification were developed by the Australian Government's Workplace Gender Equality Agency (WGEA) and have been adapted by VBCWE to suit the Vietnamese context.

VBCWE has recognized that PVCFC provides an effective, safe, and happy living and working environment. There is no discrimination, and everyone is confident, autonomous, professional, and united.

# 10 HIGHLIGHT EVENTS OF 2023 (Cont.)



## PVCFC RECEIVES THE "EXEMPLARY ENTERPRISE FOR EMPLOYEES" AWARD

On October 29, 2023, the "Exemplary Enterprises for Employees" awards ceremony took place in Hanoi. Ca Mau Fertilizer was one of three units under the Vietnam Oil and Gas Group (PVN) to be recognized and honored at this special event.

The "Exemplary Enterprises for Employees" title aims to commend and honor companies that have made significant efforts to improve the working environment for their employees. PVCFC was highly rated on stringent criteria established by labor and union experts, which ensure a close reflection of the company's actual practices in employee management and benefits. These criteria include aspects such as income, training, working environment, social welfare, and activities that support both the physical and mental well-being of employees.



## "ANH HAI CA MAU" – APPLYING ARTIFICIAL INTELLIGENCE IN BUSINESS MANAGEMENT AND MARKETING

At the 2023 year-end summary conference, PVCFC officially launched the first artificial intelligence project in Vietnam's agricultural sector, named "Anh Hai Ca Mau." This project has affirmed the company's position as a pioneering brand, leading in the application of digital technology and being at the forefront of implementing Martech in Ca Mau Fertilizer's communication and sales promotion activities.

"Anh Hai Ca Mau" will enhance customer experiences, thereby strengthening customer engagement and increasing the brand image of Ca Mau Fertilizer in the minds of consumers.



# NOTABLE TITLES AND AWARDS

Over more than 12 years of serving the nation's agriculture, PVCFC has witnessed many ups and downs; however, the more challenging the circumstances, the more resilient the company has become, and its power has been deeply embedded in sustainability. Each step forward by PVCFC marks a proud milestone. In 2023, PVCFC was continually honored and awarded prestigious accolades. These recognitions are not only a well-deserved acknowledgment of the company's relentless efforts but also serve as motivation for PVCFC to reach new heights and further expand on its pioneering journey to create a "MORE SUSTAINABLE, MORE PROSPEROUS" agriculture.



THIRD CONSECUTIVE TIME HONORED

**TOP 500**

LARGEST ENTERPRISES IN VIETNAM

by Vietnam Report.



**TOP 10** BEST CORPORATE GOVERNANCE ENTERPRISES OF 2023 at the 2023 Listed Companies Awards organized by HoSE.

THIRD CONSECUTIVE TIME **TOP 50** BEST LISTED COMPANIES by Forbes Vietnam.

TITLE OF "OUTSTANDING ENTERPRISE FOR EMPLS IN 2023" awarded by the Vietnam General Confederation of Labor in collaboration with the Ministry of Labor, Invalids and Social Affairs, and the Vietnam Chamber of Commerce and Industry (VCCI).

SECOND CONSECUTIVE TIME ACHIEVING "COMMUNITY-ORIENTED ENTERPRISE" awarded by Saigon Times Group.

RECEIVED GENDER EQUALITY CERTIFICATION USING THE GEARS TOOL awarded by VBCWE.

# CORPORATE CULTURE


**PVCFC identifies culture as the driving force, guiding and paving the way for business renewal. Along with “change management,” which is becoming a cultural norm in corporate governance, the important cultural values contribute to the sustainable and prosperous development of PVCFC. In 2016, PVCFC initiated the “PVCFC Culture Renewal” project, progressing from foundational culture to the development of a distinctive culture with the “PVCFC Culture Development” project, which has been ongoing since 2022.**



The teams participated under the theme “Value Creation”.

Building a work environment with a unified goal and a solid cultural foundation, PVCFC’s culture has always been embraced and supported by the leadership and all employees through activities, training, and workshops such as **“Board Governance and Governance through Culture”**; the issuance and implementation of the **“Code of Conduct (COC)”**; and living and practicing the **“7 Habits of Highly Effective People”** with the motto “Always Renew Every Day,” which is being effectively applied throughout the company.

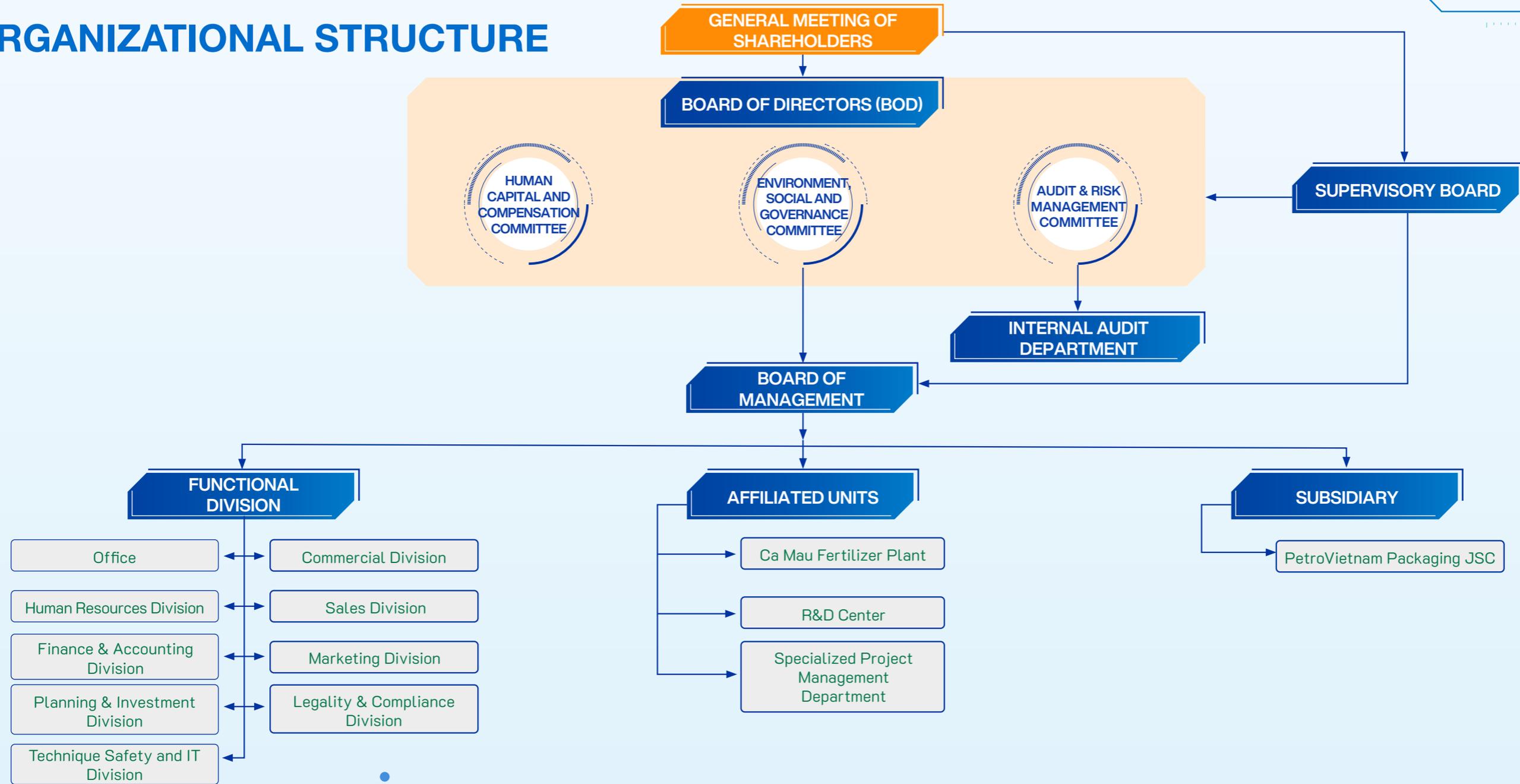
PVCFC provides an effective, safe, and happy living and working environment. Every individual is given the opportunity to showcase their abilities, without discrimination on gender, background, family circumstances, or professional skills. Employees are confident, autonomous, and are fairly evaluated based on their job nature and performance outcomes.

The culture of unity, sharing, and collaboration has been continuously fostered over many years, forming and creating PVCFC’s culture with four core values: **“Pioneering - Responsibility - Care - Harmony.”**



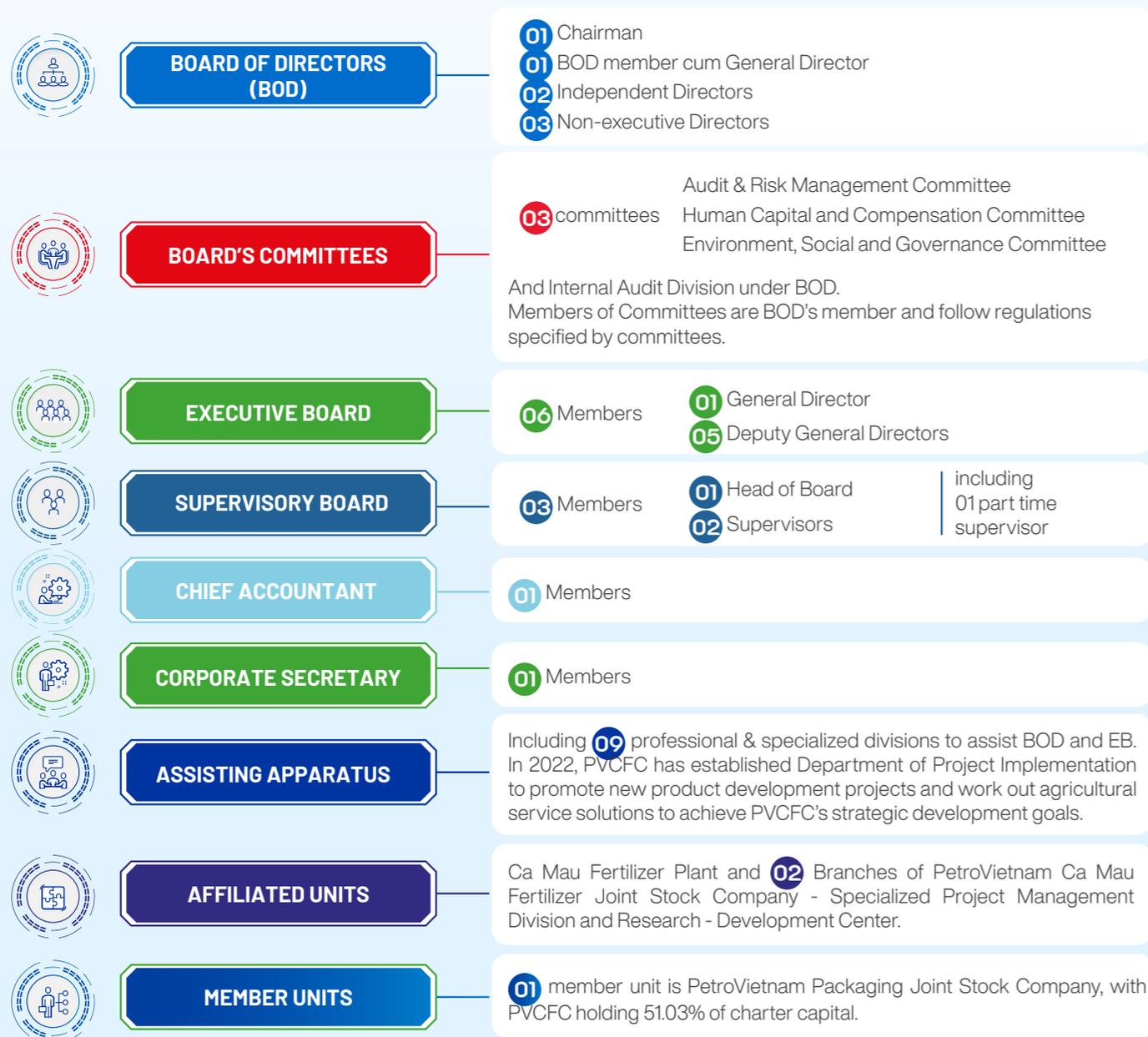
# GOVERNANCE MODEL AND MANAGEMENT STRUCTURE

## ORGANIZATIONAL STRUCTURE



# GOVERNANCE MODEL AND MANAGEMENT STRUCTURE (Cont.)

## ORGANIZATIONAL STRUCTURE (Cont.)



## BUSINESS MODEL AND ACTIVITIES

### GOVERNANCE MODEL

Petrovietnam Ca Mau Fertilizer Joint Stock Company, formerly known as Petrovietnam Ca Mau Fertilizer One-Member Limited Liability Company, is an affiliated unit of the Vietnam Oil and Gas Group (Petrovietnam). It was established under Decision No. 474/QĐ-DKVN dated March 9, 2011, by the Members' Council of Petrovietnam. In January 2015, the company officially transitioned to the joint-stock company model and was renamed Petrovietnam Ca Mau Fertilizer Joint Stock Company.

Throughout its operational history, the company's organizational structure has evolved over different periods. The Petrovietnam Ca Mau Fertilizer Joint Stock Company has implemented a project to reform and restructure its organizational framework toward a streamlined, multifunctional, and efficient model that aligns with current realities. This restructuring aims to enhance the effectiveness and efficiency of business operations, adapt to the company's circumstances, and optimize management levels.

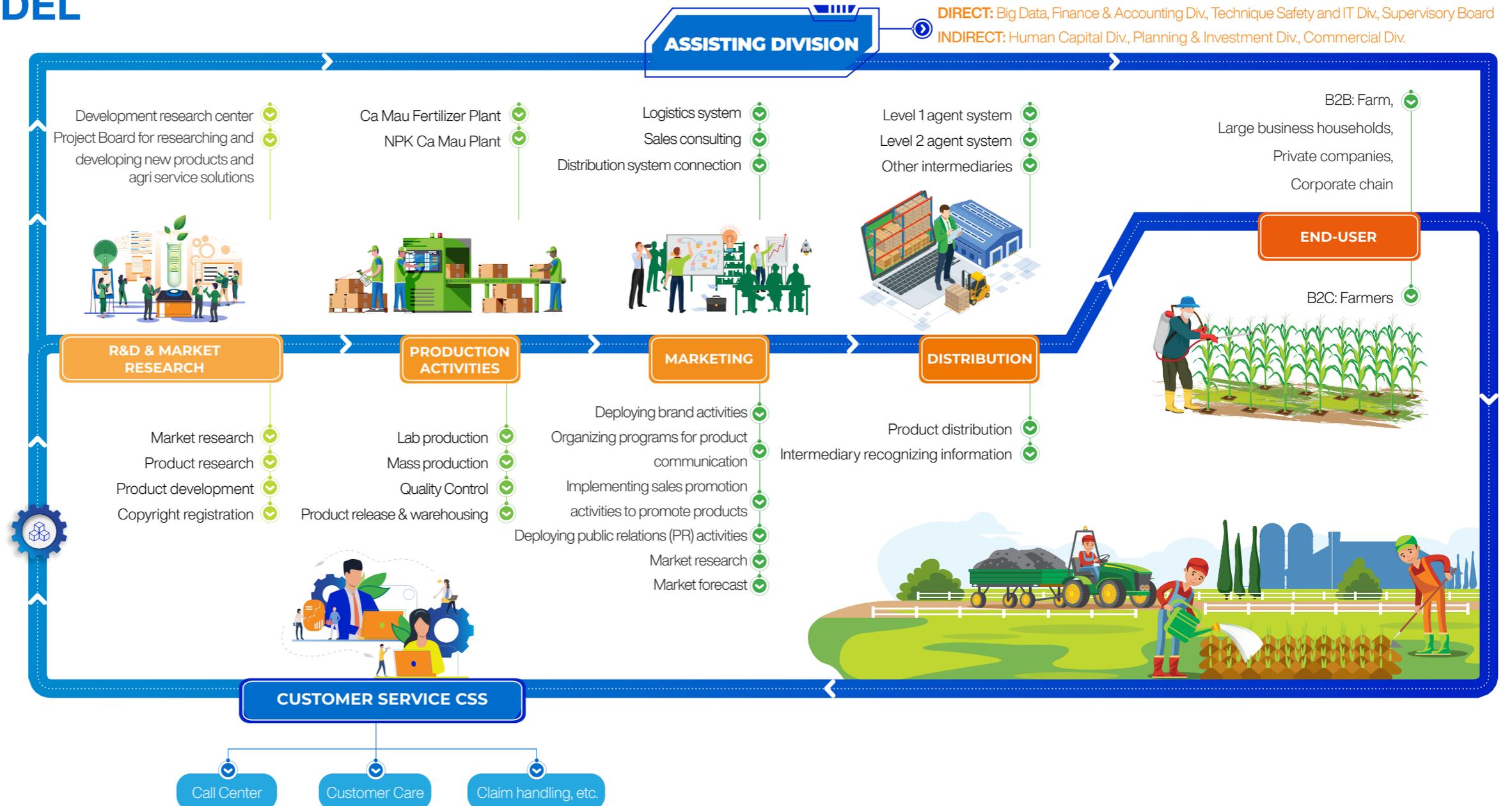


# BUSINESS MODEL AND ACTIVITIES (Cont.)

## SUPPLY CHAIN MODEL

The impacts of PVCFC's production and business activities on environmental and social issues extend beyond the operations within the plant. PVCFC recognizes the environmental and social impacts generated from the production and supply of raw materials, chemicals, and services that support its business activities. Therefore, in the process of selecting and evaluating suppliers, PVCFC does not merely choose based on traditional criteria such as Financial Strength, Production Capacity, and After-Sales Service.

The Board of Directors is committed to ensuring that PVCFC's supplier evaluation and selection process always considers environmental and social factors to achieve long-term development, aligned with PVCFC's strategic growth orientation. These factors include the actual and potential impacts of suppliers on the environment and society. The supplier selection process always strives to balance economic, environmental, and social factors (ESG). The Board of Directors has decided to select suppliers that comply with legal requirements regarding environmental and social sustainability (ESG).



# KEY BUSINESS AREAS

PVCFC is an enterprise whose main functions and business activities include the production, trading, import-export of fertilizers and petrochemical products, primarily serving the agricultural sector. With the mission to serve millions of farmers, PVCFC provides high-nutrient fertilizers suitable for a wide variety of crops and soil types. By applying technological advancements based on the petrochemical industry, PVCFC enhances business efficiency while contributing to the transformation of the national agricultural economy towards sustainable green development.

PVCFC has made significant and positive contributions over the years:

## CONTRIBUTION TO FOOD SECURITY

PVCFC not only supplies fertilizers to increase crop yields but also helps ensure a stable food supply for the entire country.

## RURAL ECONOMIC DEVELOPMENT

The effective use of fertilizers aids farmers in increasing their income, improving their livelihoods, and promoting the development of rural areas.

## APPLICATION OF TECHNOLOGY IN PRODUCTION

PVCFC applies modern technology in production, enhancing product quality, minimizing negative environmental impacts, and creating high-quality fertilizers tailored to various crops and soil conditions.



PVCFC recognizes the importance of sustainable development. Alongside providing high-quality fertilizers that contribute to increasing agricultural productivity and improving people's lives, we also committed to minimizing negative environmental impacts. The company has been investing in research and development of organic fertilizers and high-quality fertilizers, while also implementing training programs for farmers to enhance their knowledge and experience in using fertilizers effectively, efficiently, and economically. Thereby, PVCFC not only contributes to the development of the agricultural sector but also protects the environment and contributes to a sustainable future for future generations.



### COMMUNITY INVESTMENT

PVCFC participates in community activities such as building schools, supporting people in difficult areas, constructing charity houses, and planting trees for reforestation.



### SUSTAINABLE DEVELOPMENT

The company aims for long-term sustainable development, balancing economic benefits with environmental and social protection.



### PRODUCTION

Innovating and upgrading machines to reduce energy consumption per unit of product and minimize CO<sub>2</sub> emissions into the environment.



### RESEARCH AND DEVELOPMENT

Developing fertilizers that provide high efficiency for farmers, increase crop yields, and improve pest resistance while making a positive and effective contribution to reducing greenhouse gas emissions. Examples include slow-release fertilizers (N46 Plus), resistance-inducing fertilizers (N46.True), bio-fertilizers (N46 Rich), microbial fertilizers (Urea BiO), and organic fertilizers.



### BUSINESS OPERATIONS

Guiding farmers to apply new technical advancements and adopt sustainable agricultural practices; providing training and technical support to ensure proper fertilizer use, reducing the amount of fertilizer needed and lowering investment costs; and supporting the agricultural product consumption.

# 02

## SUSTAINABLE DEVELOPMENT FRAMEWORK

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# PVCFC'S BUSINESS CONTEXT

In recent years, the global fertilizer industry has faced significant challenges and opportunities due to the impact of major international events, notably the COP26 conference held in 2021, where Vietnam committed to achieving net-zero emissions by 2050.

In 2023, the global economy faces numerous difficulties and challenges. The ongoing Russia-Ukraine conflict, along with newly erupted tensions in the Middle East and the Red Sea in the latter months of the year, have disrupted supply chains (resulting in extended shipping times and the bankruptcy of many suppliers due to rising input costs), leading to increased oil prices and shipping costs.

The COP events serve as crucial forums where nations discuss and reach agreements on climate action, promoting global commitments to reduce emissions and enhance efforts to adapt to climate change. Notably, COP 26 in 2021 was a significant event for Vietnam, where the government made several important commitments, including: (1) a pledge to achieve net-zero emissions by 2050; (2) an increase in the use of renewable energy; (3) enhanced investment in green finance and clean technology; and (4) a commitment to reduce methane emissions by 30% by 2030. At COP 27, countries continued their commitments to reduce carbon emissions and update their national climate plans. At COP 28, which will take place in November 2023, nations are expected to reaffirm their commitments to emission reductions, update their national climate strategies, and nationally determined contributions (NDCs) to support the implementation of these pledged goals.

The global fertilizer industry in general and particularly in Vietnam, is currently facing significant challenges and opportunities. In the aftermath of the Covid-19 pandemic, the agricultural sector has demonstrated its value and position as a foundation for the economy, ensuring supply and food security. The increasing population and demand for food, along with the growth of the agricultural sector, will drive the demand for fertilizers. Research into and application

of new fertilizer production technologies, as well as smart solutions for crop nutrition management, can enhance fertilizer efficiency and reshape market demand. Additionally, the trend toward green consumption and consumers' growing interest in organic and sustainable agricultural products will also impact the fertilizer industry.

In addition, the European Union implemented the Carbon Border Adjustment Mechanism (CBAM) in 2023, establishing carbon taxes on goods exported to this market based on greenhouse gas emissions intensity during production. This regulation requires the fertilizer industry to enhance transparency and reduce CO<sub>2</sub> emissions. Furthermore, guidelines from industry associations such as the International Fertilizer Association (IFA) continuously encourage fertilizer companies worldwide to focus on adopting new fertilizer production technologies aimed at optimizing performance and sustainability.

Lastly, it is important to highlight the trend among fertilizer companies worldwide toward the production and application of green hydrogen, utilizing clean raw materials and energy. There is a growing focus on efficient and sustainable fertilizer use, organic fertilizers, and smart fertilization solutions to optimize nutrient supply for crops while minimizing environmental impacts.

Domestically, we are also affected by regulations on reducing greenhouse gas emissions, greenhouse gas inventories, as well as the disclosure of information related to the environment and society. This requires us to continuously improve our production and management processes to effectively meet emission reduction requirements and to disclose this information transparently. In the Mekong Delta region, the government issued Decision 1490/QĐ-TTg on November 27, 2023, approving the project "Sustainable Development of One Million Hectares of High-Quality, Low-Emission Rice Cultivation Linked to Green Growth in the Mekong Delta by 2030". This initiative aims to promote green development and emission reductions, facilitating businesses' participation in sustainable development projects. Additionally, the government has enacted Decree 06/2022/NĐ-CP, which regulates greenhouse gas emission reduction and ozone layer protection in accordance with commitments made at COP26.



 **In this context, in 2023, PVCFC continues to enhance its activities in researching new products aimed at improving soil health, reducing losses, and increasing the economic efficiency of fertilizer use, such as the N46 Plus product line. The company is also focusing on energy-saving research and practices at its facilities to reduce CO<sub>2</sub> emissions, as well as investigating green hydrogen production technologies for application in fertilizer manufacturing.**

**Despite facing many challenges, we understand and take pride in being part of this trend, with a strong commitment to a sustainable future for the agricultural sector.**

# COMPLIANCE WITH ENVIRONMENTAL AND SOCIAL REGULATIONS

## COMPLIANCE WITH ENVIRONMENTAL REGULATIONS

The company has received ISO 14001:2015 certification and strictly adheres to environmental protection laws, including waste and air pollution control regulations, throughout its operations. PVCFC is committed to complying with regulations issued by the Ministry of Natural Resources and Environment regarding water resources, incident response, and related technical standards in the industry.

In addition, the company has established a Quality, Safety, and Environmental Policy, as well as regulations and procedures to guide the implementation of monitoring and testing activities for environmental control in production areas and other locations where the company operates. These policies, regulations, and procedures are widely shared with all employees to enhance their awareness of responsibility towards the community and the living environment.

The company collaborates and coordinates with experienced businesses and organizations to evaluate and improve environmental conditions within the enterprise.

All emissions from the plant are closely monitored and minimized to the greatest extent possible, ensuring that their quality consistently meets permissible standards before being released into the environment, as detailed below:

In 2023, the Ca Mau Fertilizer Plant maintained strict control, preventing any serious environmental incidents in the plant area. PVCFC consistently meets the requirements, policies, and regulations of environmental protection laws, contributing to environmental protection funds to promote the company's commitment to environmental responsibility and sustainable community engagement.



## COMPLIANCE WITH SOCIAL REGULATIONS

We are committed to diligently adhering to all legal regulations in Vietnam related to labor, social insurance, and occupational health and safety. These regulations include the 2019 Labor Law and relevant decrees and circulars pertaining to working conditions, labor relations, as well as issues related to retirement age and minimum wage. We ensure that all provisions regarding employment contracts, working hours, rest periods, and tasks affecting employee health are fully complied with.

In addition, we comply with regulations on social insurance, health insurance, and unemployment insurance to ensure the rights and social welfare of all employees. We implement the provisions of the 2014 Social Insurance Law and its guiding decrees, including requirements for mandatory social insurance, health insurance, and unemployment insurance. Detailed circulars regarding the rights, obligations, and processes related to these types of insurance are strictly applied in the company's operations.

We also place great emphasis on ensuring occupational safety and hygiene, in compliance with the 2015 Occupational Safety and Health Act and related decrees and circulars. We implement technical safety inspection processes, conduct safety training for employees, and monitor the working environment to ensure a safe workplace. Additionally, we strictly adhere to regulations regarding occupational accident insurance, occupational disease policies, and compensation for employees working in hazardous conditions or environments. All these measures are designed to maximize safety and benefits for employees within the company.



Banner for the event on August 16, 2024: Ca Mau Fertilizer Plant Shutdown for Comprehensive Maintenance.

# STAKEHOLDERS ENGAGEMENT



PVCFC places a strong emphasis on building and developing cooperative relationships, sharing, and aligning interests with stakeholders. To achieve this, we actively seek to understand the aspirations and concerns of stakeholders through various interaction channels and methods. This approach allows us to identify and assess the priorities of stakeholders and develop plans to implement activities that meet their needs.

## PROCESS OF IDENTIFYING AND ASSESSING STAKEHOLDER PRIORITIES



**Identify Key Stakeholders:** PVCFC identifies all stakeholders who can be individuals or organisations who has an interest that is affected or could be affected by the PVCFC's activities. The stakeholders identified by PVCFC include:

- Shareholders – Investors
- Partners
- Customers
- Suppliers
- Community and Society
- Banks/Creditors
- Government and State Agencies
- Media
- Employees

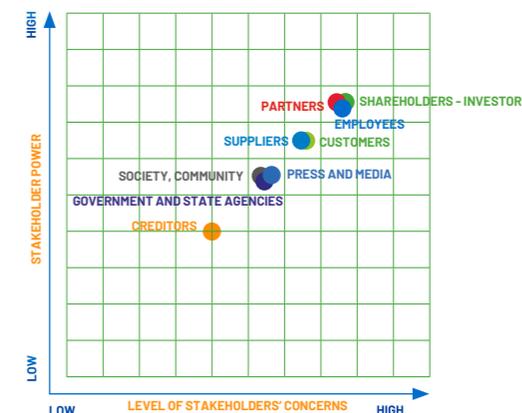
**Gather Feedback from Stakeholders:** PVCFC interacts with stakeholders through various methods such as surveys, interviews, periodic dialogues with employees; farmer and distributor workshops; and organizing annual or extraordinary shareholder meetings, either in-person or online via <https://www.pvcfc.com.vn> website with full contact information, including the headquarters address, representative office, and phone numbers, to collect feedback, concerns, and expectations. Additionally, the company has other applications such as the **2Nong mobile application (or website 2nong.vn) to provide market information, agricultural input prices, cultivation techniques, fertilizer application guidance, purchasing instructions, and customer care.**

**Prioritize Stakeholder Concerns:** We analyze the input information collected from stakeholders to identify common themes, trends, and priorities. Then, we base our priority assessment on factors such as the importance of the issues, their impact on PVCFC and stakeholders, urgency, and feasibility, to determine the level of priority for stakeholder concerns.



**Develop an Action Plan:** After identifying priorities, we implement action plans to address the prioritized concerns. This involves clearly outlining specific objectives, strategies, and timelines to tackle stakeholder issues. Additionally, we assign responsibilities to relevant parties and allocate appropriate resources to ensure effective implementation.

### STAKEHOLDER PRIORITIZATION MATRIX



**Engage and Communicate About Actions:** PVCFC transparently and regularly communicates the results of the prioritization process and action plans to stakeholders. This ensures alignment between the prioritized concerns of stakeholders and the organization's objectives.

**Monitor and Evaluate:** PVCFC continuously monitors and evaluates the effectiveness of stakeholder engagement efforts as well as the progress made in addressing stakeholder priorities.

# STAKEHOLDERS ENGAGEMENT (Cont.)

## APPROACHES TO STAKEHOLDER ENGAGEMENT



### SHAREHOLDERS INVESTORS



### PARTNERS

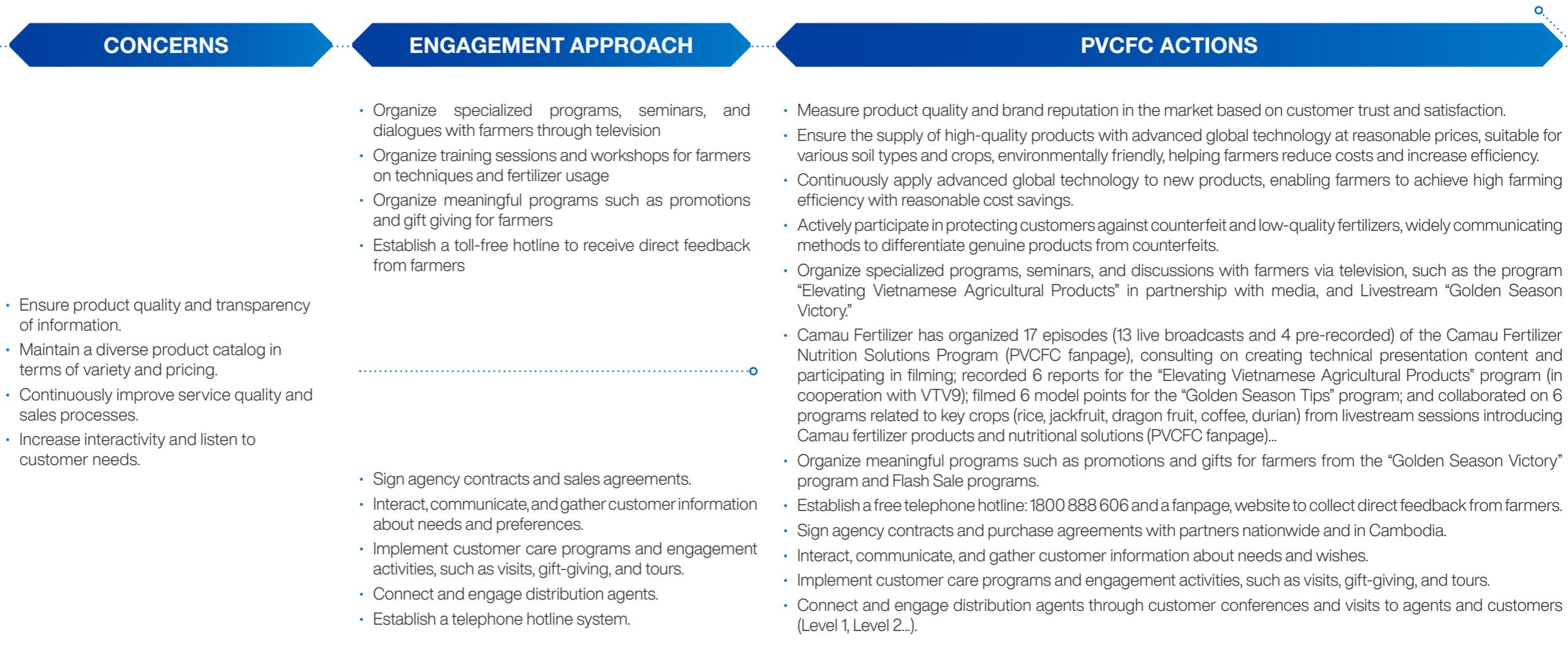


### SUPPLIERS

	CONCERNS	ENGAGEMENT APPROACH	PVCFC ACTIONS
SHAREHOLDERS INVESTORS	<ul style="list-style-type: none"> <li>Ensure effective use of investment capital;</li> <li>Ensure information is public, transparent, and provided in a timely manner;</li> <li>Stabilize and increase the value of the company and stock price on the stock exchange;</li> <li>Continuously enhance corporate governance capacity;</li> <li>Treat shareholders and investors equally, ensuring their rights and interests.</li> </ul>	<ul style="list-style-type: none"> <li>Organize annual or extraordinary shareholder meetings as required by law.</li> <li>Receive inquiries via email, fax, or directly at phone number: 0290 3819 000, website: pvcfc.com.vn, investor relations section: <a href="https://www.pvcfc.com.vn/quan-he-dau-tu">https://www.pvcfc.com.vn/quan-he-dau-tu</a>.</li> <li>Conduct annual investor conferences to report the company's production and business situation to shareholders and investors.</li> <li>Disclose information on the company's website: <a href="http://www.pvcfc.com.vn">www.pvcfc.com.vn</a>.</li> <li>Participate in investor forums and workshops to share information and investment opportunities.</li> </ul>	<ul style="list-style-type: none"> <li>Fully comply with information disclosure procedures as regulated by the Ministry of Finance to ensure timely information provision for shareholders and investors, promoting transparency in business operations.</li> <li>Information exchange and disclosure must be fair, ensuring equal investment opportunities for all investors.</li> <li>The company successfully held the 2023 Annual General Meeting of Shareholders on June 12, 2023.</li> <li>The meeting was attended by shareholders and individuals authorized to represent 80.71% of the total voting shares.</li> <li>The company successfully organized an Extraordinary General Meeting on January 10, 2024.</li> </ul>
PARTNERS	<ul style="list-style-type: none"> <li>Collaborate for mutual development;</li> <li>Conduct business operations responsibly.</li> </ul>	<ul style="list-style-type: none"> <li>Direct meetings and exchanges;</li> <li>Agreements outlined in the cooperation contract between both parties.</li> </ul>	<ul style="list-style-type: none"> <li>Doing business on the principles of fair business, integrity, and mutual benefit in all cooperative activities with PVCFC.</li> <li>Ensure fair treatment among partners both domestically and internationally.</li> <li>In 2023, PVCFC signed a cooperation program and became a strategic partner for distributing high-quality DAP products from Hong Lan Van Thien Hoa Van Nam Co., Ltd.</li> <li>In 2023, to increase fertilizer exports to the Cambodian market, on June 12, 2023, PVCFC officially signed a strategic cooperation agreement with Yetak Group (Cambodia).</li> </ul>
SUPPLIERS	<ul style="list-style-type: none"> <li>Fair treatment among suppliers</li> <li>Collaborate for mutual development</li> <li>Sustainable growth</li> <li>Supplier rights, including timely and guaranteed payments.</li> </ul>	<ul style="list-style-type: none"> <li>Direct meetings and exchanges through communication channels (email, phone, etc.)</li> <li>Via regulations and guidelines related to procurement and consumption activities</li> <li>Through bidding processes and assessing supplier criteria</li> <li>Establishing a feedback interaction channel between both parties to improve product and service quality.</li> </ul>	<ul style="list-style-type: none"> <li>No abuse the company's brand reputation to pressure suppliers or make unreasonable demands, and do not cooperate with entities engaging in solicitation or offering commissions, kickbacks, gifts, or other incentives to PVCFC employees.</li> <li>Select suppliers fairly based on quality profiles, technical capabilities, experience, etc.</li> <li>Camau Fertilizer cooperates with suppliers through regulations and processes related to the procurement of goods/services as outlined in Decision No. 1807/QĐ-PVCFC dated August 13, 2021, regarding the promulgation of PVCFC's procurement regulations; and Decision No. 2229/QĐ-PVCFC dated October 14, 2021, regarding the promulgation of PVCFC's procurement processes.</li> <li>PVCFC respects the legitimate and reasonable rights of suppliers. We have policies in place to ensure timely payments to suppliers, which include: (i) all contracts specify payment terms and conditions; (ii) an internal process is established to ensure that payment requests meeting the requirements will be processed within 15 days.</li> <li>The company has a contact channel available on the website under the "Contact" section: <a href="https://www.pvcfc.com.vn/lien-he">https://www.pvcfc.com.vn/lien-he</a>.</li> </ul>

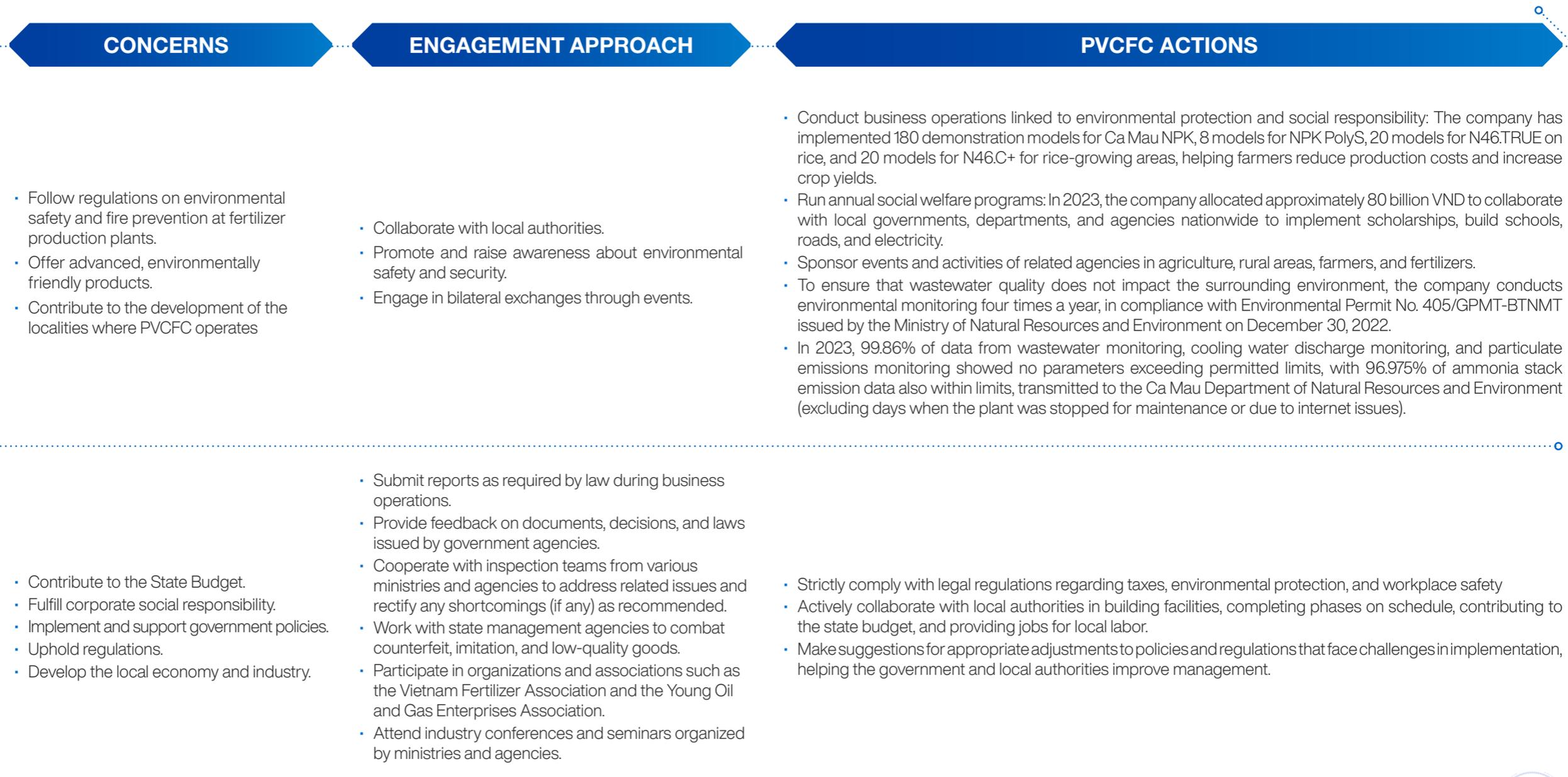
# STAKEHOLDERS ENGAGEMENT (Cont.)

## APPROACHES TO STAKEHOLDER ENGAGEMENT (Cont.)



# STAKEHOLDERS ENGAGEMENT (Cont.)

## APPROACHES TO STAKEHOLDER ENGAGEMENT (Cont.)



# STAKEHOLDERS ENGAGEMENT (Cont.)

## APPROACHES TO STAKEHOLDER ENGAGEMENT (Cont.)



### MEDIA AND COMMUNICATION



### EMPLOYEES

CONCERNS	ENGAGEMENT APPROACH	PVCFC ACTIONS
<ul style="list-style-type: none"> <li>Transparent, Accurate, Timely Information</li> </ul>	<ul style="list-style-type: none"> <li>Publicly disclose information clearly and transparently to the media.</li> <li>Meet with and respond to media interview requests (both directly and indirectly).</li> <li>Issue press releases and organize press conferences for important events.</li> <li>Regularly update news and significant events on the company's website.</li> <li>Complete the English content on the website <a href="http://www.pvcfc.com.vn">www.pvcfc.com.vn</a>.</li> </ul>	<ul style="list-style-type: none"> <li>Foster positive relationships with media agencies based on principles of transparency and legality.</li> <li>Ensure the messages and information provided are accurate, clear, complete, and objective, helping the media report accurately on the company's activities: <a href="https://vnexpress.net/pvcfc-nang-cong-suat-san-xuat-ure-len-116-4599055.html">https://vnexpress.net/pvcfc-nang-cong-suat-san-xuat-ure-len-116-4599055.html</a>, <a href="https://dtc.sggp.org.vn/pvcfc-sap-dua-san-pham-vao-thi-truong-kho-tinh-nhat-the-gioi-post111895.html">https://dtc.sggp.org.vn/pvcfc-sap-dua-san-pham-vao-thi-truong-kho-tinh-nhat-the-gioi-post111895.html</a>,...</li> <li>Offer information and warnings about counterfeit or low-quality fertilizers to ensure timely reporting to farmers: Tips for distinguishing genuine products from counterfeit/low-quality ones on social media (Facebook), <a href="https://danviet.vn/tieu-dung-thong-minhphan-bon-ca-mau-la-lua-chon-hang-dau-20231105152101853.htm">https://danviet.vn/tieu-dung-thong-minhphan-bon-ca-mau-la-lua-chon-hang-dau-20231105152101853.htm</a>,...</li> </ul>
<ul style="list-style-type: none"> <li>Guarantee a stable income, welfare benefits, and safe working conditions.</li> <li>Provide a professional working environment without discrimination.</li> <li>Offer training to enhance skills and professional development opportunities.</li> <li>Recognize contributions and dedication.</li> </ul>	<ul style="list-style-type: none"> <li>Annual workplace survey.</li> <li>Annual employee town hall meeting</li> <li>Summary meetings.</li> <li>Organize training programs.</li> <li>Ensure effective internal communication.</li> <li>Establish direct feedback mechanisms for complaints.</li> <li>Enact and enforce relevant policies.</li> <li>Facilitate two-way consultation.</li> </ul>	<ul style="list-style-type: none"> <li>Issue a collective labor agreement.</li> <li>Establish unions and associations, including veterans and youth organizations.</li> <li>Gather employee input via email and surveys.</li> <li>Organize recognition programs for outstanding individuals and teams.</li> <li>Promote safety, health, and environmental advocacy.</li> <li>Develop the "Reviving PVCFC Culture" project.</li> <li>Create plans for training and specialist talks.</li> <li>Facilitate internal cultural, artistic, sports, and travel activities.</li> <li>Encourage employee involvement in community service and charity projects.</li> <li>Use Workplace for internal communication and engagement.</li> </ul>

# STAKEHOLDERS ENGAGEMENT (Cont.)

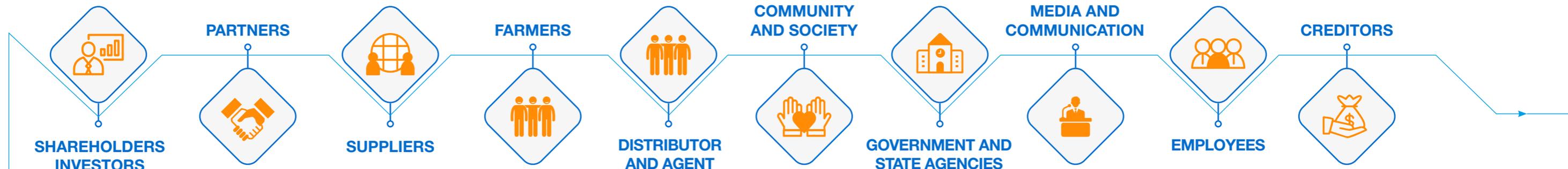
## APPROACHES TO STAKEHOLDER ENGAGEMENT (Cont.)



- The ability to pay off outstanding debts.
- Financial indicators are in good condition to maintain solvency.
- The company's prospects for the future.
- Measures to manage and mitigate potential risks.
- Compliance with commitments and terms in contracts.
- Ensuring the company fulfills agreed obligations.
- Providing information in a timely, accurate, and transparent manner.

- Organizing regular meetings with key creditors to update them on the situation, share information, and seek their opinions.
- Sending financial reports, business results, and related information regarding the company's status.
- Organizing meetings and events to enhance interaction and engagement.

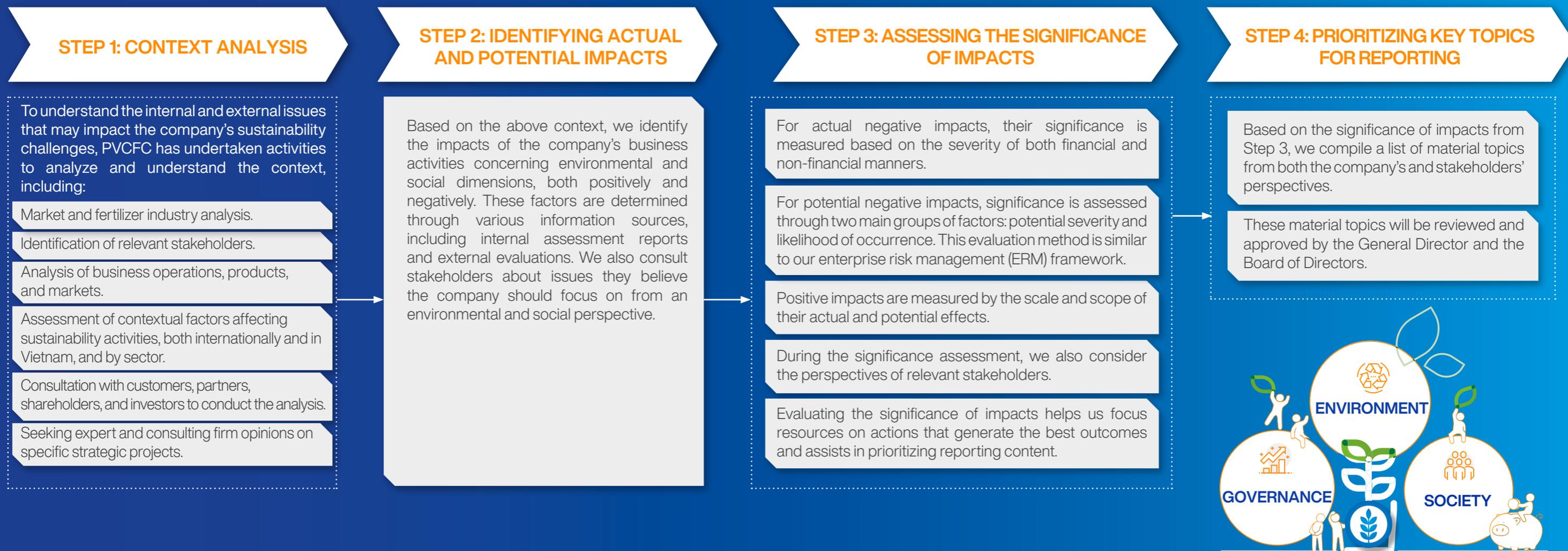
- The financial management regulations of PVCFC commit to ensure legitimate rights of the creditors including on-time repayment of outstanding debts.
- Proactively communicating and explaining the operational situation and business plans.
- Maintaining regular contact and providing information about production and business plans.
- Developing long-term cooperation plans and sharing risks.
- Publicly disclosing financial and operational information transparently and regularly.
- The Board of Directors of PVCFC adopted Resolution No. 2407/NQ-PVCFC on August 7, 2024, outlining measures to safeguard creditors' rights, which PVCFC will apply depending on circumstances and specific negotiations with creditors. Specifically:
  - Using collateral assets belonging to PVCFC to secure debts.
  - Providing guarantees as agreed with creditors.
  - Agreeing with creditors to maintain and meet certain financial ratios such as debt/equity ratio, interest coverage ratio, current ratio, etc.
  - Arranging with creditors with any other debt covenants to ensure that assets funded by creditors are protected, such as purchasing insurance and maintaining assets.
  - Providing regular reports on the implementation of guarantee terms as well as disclosing information about measures ensuring the creditors' rights are upheld.



# MATERIAL TOPICS

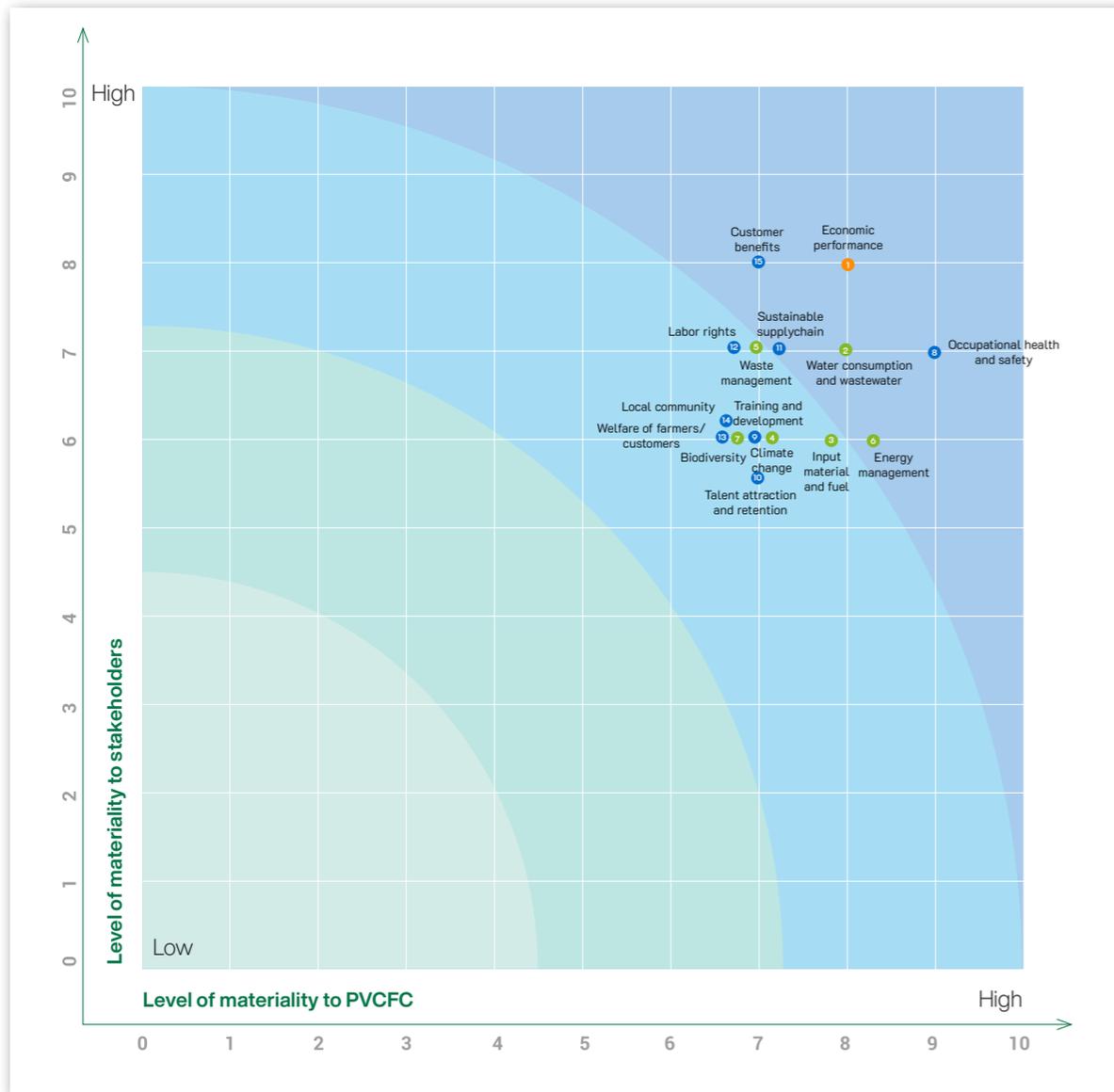
## METHOD FOR IDENTIFYING MATERIAL TOPICS

To ensure that PVCFC's efforts and resources return the highest results in sustainable development activities, PVCFC conducts evaluations to identify material topics based on GRI Standard 3, GRI 2021 version. Material sustainable development topics are identified through four main steps:



# MATERIAL TOPICS (Cont.)

## MATERIALITY MATRIX

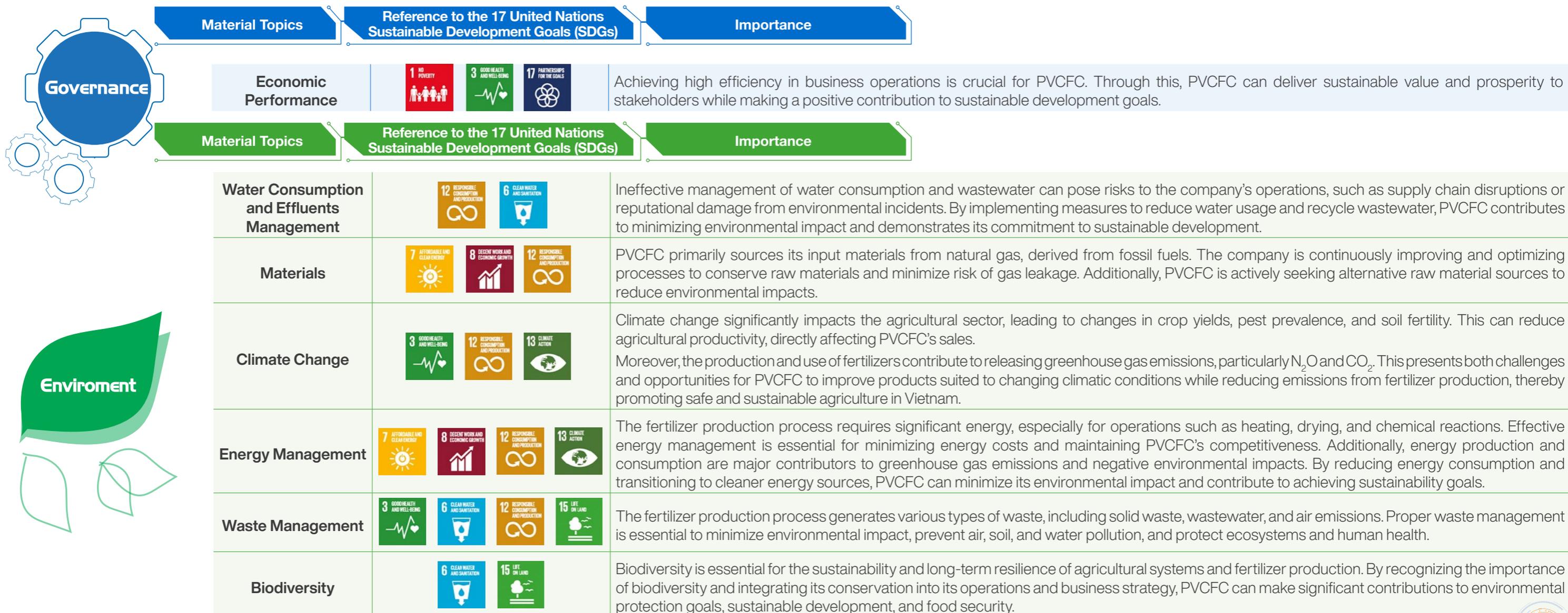


Assessing the materiality of impacts helps us focus resources on actions that generate the best outcomes and also allows us to determine the priority of reporting content.

# MATERIAL TOPICS (Cont.)

## IMPORTANCE OF MATERIAL TOPICS

Based on the materiality matrix, we have identified the key areas as described below. We have also identified the relevant SDG targets corresponding to each material topic.



# MATERIAL TOPICS (Cont.)

## IMPORTANCE OF MATERIAL TOPICS (Cont.)



Material Topics	Reference to the 17 United Nations Sustainable Development Goals (SDGs)	Importance
<b>Occupational Health and Safety</b>	 	PVCFC is committed to prioritizing the health and safety of all individuals. Effective management of occupational health and safety issues protects the company from financial losses, workforce impacts, material damages, and potential legal consequences.
<b>Training and Development</b>	 	Human Resources are one of the solid foundations that help us achieve our strategic plans and goals. Training and development of personnel, as well as policies for attracting and retaining talent, are essential for fostering long-term engagement between employees and PVCFC. This, in turn, drives the current success of PVCFC and prepares us to effectively address future challenges and seize opportunities.
<b>Talent Attraction and Retention</b>	  	
<b>Sustainable Supply Chain</b>	 	Sustainable supply chain management helps minimize negative environmental impacts, reduce operational costs, and ensure the welfare of workers throughout the supply chain. By focusing on sustainability, PVCFC can enhance efficiency and contribute to broader environmental and social goals.
<b>Labor rights</b>	  	Protecting the legal rights of workers is essential for creating a stable and inclusive work environment not only for PVCFC but also for all stakeholders. This commitment promotes social equity and responsible business practices within the corporate community in Vietnam.
<b>Improved Prosperity for Farmers/ Customers</b>	  	Caring for the interests of farmers enables PVCFC to gain a deeper understanding of their needs, concerns, and specific challenges. This insight is essential for developing timely products, programs, services, and policies that meet the requirements of farmers and customers. PVCFC is also committed to ensuring the rights and benefits of its customers are well protected.
<b>Local Community</b>	  	Community engagement programs foster trust and strengthen the relationship between PVCFC and the community. Additionally, these initiatives are essential for PVCFC to contribute to building a prosperous community and promoting sustainable social development.



# STRATEGIC ORIENTATION FOR SUSTAINABLE DEVELOPMENT

## OVERVIEW

PVCFC defines its sustainable development (SD) strategy based on the following factors:

- The company's vision and mission
- The company's long-term business strategy
- The SD strategic orientation approved by PVCFC's Board of Directors
- Analysis of the SD context at both international and domestic levels, as well as within the fertilizer industry
- Analysis of the impact of PVCFC's activities throughout the company's value chain
- Analysis of the expectations and concerns of stakeholders
- Analysis of Vietnamese legal regulations


**PVCFC's Sustainable Development strategy ensures alignment with its vision and overall goals of creating real value for stakeholders while considering industry and global trends, including but not limited to climate change, energy, circular economy, waste management, employee rights and welfare, etc.**

## SUSTAINABLE DEVELOPMENT AND THE VALUE CHAIN

As a company engaged in the production and trading of fertilizers, PVCFC's activities have environmental and social impacts throughout the value chain. We recognize the importance of identifying, evaluating, and managing the impacts of PVCFC's business activities on environmental and social factors throughout our value chain.



# STRATEGIC ORIENTATION FOR SUSTAINABLE DEVELOPMENT (Cont.)

## SUSTAINABLE DEVELOPMENT AND THE VALUE CHAIN (Cont.)



From the research phase, we analyze the effects of our products on factors such as greenhouse gas emissions, water, soil health, and biodiversity. Based on our understanding of these impacts, we create products that are more environmentally friendly and beneficial for farmers.



We understand the environmental impact of using raw materials and other effects during production. Our main raw material is natural gas. During production, we use electricity and some natural gas as fuel. The production process generally involves raw material usage and energy consumption, which results in greenhouse gas emissions, production waste, and cooling water usage. Therefore, we set annual targets to save on raw materials and enhance energy efficiency in production. PVCFC implements a series of initiatives to improve raw material efficiency and reduce the average energy consumption per product. Additionally, product distribution generates emissions from transportation, as products are shipped long distances to dealers and farmers by ships and trucks. A small amount of fertilizer may be lost during handling, transportation, and storage, which could lead to leakage and environmental pollution. Consequently, PVCFC has made substantial investments in warehouse systems in key areas and developed secondary distribution systems to reduce the distance to consumers.



The use of fertilizers has certain impacts on the environment, water, soil, biodiversity, and particularly climate change. Improper fertilizer use can also produce greenhouse gas that affect the ozone layer. We have implemented and will continue to implement measures to enhance farmers' understanding and sustainable fertilizer use practices, thereby minimizing environmental impacts.



We are in the process of analyzing and managing the impacts of waste within our value chain. We have managed and treated waste during production in compliance with legal regulations. We are also studying the environmental impacts of waste generated from fertilizer use, including the effects of fertilizer packaging on the environment and society.



# STRATEGIC ORIENTATION FOR SUSTAINABLE DEVELOPMENT (Cont.)

## STRATEGIC SUSTAINABLE DEVELOPMENT DIRECTION

Based on our analyses, we have developed the basic framework for PVCFC's SD strategic direction as follows: The SD strategic framework is a set of strategic initiative directions under the pillars of Environment, Social, and Governance, aligned with the company's overall operational strategy. These pillars are presented as major themes that guide the company's SD activities to ensure the integration of SD content in the implementation of general strategies and operations. PVCFC's SD strategic framework, approved by the Board of Directors, ensures the effective implementation of the company's business strategy while considering four key factors:

- Alignment with best practices in the fertilizer industry and in Vietnam
- Compliance with legal regulations
- Consideration of stakeholder expectations
- Alignment with shareholder development orientations



The SD strategic orientation includes groups of strategic initiative orientations under the pillars of Environment, Social, and Governance, aligned with PVCFC's overall operational strategy. These groups are presented as major themes to guide and shape strategies and activities related to SD content, ensuring the integration of SD content in the implementation of PVCFC's general strategies and operations:



### ENVIRONMENT STRATEGIC DIRECTION

- **Clean Technology:** Research and implement the application of technology in production, business, and fertilizer use aimed at reducing emissions and minimizing environmental impact.
- **Energy:** Continue to focus on improving energy use efficiency, exploring renewable energy sources to partially replace fossil fuels, and working towards reducing energy intensity and emissions.
- **Climate Change:** Utilize all available resources to reduce absolute emissions and emission intensity across all three scopes. We also continue to invest in product research to provide farmers with better tools to cope with climate change impacts, such as drought and salinity.
- **Circular Agriculture:** As a closed-loop agricultural production system, waste and by-products are regenerated and used as inputs in the production process, maximizing resource utilization and minimizing waste and negative environmental impacts. We aim to provide activities and products that sustainably supply crops with nutrients, including increasing the proportion of organic and microbial fertilizers and improving soil health.
- **Water, Air, and Waste:** We aim to manage and use water resources responsibly, manage waste during production, and particularly focus on recovering and recycling fertilizer packaging.
- **Biodiversity:** Our activities aim to maintain and protect biodiversity. We achieve this by delivering high-quality products to consumers and training in sustainable fertilizer use practices following the 4R principles of IFA and the 5-Right principles of Vietnam.

# STRATEGIC ORIENTATION FOR SUSTAINABLE DEVELOPMENT (Cont.)

## STRATEGIC SUSTAINABLE DEVELOPMENT DIRECTION (Cont.)



### SOCIAL STRATEGIC ORIENTATION

- **Protecting and Building Human Capital:** People are the key success factor at PVCFC. We focus on creating an environment where employees are ensured health, safety, commensurate benefits for their contributions and experience, and opportunities for skill development and advancement.
- **Welfare for Farmers/Customers:** Farmers play an important role in the agricultural value chain. Through training programs, collaboration with other organizations, and customer/farmer support programs, PVCFC will contribute to improving rural living standards and the sustainable development of agriculture.
- **Product Safety:** Safe fertilizers enhance crop yield, quality, and protect the environment and human health. Fertilizer quality is strictly controlled according to international standards from raw materials to the final product, with periodic inspections throughout the production process, ensuring each batch meets the highest and most consistent quality standards, protecting public health and biodiversity.
- **Financial inclusion:** We support farmers in accessing financial resources for their business operations. We also guide the establishment of a green finance framework to ensure environmental and social efficiency in projects.
- **Community:** We continue to support communities through projects that significantly impact social welfare in areas where we operate.
- **Diversity, Equity, and Inclusion:** We encourage and create an environment where employees from different cultures, genders, ages, religions, political views, abilities, and other aspects of diversity are respected and have a voice in the company's decisions and activities.



### GOVERNANCE STRATEGIC ORIENTATION

PVCFC is committed to practicing corporate governance at the highest level possible, including but not limited to good corporate governance practices in Vietnam and ASEAN. Key governance areas in ESG include:

- **Business Ethics:** Business ethics is the core foundation for all decisions and actions in corporate governance; it encompasses compliance with ethical principles and standards in all business activities, from human resource management, customer and partner relations, to how we treat the environment and the community.
- **Sustainable Supply Chain:** We aim for a sustainable supply chain where input products and goods are also evaluated for environmental and social aspects.
- **Regulatory Compliance:** Fertilizer industry regulations frequently change. We are committed to maintaining a system that ensures compliance with legal regulations as well as the best practices we have committed to follow.
- **Board Effectiveness:** This is a decisive factor in an organization's success. The Board is responsible for strategic direction, overseeing company operations, and ensuring the company adheres to good corporate governance principles and promotes Sustainable Development in governance.
- **Conflict of Interest Management:** To protect our reputation and transparency, the company has established a strong conflict of interest management policy to identify, prevent, and resolve potential conflicts of interest transparently, fairly, and in a manner that maximizes benefits for the company.
- **Risk Management:** To effectively respond to challenges and risks in the business environment, the company needs to build a comprehensive risk system. This system includes identifying, assessing, and addressing risks that could affect the company's goals and operations, ranging from financial and legal risks to environmental and social risks.

# 03

## GOVERNANCE - THE FOUNDATION FOR CREATING SUSTAINABLE VALUE

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# GOVERNANCE CULTURE OF PVCFC

## BUSINESS ETHICS

### CODE OF CONDUCT

The Company's Code of Conduct (COC) was approved and issued by the Board of Directors in Decision No. 2048/QĐ-PVCFC dated August 22, 2022. The code provides specific guidelines on how to conduct as an employee (including members of the Board of Directors and the executive management team) of PVCFC when interacting with any stakeholders. The implementation of the Code of Conduct in daily activities plays a crucial role in shaping the business ethics that PVCFC aspires to, while also directly impacting PVCFC's business objectives. This Code of Conduct also helps PVCFC aim for higher governance standards, while contributing to guiding the team in interacting more professionally and swiftly, thereby contributing to forming a sustainable competitive advantage for PVCFC.

The Code is communicated through the Company's internal platform via Facebook at Work and is incorporated into internal training on the E-learning system to ensure that 100% of employees have full access to the COC content.

### SAYING NO TO CORRUPTION

The Company's issued Code of Conduct clearly stipulates in Article 17, Anti-Corruption and Bribery: "PVCFC's success is based on the quality of its products and services, never on illegal or unethical actions. PVCFC does not tolerate corruption or bribery." The Whistleblowing System is one of the effective channels for the Company to receive initial reports/warnings about corruption.

### WHISTLEBLOWING SYSTEM



The Whistleblowing Regulation was issued under Decision No. 204/QĐ-PVCFC dated February 10, 2023, by the Board of Directors and is published in both Vietnamese and English on the Company's website. This regulation outlines the basic principles of PVCFC's Whistleblowing system to quickly detect and correct behaviors, promote and enhance employees' sense of ownership, and encourage proactive and confident feedback to management and leadership. This, in turn, increases management and operational efficiency, business performance, and protects and enhances PVCFC's reputation and credibility.

The regulation also outlines general principles related to the establishment and management of the whistleblowing system; the channels for receiving reports of violations, including signs of corruption; guidelines for handling, assessing, investigating, concluding, and disclosing information about violations; and the responsibilities and obligations of management levels in implementing, communicating, and training on the whistleblowing system at PVCFC. On this basis, PVCFC established the Whistleblowing Committee under Decision No. 2766/QĐ-PVCFC dated October 27, 2023. PVCFC has created some channels managed by the Compliance Legal Department, which relevant stakeholders can use to raise concerns and/or complaints about violations that may occur regarding their rights. PVCFC's whistleblowing channels include:

-  • **Email:** [tiepnhanthongtin@pvcfc.com.vn](mailto:tiepnhanthongtin@pvcfc.com.vn)
-  • **Hotline:** 0798 041 041
-  • **Speakup Mailboxes** (named "Tiep Nhan Thong tin") at three locations: Ca Mau Fertilizer Plant, Ca Mau Office, and HCM Office
- These channels are also described in PVCFC website

The results after preliminary processing will be submitted to the Whistleblowing Council for a final decision. The Board of Directors is required to ensure the independence of this Council.

The whistleblowing regulation allows for anonymous reports and establishes principles and measures to protect whistleblowers from retaliation for disclosing illegal or unethical behavior. In the fiscal year 2023, the Company did not experience any cases or ongoing investigations related to corruption, bribery, fraud, or tax evasion.

# BUILDING A SUSTAINABLE CORPORATE GOVERNANCE FOUNDATION

## BOARD OF DIRECTORS' OPERATIONAL EFFICIENCY


**The Board of Directors is the highest governing body in the company and the guiding force for strong governance at PVCFC. PVCFC's Board of Directors aims not only to comply with corporate governance regulations in Vietnam but also to maximize adherence to the best practices suggested in the ASEAN Corporate Governance Scorecard (ACGS) questionnaire.**

Detailed information about PVCFC's compliance with ACGS2023 is always updated here: <https://www.pvcfc.com.vn/Data/Sites/1/media/quan-he-nha-dau-tu/bao-cao-quan-tri/eng/2023-Asean-corporate-governance-scorecard-pvcfc.pdf>. Comprehensive information on the operational efficiency of PVCFC's Board of Directors is fully described in Chapter 4 of the 2023 Annual Report (<https://www.pvcfc.com.vn/Data/Sites/1/media/bao-cao-thuong-nien/2023/value-drives-prosperity-2023---v2.pdf>). In this section, we report on how PVCFC ensure the effectiveness of the Board of Directors.

## STRUCTURE OF THE BOARD OF DIRECTORS

### Board's Committees

The Company currently has three Committees under the Board of Directors: (i) the Audit and Risk Management Committee (ARMC); (ii) the Human Capital and Compensation Committee (HCCC); and the Environmental, Social, and Governance Committee (ESG Committee).

The members of these Committees are all non-executive Board members, and the Chair of the ARMC is independent Board member Do Thi Hoa, while the Chair of the HCCC is independent Board member Truong Hong.

- The ESG Committee consists of two non-executive Board members
- The ARMC consists of two independent Board members and one non-executive Board member
- The HCCC consists of two independent Board members

The structure and composition of these Committees are appropriate for the Company's actual conditions. The activities of these Committees help the Board of Directors leverage collective strength, enhance their role, and improve the Company's governance efficiency.

### Audit and Risk Management Committee (ARMC)

The Audit and Risk Management Committee (ARMC) is a specialized unit under the Board of Directors, with the function of advising and consulting the Board on the Company's audit and risk management areas.

The ARMC reports directly in writing to the Board of Directors and operates independently in performing its duties to ensure that the Company complies with all legal regulations.

The ARMC reviews and approves the Company's quarterly, semi-annual, and annual financial statements; reviews the Company's internal control and risk management systems; reviews transactions with related parties under the Board of Directors' or General Meeting of Shareholders' approval authority and makes recommendations on transactions requiring approval from the Board of Directors or the General Meeting of Shareholders; and oversees the Company's Internal Audit Department.

Additionally, it performs other duties as stipulated in the ARMC's operational regulations (refer to: <https://www.pvcfc.com.vn/quan-he-dau-tu/dieu-le-quy-che-bieu-mau>)



# BOARD OF DIRECTORS' OPERATIONAL EFFICIENCY (Cont.)

## STRUCTURE OF THE BOARD OF DIRECTORS (Cont.)

### Human Capital and Compensation Committee (HCCC)



The Human Capital and Compensation Committee (HCCC) is a specialized unit under the Board of Directors, responsible for advising and consulting the Board on matters related to organization, personnel, compensation, and the company's policies.

The Committee reports directly in writing to the Board of Directors and operates independently to ensure that the Company complies with all legal regulations.

- Annually, the HCCC reviews and evaluates the Company's personnel and compensation policies;
- Reviews and proposes the structure, size, and composition of the Board of Directors and the Committees under the Board;
- Reviews, evaluates, and establishes quality criteria and nominates candidates for the Board of Directors to ensure suitability and diversity within the Board;
- Consults, searches, and builds a database of Board members/independent Board members from both internal sources within the Company and external sources (recommended by Board member institutes or shareholder associations) to propose to the Board;
- Recommends to the Board on the appointment of personnel for the Committees under the Board and other positions under the Board's authority;
- Participates in and conducts annual evaluations of the Board, Board members, and the Committees and Committee members under the Board;
- Assists the Board in fulfilling its responsibilities related to compensation and policies for the Executive Management and management staff when submitted to the Board for review and decision.
- Additionally, the HCCC performs other duties as stipulated in its operational regulations (refer to <https://www.pvcfc.com.vn/en-US/investor-relations/charter-regulations-forms>)



### ESG Committee

The ESG Committee is a specialized unit under the Board of Directors, with the functions of advising, consulting, and overseeing areas related to sustainable development and corporate governance for the Board.

The Committee reports directly in writing to the Board of Directors and operates independently to ensure that the Company complies with all legal regulations.

- The ESG Committee advises the Board on the formulation of the Company's sustainable development Direction, Strategy, and long-term Objectives; oversees the action programs, projects, and sustainable development activities of the Executive Management based on the Direction, Strategy, and long-term Objectives of sustainable development approved by the Board; monitors the disclosure of information related to PVCFC's sustainable development; and reviews and evaluates the compliance of the Corporate Governance Policy (handbook), the Code of Conduct (COC), and other relevant policies related to corporate governance.
- Additionally, it performs other duties as stipulated in the ESG Committee's operational regulations (refer to: <https://www.pvcfc.com.vn/en-US/investor-relations/charter-regulations-forms>)



### Internal Audit Department

The Internal Audit Department, under the Board of Directors, performs internal audit tasks as prescribed and reports directly to the Audit and Risk Management Committee (ARMC).

In May 2024, the Board of Directors established the Office of the Board of Directors, under the Board, to assist with corporate governance and manage relations with stakeholders, including relationships with shareholders and investors. The Chief of the Office of the Board of Directors also serves as the Corporate Governance Officer, responsible for ensuring that corporate governance is practiced according to best practices and in compliance with legal regulations.

# BOARD OF DIRECTORS' OPERATIONAL EFFICIENCY (Cont.)

## DIVERSITY OF THE BOARD OF DIRECTORS

PVCFC's Board of Directors recognizes the importance of diversity among its members and ensures the best practices in this regard. The Company's internal governance regulations provide direction and policies to ensure diversity within the Board in terms of gender, age, and professional skills that align with the Company's long-term strategy.

In recent years, based on the Company's strategy, the Company has aimed to add one female Board member and one Board member with experience in agriculture and soil health. We achieved this goal in 2021. The Company aims to achieve the following diversity goals for the Board of Directors by 2030:

- The Board will have at least two independent female Board members.
- The Board will have at least one member with experience in Mergers and Acquisitions (M&A) to support production and business expansion.
- The Board will have at least one member with international market experience to meet the needs of business expansion.
- The Board will have at least one member with experience in business strategy planning.

## COMPOSITION OF THE BOARD OF DIRECTORS

The current Board consists of 7 members, including:

- The Chairman is a non-executive Board member.
- **01** Board member concurrently holds the position of General Director.
- **02** Independent Board members, **01** of whom is female.
- And **03** non-executive Board members.

(For details, please refer to the 2023 Annual Report pages 54-57)



**MR TRAN NGOC NGUYEN**  
Non-executive Chairman



**MR. VAN TIEN THANH**  
BOD Member cum General Director



**MS. DO THI HOA**  
Independent Director



**MR. TRUONG HONG**  
Independent Director



**MR. TRAN MY**  
Non-executive Director  
(Submitted resignation letter in August 2023)



**MR. NGUYEN DUC HANH**  
Non-executive Director



**MR. LE DUC QUANG**  
Non-executive Director



**MR. NGUYEN DUC THUAN**  
Non-executive Director  
(Appointed in January 2024)

# RISK MANAGEMENT



PVCFC's enterprise risk management system was established early, in 2018. Since then, risk management has always been a priority and has been continuously improved. In 2019, the Company successfully researched and developed its own risk management software, which was officially put into use in 2020. This was a milestone marking a pioneering effort to integrate risk management activities with the Company's daily operations, while also creating a significant digital transformation in risk management.

PVCFC applies the "Three Lines" model to support the Board of Directors and the General Director in overseeing and operating the risk management activities by identifying factors that could affect the Company's mission, vision, and strategic objectives, and by implementing measures to mitigate threats and capitalize on opportunities.

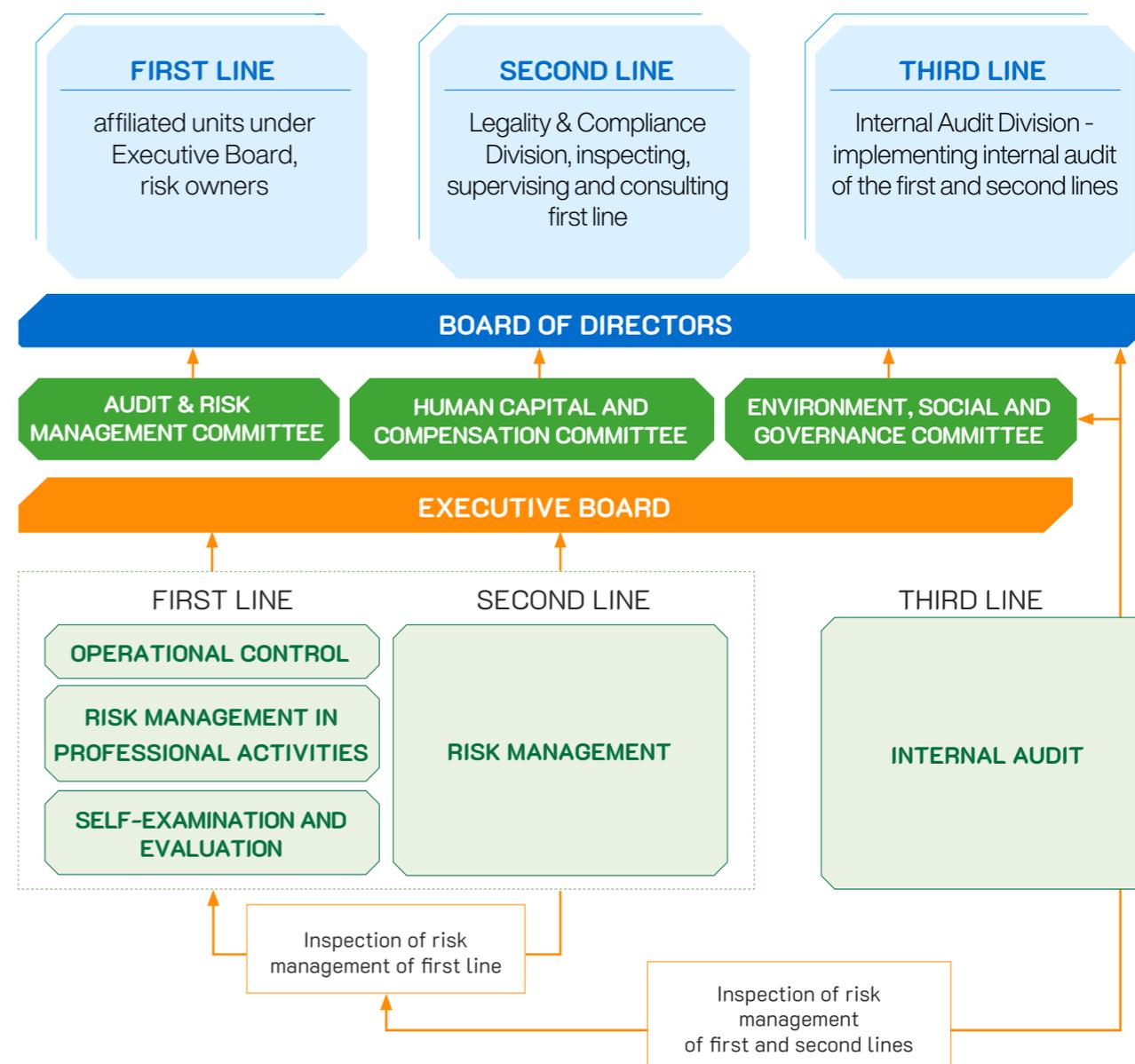
For details, please refer to the 2023 Annual Report (pages 184-191)

## THREE LINES MODEL

The Company applies the "Three Lines governance model" to assist the Board of Directors and the Executive Management in not only effectively controlling risks but also creating greater value by identifying factors that could affect the Company's mission, vision, and strategic objectives, and by implementing measures to mitigate potential risks and capitalize on opportunities. The Board of Directors has established an internal control system model based on the value chain and risk management system governance from the Company level to the unit level.

- **The first line** consists of the units under the Executive Management, who are the risk owners.
- **The second line** is the Risk and Compliance Department, which performs monitoring and advisory functions for the first line.
- **The third line** is the Internal Audit Department who report to Audit and Risk Management Committee (ARMC) under the Board of Directors, which perform internal audit functions for the first and second lines.

## MODEL OF "THE THREE LINES" OF PVCFC



# RISK MANAGEMENT (Cont.)

## RISK MANAGEMENT SYSTEM

Since the implementation of risk management, the Company has issued a Risk Appetite Statement, Risk Tolerance Levels, and Risk Metrics; developed regulations for risk management activities, and established both Company-level and unit-level Risk Registers.

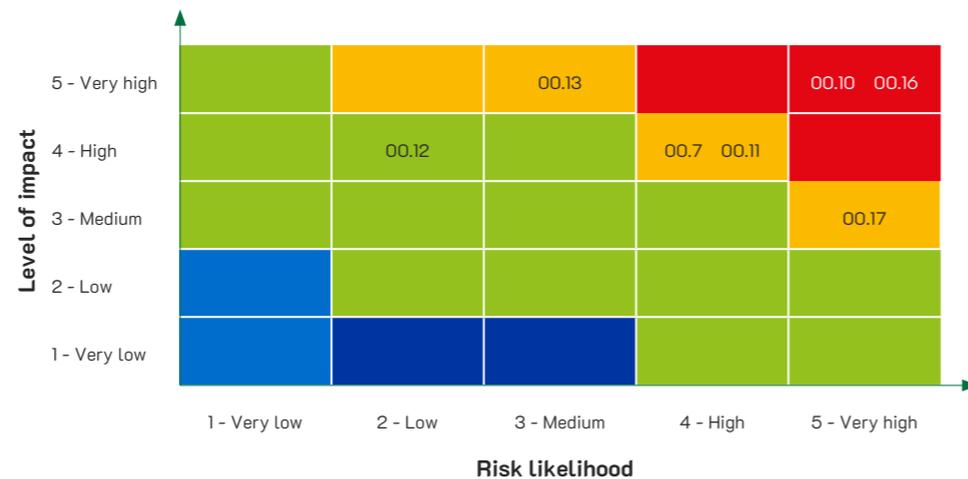
Based on practical operations over the years, the legal framework for risk management is continuously reviewed and updated by the Company to align with its strategic objectives during each period.

The Company has categorized risks into four main groups: strategic risks, operational risks, compliance risks, and financial risks. The Company has issued a statement on risk appetite and risk tolerance levels and developed risk metrics to classify and identify key risks on the Risk Heat Map. For information technology risks, the Company has identified them as part of the Company-level risks that need to be controlled and has also created a specific criterion in the Company's risk metrics related to information technology.

These risks are evaluated and prioritised based on the likelihood of occurrence and the impact level on the Company-level Risk Heat Map



**THE COMPANY LEVEL RISK HEAT MAP**



## RISK MANAGEMENT WITH AN ESG ORIENTATION

In response to the essential needs of sustainable development trends for all businesses, PVCFC is increasingly focused on governance based on the three factors: Environment, Social, and Governance (ESG).

Building on the early-established risk management system, PVCFC conducts regular annual reviews and reassessments of key risks. In practicing ESG, PVCFC categorizes its risk portfolio according to the three E-S-G factors, ensuring that operations are conducted safely and in compliance with state regulations on emissions, waste, QHSE standards, and other relevant standards. Consequently, risks related to safety, health, and environmental violations are tightly controlled, preventing incidents or violations that exceed allowable limits.



## RISK MANAGEMENT (Cont.)

### INTERNAL AUDIT

#### Internal Audit Department

Internal Audit Department: Established in November 2020, the Internal Audit Department is under the Board of Directors and conducts internal audits across the entire Company in accordance with Decree 05/2019/NĐ-CP. The Internal Audit Department consists of 5 members with expertise in various fields: Law, Finance, Auditing, Accounting, and Technology.

The Head of the Internal Audit Department is Mr. Vu Chi Duong, who holds a Master's degree in Finance and Banking, a Bachelor's degree in Auditing and Accounting, and a Bachelor's degree in Law. Mr. Vu Chi Duong has extensive experience in the fields of legal affairs, finance and accounting, internal control, risk management, and auditing.



## COMPLIANCE WITH LEGAL REGULATIONS

The Company strictly complies with legal regulations on environmental protection, pollution control regarding waste and emissions, resource conservation, and actively engages in in-depth learning about current environmental management regulations, ensuring management according to the ISO 14001:2015 standard. In 2023, the Company did not experience any instances of non-compliance with legal regulations.

The Company has issued policies on quality, safety, and the environment; established regulations and guidelines for implementation; and conducted inspections and testing to control the environment in production areas and other locations where the Company operates. These policies, regulations, and procedures are widely communicated to all employees to raise awareness and responsibility towards the community and the living environment.

The Company collaborates and coordinates with businesses and organizations with experience in assessing and improving environmental conditions within the enterprise.

All emission sources from the Plant are tightly controlled and minimized in quantity, with quality always meeting the regulated limits before being released into the environment.

In 2023, the Ca Mau Fertilizer Plant consistently maintained strict control, ensuring that no serious environmental incidents occurred at the Plant. PVCFC fully complies with the requirements, policies, and regulations of the Environmental Protection Law, and contributes to environmental protection funds, demonstrating its commitment to environmental responsibility and the community as a sustainable enterprise.

## CONFLICT OF INTEREST MANAGEMENT

To implement the strategy set forth by the Board of Directors (BOD), Ca Mau Petroleum Fertilizer Joint Stock Company (PVCFC) has undertaken various digital transformation activities aimed at optimizing production processes, enhancing business efficiency, and improving service quality. These activities include the adoption of modern technologies in operational management, automation of production processes, and the development of digital solutions to strengthen governance and decision-making capabilities.

*(Details can be found in the Annual Report, page 225)*

# DIGITAL TRANSFORMATION - THE FOUNDATION FOR EFFECTIVE GOVERNANCE

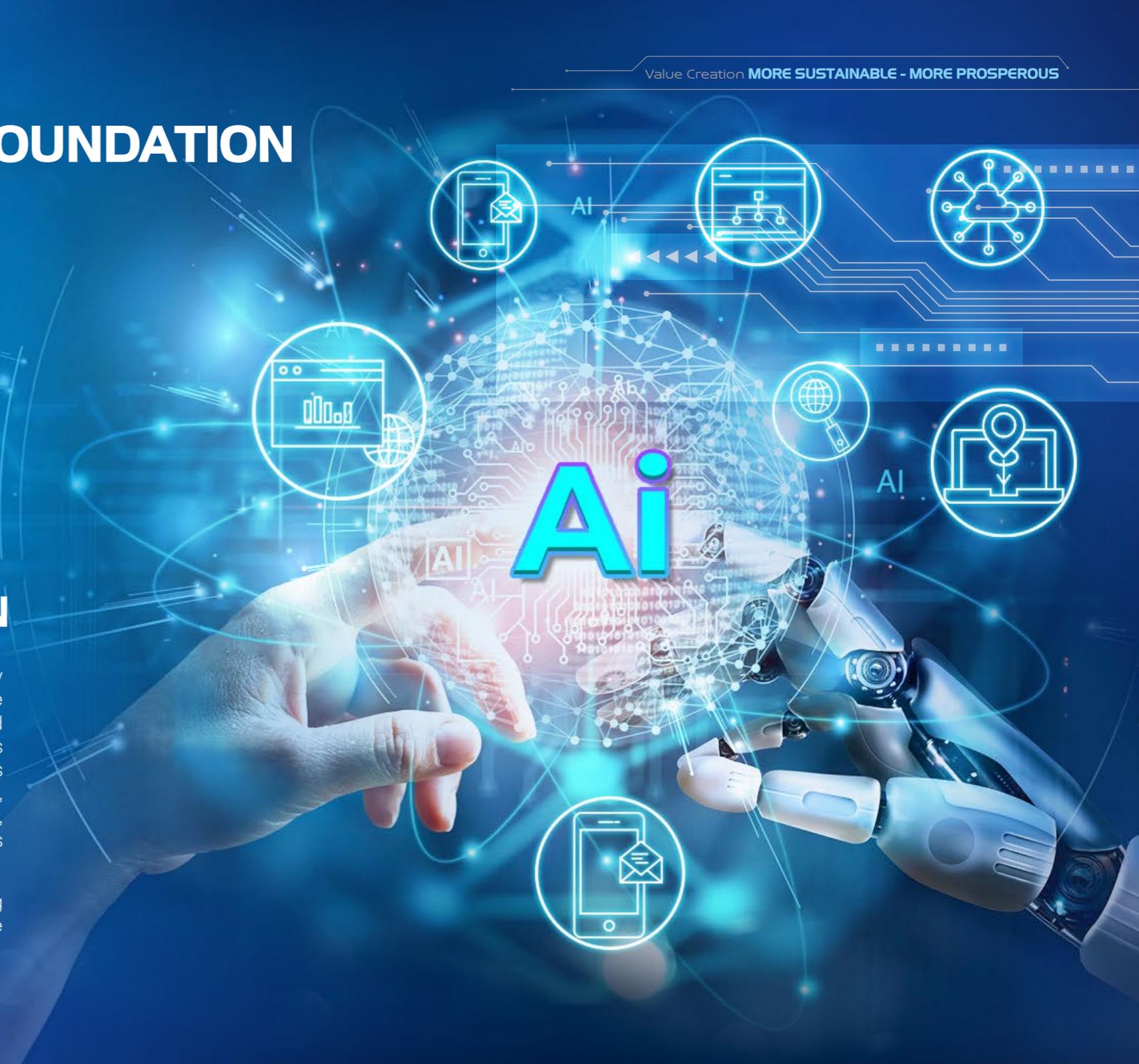


To implement the strategy set forth by the Board of Directors (BOD), Ca Mau Petroleum Fertilizer Joint Stock Company (PVCFC) has undertaken various digital transformation activities aimed at optimizing production processes, enhancing business efficiency, and improving service quality. These activities include the adoption of modern technologies in operational management, automation of production processes, and the development of digital solutions to strengthen governance and decision-making capabilities.

## OBJECTIVES OF DIGITAL TRANSFORMATION

In recent years, PVCFC has intensified its digital transformation efforts across the entire company by equipping itself with modern tools and technologies, enabling the business to optimize processes, enhance operational efficiency, and quickly respond to the daily changes in the market. To date, PVCFC has continued to invest in digital transformation activities by implementing and applying various IT-based systems such as the ERP Management System, Eoffice Electronic Office System, Risk Management System, Digital Business Operations System (DMS), “2Nông” App, Customer Service and Marketing Communication System (CRM), Big Data, DMS, and others at different levels to effectively utilize information and data from the market, distributors, and farmers. These efforts have begun to yield certain positive outcomes in the company’s production and business operations.

The digital transformation objectives at PVCFC by 2025 focus on completing the database system, expanding data utilization, and connecting various application systems into an ecosystem that serves corporate governance, leading to improved operational efficiency and sustainable development in the future.



# DIGITAL TRANSFORMATION - THE FOUNDATION FOR EFFECTIVE GOVERNANCE (Cont.)

## DEVELOPMENT ORIENTATION FOR DIGITAL TRANSFORMATION ACTIVITIES

In the coming years, PVCFC will continue to make significant investments in digital transformation to enhance governance, production, and business activities.

### Digital Transformation in Governance

- Develop and deploy a Data Platform system on the Data Lake and Power BI platforms; utilize a dashboard system for leadership to centralize all of PVCFC's data and create data visualizations.
- Focus on improving IT infrastructure, with an emphasis on system and data security in an era of accelerated digital transformation.
- Apply AI technology platforms and chatbots to leverage specific data unique to PVCFC.

### Digital Transformation in Production

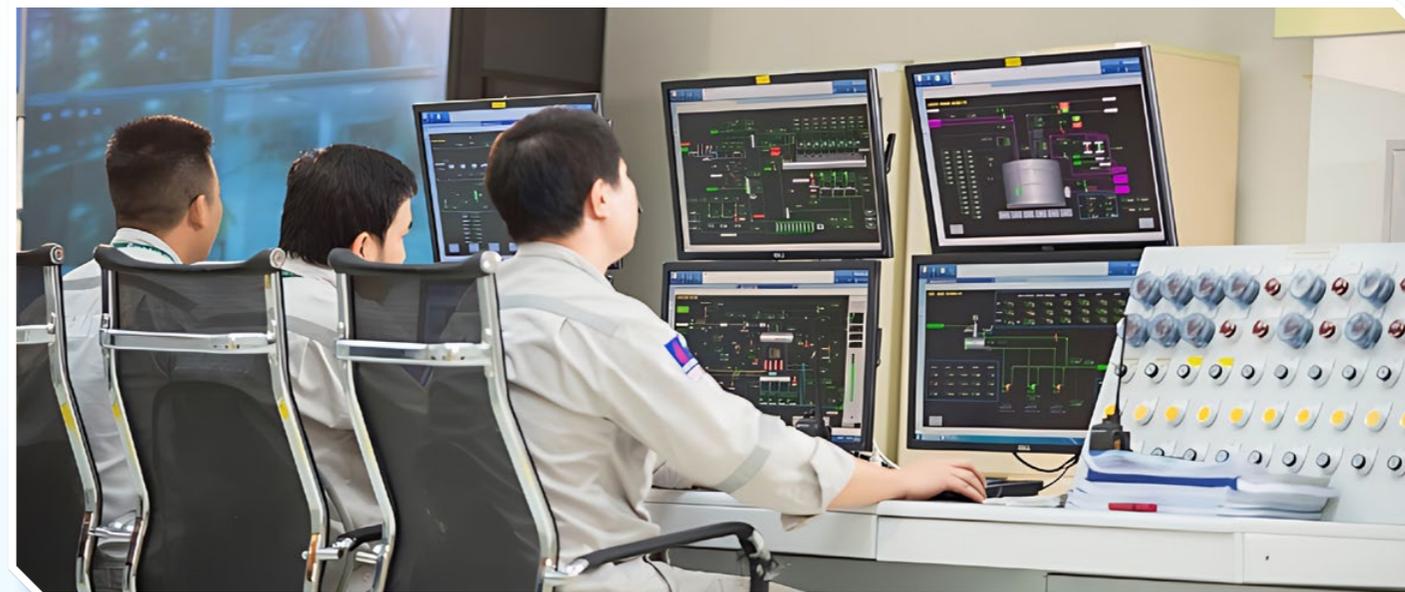
- Build a centralized database for production operations, maintenance, and management.
- Transition the existing Management Information System (MIS) to a new system.
- Develop a smart, highly automated plant.

### Digital Transformation in Business Activities

- Continue to enhance and increase the value of digital applications in managing distribution channels and customers.
- Implement and launch the artificial intelligence project named "Anh Hai Ca Mau" to enhance customer experience, thereby strengthening customer engagement and increasing the brand image of Ca Mau Fertilizer in customers' minds.
- Collect agricultural data and improve customer experience.

## SPECIFIC ACTIVITIES AND KEY PROJECTS

- Completed and deployed the Data Platform system and several BI reporting systems.
- Expanded the implementation of the DMS system to support distribution activities, while also integrating RFID technology in inventory management and implementing loyalty programs.
- Completed and deployed the system for monitoring and managing the operational performance of the Plant on the OSisoft (PI system) platform.



Technology Department of Ca Mau Fertilizer Plant.



# GOVERNANCE ON SUSTAINABLE DEVELOPMENT

## SUSTAINABLE DEVELOPMENT GOVERNANCE STRUCTURE OF PVCFC

## ENVIRONMENTAL AND SOCIAL RISK MANAGEMENT



### BOARD LEVEL: ESG COMMITTEE

#### The ESG Committee has the following duties:

- Develop and amend the ESG Committee's organizational and operational regulations and submit them to the Board of Directors for approval.
- Advise the Board of Directors on the development of PVCFC's sustainable development direction, strategy, and long-term objectives.
- Oversee the action programs, projects, and sustainable development activities of the Executive Management (including the General Director and Deputy General Directors) based on the sustainable development direction, strategy, and long-term objectives of PVCFC approved by the Board of Directors.
- Monitor the disclosure of information related to PVCFC's sustainable development (including sustainable development content in the Annual Report, the Sustainability Report, and other disclosures).
- Annually review and evaluate the compliance of the Corporate Governance Policy (handbook), the Code of Conduct (CoC), and other policies related to corporate governance.
- Propose to the Board of Directors the approval of ESG risk management policies.
- Oversee the management of risks and opportunities related to ESG, including risks and opportunities associated with climate change.



### EXECUTIVE MANAGEMENT LEVEL

- The General Director (GD) is primarily responsible and assigns the Planning and Investment Department as the focal point to coordinate and connect all departments/units within the Company in developing plans, monitoring implementation, and reporting on ESG.



### DEPARTMENT/UNIT LEVEL

- Each department/unit has a focal point officer responsible for ESG-related issues, who compiles and reports to the Planning and Investment Department (the focal point) for reporting to the General Director (GD)/Board of Directors (BOD)/General Meeting of Shareholders (GMS).

The Audit and Risk Management Committee (ARMC) and the ESG Committee oversee the implementation of the ESG strategy at the Board level and report to the Board of Directors.

Recognizing the potential risks, the Company has issued a Risk Management Regulation, which outlines the management principles in the Company's risk management activities and serves as a legal basis for the Board of Directors, the Audit and Risk Management Committee, the General Director, the Supervisory Board, the Internal Audit Department, and the Company's units to implement risk management. This regulation is applied consistently and is closely aligned with the Company's Mission, Vision, Core Values, and Strategic Objectives.

The Company's risks are identified, assessed, and prioritized by the appropriate management level based on "Risk Metrics," which evaluate the likelihood and impact of the risks. All employees of the Company must comply with the approved Risk Management Framework, Risk Management Regulation, and Risk Management procedures.

The Environmental and Social Risk Management Policy is central to sustainable governance and is a key driver for PVCFC to enhance its sustainable development efforts, both now and in the future.

The Company's Risk Appetite Statement addresses aspects related to its operations, including environmental-social risks and information technology risks.

The Company is committed to complying with legal regulations (including those related to labor safety and the environment) in Vietnam and in the countries and territories where PVCFC operates.

The Company proactively identifies and meets compliance requirements, establishes, and operates a management system to ensure compliance, including (but not limited to): the Code of Conduct (CoC), policies, procedures, and guidelines in investment, production, business operations, and the fulfillment of contracts/commitments with customers, suppliers, and partners.



# GOVERNANCE ON SUSTAINABLE DEVELOPMENT (Cont.)

## ENVIRONMENTAL AND SOCIAL RISK MANAGEMENT (Cont.)

Based on PVCFC's risk management framework, some of the environmental and social risks that the Company is focusing on managing include:

	The Risks	Risk Management Actions
ENVIRONMENT	Gas Leakage	<ul style="list-style-type: none"> <li>To manage and control these risks, the Company has issued operational procedures and regulations for production activities, requiring strict compliance to prevent and minimize gas leakage.</li> <li>The Company has installed monitoring stations at critical locations to continuously monitor air quality, enabling early detection of leaks and allowing timely measures to address and rectify the situation.</li> </ul>
	Climate Change	<ul style="list-style-type: none"> <li>Continuously improving the efficiency of input gas usage.</li> <li>Researching and improving production processes to use energy more efficiently.</li> <li>Utilizing renewable energy.</li> <li>Researching greener products that are more environmentally friendly...</li> </ul>
	Wastewater and solid waste impacting air quality and biodiversity	<ul style="list-style-type: none"> <li>Regulations and procedures for the use of clean water and the treatment of wastewater and solid waste have also been developed and issued to ensure compliance with the quality standards of Vietnam and the countries/territories within PVCFC's operational scope.</li> <li>The Company has signed contracts for solid waste treatment with professional units that have extensive experience and are recognized by reputable organizations or competent authorities.</li> </ul>
	Risk of excessive use of chemical fertilizers beyond the needs of crops, which can impact soil health, pollute water sources, affect ecosystems, and generate greenhouse gas emissions	The Company's product usage and crop care guidelines are disseminated in various forms: distributing leaflets, posting on the website, through the "2Nông" app on mobile devices, and organizing direct workshops to guide dealers/farmers on using the products at the right time, with the right type, in the right dosage, and in the right way, to minimize loss and reduce undesirable environmental impacts.

	The Risks	Risk Management Actions
ENVIRONMENT	The risk of a high turnover rate will reduce PVCFC's operational efficiency, and the Company will require additional resources to recover	<ul style="list-style-type: none"> <li>The Company fosters a culture that spans from foundational culture to distinctive culture, encouraging employees to engage in practices that ensure their Physical - Mental - Intellectual well-being and orient them toward long-term work and dedication to the Company.</li> <li>The Company's policies ensure that salaries, bonuses, and remuneration are commensurate with the effort expended and adhere to timely payment schedules, including fulfilling tax obligations for both parties and fully contributing to social insurance.</li> <li>The Company has policies for attracting talent, training personnel according to expertise, and an internship program to supplement its workforce.</li> </ul>
	The risk of job shortages for employees can lead to difficulties in career advancement. This risk may arise from various factors, including economic downturns, technological advancements, changes in industry demand, and changes in government policies	<ul style="list-style-type: none"> <li>Ensure sufficient employment for workers, minimizing the risk of unemployment that impacts society.</li> <li>Create opportunities to increase the employment rate of local workers.</li> <li>Invest in new projects to increase revenue and profit, while also creating additional job opportunities for various groups.</li> </ul>



The management of environmental and social risks is the responsibility of all units and individuals within the Company who are involved in the Company's production and business activities. Environmental and social criteria are assigned to departments and will be periodically evaluated by each management level.

# GOVERNANCE ON SUSTAINABLE DEVELOPMENT (Cont.)

## CLIMATE CHANGE RISK


**PVCFC is deeply aware of the risks that climate change poses to the Company's production and business activities. As a fertilizer production and trading enterprise, PVCFC understands that agricultural production can be severely affected by rapidly changing climatic conditions, threatening productivity and yield, such as higher temperatures, increased rainfall, prolonged heatwaves, droughts, rising sea levels, etc. Additionally, the transition to a low-carbon economy also presents many risks for PVCFC.**

## PHYSICAL RISKS

According to assessments by international organizations, Vietnam is one of the five countries most severely affected by climate change and rising sea levels. The physical risks related to climate change that have immediate or long-term impacts on PVCFC include floods, rising sea levels, tropical storms, heatwaves, heat shocks, and droughts. With their negative impact and the increasing risk of intensified severity, the abnormal fluctuations of these risks could significantly affect agricultural production areas, which in turn could have a substantial impact on the market's ability to consume fertilizers. The Mekong Delta, which is a key market for PVCFC, is the region most severely affected compared to other areas in Vietnam.

## TRANSITION RISKS

The transition to a net-zero emissions world is becoming increasingly urgent. With the desire to take more decisive action on climate change, Vietnam has committed to achieving net-zero emissions by 2050 at the COP26 conference. This could lead to several risks that PVCFC will face in the transition to a low-carbon economy.



### Policy and Legal Risks

Changes in the issuance of relevant policies and legal frameworks in the near future will significantly impact operating costs, arising from the purchase of carbon credits, as well as increasing the need for capital investment to meet new standards for efficient energy use, including for companies like PVCFC.



### Technology Risks

The deployment of new technologies to both decarbonize and meet the growing energy demand poses technology risks for the nation in general and for businesses like PVCFC in particular. The reduction in renewable energy costs may create cost competition with fossil fuels, but the deployment of renewable energy requires significant initial investment. Furthermore, the early discontinuation of fossil fuel sources is certainly beneficial for the climate, but it may present challenges for large producers like PVCFC.



### Market Risks

Constant changes in international trade regulations, along with global geopolitical uncertainties, are posing significant challenges for traditional industries. These industries, particularly, face the threat of transitioning to a low-carbon economy while other countries are implementing carbon border adjustment policies to accelerate decarbonization. At the same time, institutional investors are beginning to limit funding for fossil fuel sources. All these factors are creating significant impacts, especially for exporting countries like Vietnam, where the fertilizer industry is also significantly affected. Additionally, the imposition of carbon taxes both domestically and in importing countries may require PVCFC to innovate technology, upgrade equipment, or build new facilities. This could affect product costs, thereby threatening the company's profitability.

## HOW THE BOARD OF DIRECTORS RECEIVES AND MONITORS RISK MANAGEMENT INFORMATION

Based on the established Risk Appetite Statement, Risk Tolerance Levels, and Risk Metrics, the Executive Management, the Audit and Risk Management Committee (ARMC), and the Board of Directors (BOD) receive quarterly reports on the implementation of risk management, reviewing and assessing the identified key risks in the Company's Risk Register as well as emerging risks. This allows for timely monitoring and guidance to ensure effective risk management.

Guided by the Board of Directors' direction on sustainable development, the Company deeply understands the significance and importance of managing risks related to sustainable development. By identifying both the challenges and opportunities that these risks present, the Company will develop appropriate risk management strategies and operational plans.



# GOVERNANCE ON SUSTAINABLE DEVELOPMENT (Cont.)

## INFORMATION MANAGEMENT AND SUSTAINABILITY REPORTING

Disclosure on on risk management or sustainability activities is governed by the information/document management regulation issued by the Board of Directors (BOD).

When preparing sustainability report the BOD forms a working group, and the relevant departments/units submit the information/documents under their responsibility to the working group for compilation and reporting. All information in the report is approved by the Executive Management before being submitted to the BOD for approval. The Audit and Risk Management Committee (ARMC) and the ESG Committee are responsible for overseeing, and the BOD approves the disclosure of information on sustainable development to ensure it meets the required standards.

## REQUIREMENTS AND POLICIES FOR SENIOR PERSONNEL IN SUSTAINABLE DEVELOPMENT

Recognizing the importance of governance and practice in sustainable development, the Company has established requirements and policies for the Company's management and executive team related to sustainable development, such as:

For the composition of the Board of Directors, in addition to core professional competence requirements, the Company aims for diversity within the Board with criteria that include:

- Diversity in age
- Diversity in gender
- Diversity in independence
- Diversity in expertise and industry
- Diversity in nationality
- Diversity in culture
- Other diversity factors that align with the Company's development strategy

When developing policies on remuneration and compensation for the Board of Directors and the Executive Management, the Company use those criterias group related to sustainable development. The performance evaluation of the Board and Senior Management includes KPIs related to sustainable development.



# CREATING SUSTAINABLE VALUE



**The Company not only contributes to environmental protection and improving the quality of life in the community but also builds a solid business foundation. This not only enhances the company's reputation and position in the market but also lays the groundwork for ensuring sustainable development in the future. As a result, the company can maintain competitiveness and long-term success.**

## GREEN FINANCE FRAMEWORK

Green finance focuses on investing in projects and activities that minimize negative environmental impacts, such as renewable energy, energy conservation, and sustainable resource management. Currently, PVCFC is investing in projects that benefit the environment, as well as in social welfare initiatives such as tree planting, bridge construction, and improving the environment and infrastructure in various areas.

Additionally, PVCFC is investing in projects and scientific research that help reduce environmental emissions and regenerate energy, such as rooftop solar energy projects; food-grade CO2 production projects; investments in scientific research topics like the ORC system; utilizing excess energy to generate electricity for production at the Ca Mau Fertilizer Plant, and developing organic fertilizers and fertilizers that are environmentally friendly to the soil.



## FINANCIAL INCLUSION

Financial Inclusion ensures that everyone, especially vulnerable and disadvantaged groups who have difficulty accessing traditional finance, has the opportunity to access financial services.

Initiating its first activities aimed at helping farmer customers overcome financial difficulties, PVCFC is currently drafting regulations on deferred payment sales. This is considered a credit activity, supporting customers who face cash flow challenges in their operations.

# 04

## BUILDING A MORE PROSPEROUS LIFE

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# BUILDING A SUSTAINABLE SUPPLY CHAIN




 The impacts of PVCFC's business operations on environmental and social issues extend beyond activities within the factory premises. We are aware of the environmental and social impacts resulting from the production and supply of raw materials, chemicals, and services essential to our business operations. Therefore, in our supplier selection process, we require and only choose entities that comply with legal requirements concerning environmental and social standards. In the coming years, we plan to gradually incorporate deeper environmental and social assessment criteria into our supplier evaluation process.

# BUILDING A SUSTAINABLE SUPPLY CHAIN (Cont.)

## THE ROLE OF A SUSTAINABLE SUPPLY CHAIN AT PVCFC



**A sustainable supply chain is a system designed and operated to optimize resource efficiency, minimize negative impacts on the environment and society, and ensure long-term sustainability for all stakeholders involved.**

We recognize that a supply chain designed and operated to optimize resource efficiency, minimize negative impacts on the environment and society, while ensuring long-term sustainability for all stakeholders is essential.

We believe that building a sustainable supply chain is not only a compulsory requirement but also a key strategic factor for maintaining competitiveness and achieving sustainable development. Ensuring that our suppliers comply with sustainability standards helps us mitigate risks, enhance operational efficiency, and contribute positively to the community and the environment.

Currently, 100% of our technology licensors (Topsoe, Toyo, Saipem, Espindesa) meet environmental and social criteria, such as waste management, energy saving, pollution reduction, occupational safety, and ethical commitments. These evaluations are conducted by reputable independent assessors.

In the future, we plan to develop an assessment model for our main equipment suppliers within the supply chain. We are also considering applying these evaluation criteria to future investment decisions to ensure that all activities and investments align with the company's sustainability goals.

A sustainable supply chain not only plays a vital role in optimizing operational performance but also has a profound impact on the environment and society. Activities within the supply chain, from production and transportation to distribution, can positively or negatively affect natural resources, working conditions, and surrounding communities. A sustainable supply chain helps minimize carbon emissions, utilizes resources more efficiently, and ensures fair working conditions.

We believe that building a sustainable supply chain is not only a mandatory requirement but also an important strategic factor to maintain competitiveness and sustainable development. Ensuring that our suppliers comply with sustainable standards helps us minimize risks, improve operational efficiency, and make a positive contribution to the community and the environment.



## SPECIFIC ACTIONS BY PVCFC

In 2023, PVCFC utilized traditional supplier assessment criteria, such as evaluating financial capability, production capacity, and after-sales service, without incorporating specific environmental and social evaluation criteria. However, we ensured that there were no violations related to environmental and social issues from our suppliers within the supply chain during the year 2023.

According to our proposed roadmap, in 2024, PVCFC will officially implement a procurement policy that ensures transparency, fairness, and equity among suppliers. We also plan to establish a model for assessing key equipment suppliers within our supply chain. Additionally, we are considering the application of specific environmental and social evaluation criteria for future investment decisions to ensure that all activities and investments align with the company's sustainability goals.

# A PROSPEROUS LIFE FOR EMPLOYEES

## OCCUPATIONAL HEALTH AND SAFETY OF EMPLOYEES GRI 403

### WORKPLACE HAPPINESS



The company manages occupational health and safety in accordance with ISO 45001:2018 standards, which includes our Quality, Safety, and Environment Policy, as well as the assessment and testing protocols of PVCFC. This framework is implemented to control workplace safety and hygiene within the organization. Moreover, the company consistently complies with legal regulations regarding occupational health and safety to ensure safe working conditions for employees.



# OCCUPATIONAL HEALTH AND SAFETY OF EMPLOYEES (Cont.)

## WORKPLACE HAPPINESS (Cont.)

### Occupational Health Services GRI 403-3

The company diligently conducts regular health check-ups for employees in accordance with State regulations. We perform biannual health examinations and screenings for occupational diseases for employees working in heavy, hazardous, and toxic environments.



### Enhancing Employee Health GRI 403-6

-  Employee health is a valuable asset for any business. Recognizing this, the company not only fulfills regular health check-up requirements and screenings for occupational diseases as mandated by law but also expands the range of health indicators monitored to detect illnesses in employees promptly.
-  The company provides hazardous work allowances and in-kind benefits for employees working in dangerous and toxic environments as per state regulations.
-  Each month, the company organizes insect pest control two times to prevent disease outbreaks in both the housing areas and the factory.
-  Annually, the company conducts comprehensive environmental monitoring in compliance with legal regulations. Areas with hazardous or harmful factors are addressed with timely corrective and preventive measures to ensure a safe working environment, with all monitored indicators remaining within permissible limits.
-  The company supplies personal protective equipment and specific safety gear to employees in accordance with regulations, minimizing the impact of hazardous factors on their health.
-  Additionally, the company has launched an online health consultation service for employees.

# OCCUPATIONAL HEALTH AND SAFETY OF EMPLOYEES (Cont.)

## PROCESS SAFETY

Annually, the company conducts hazard identification and risk assessment to ensure that all safety and health hazards in the workplace are effectively detected and controlled. These risks are communicated to each employee to minimize the chances of accidents, safety incidents, and occupational diseases.

Risks are categorized and managed through risk assessment and appropriate measures aimed at bringing risks down to acceptable levels. The processes for hazard identification and risk assessment are essential tools for enhancing workplace safety and health conditions for employees.

Information about these risks is disseminated to each employee in compliance with legal requirements through various communication methods, such as organizing safety competitions and regularly publishing safety newsletters. Additionally, the company measures and evaluates working environment as a basis for organizing annual health check-ups and screenings for occupational diseases. This approach enables the company to develop strategies for arranging a work environment that aligns with employee health, thereby protecting them from potential occupational disease risks.

**The company rigorously implements occupational health and safety training and provides personal protective equipment to employees in compliance with legal requirements. Safety training is conducted every two years, and the status of employee training for the years 2022 and 2023 is as follows:**



Due to the COVID-19 pandemic, no training was organized in 2021.



In 2022, the company organized self-training in occupational health and safety for 100% of workers (received training) and contracted a service provider to train 754 individuals (specialized training).

**1,230** employees



In 2023, the company conducted self-training in occupational health and safety for

**427<sup>(\*)</sup>** employees



- The rate of work-related injuries: **0**
- Occupational diseases: **0**



PVCFC 2024 Competition for Excellent Occupational Health and Safety Officer.

(\*) Due to PVCFC's specific occupational safety and health training program, the number of employees trained in PVCFC's labor safety and hygiene will fluctuate from year to year.

# ATTRACTING AND RETAINING TALENT



PVCFC is committed to fostering a humane working environment by continuously improving its policies for employees, from compensation and rewards to welfare programs. The company also provides optimal conditions for employees to fully realize their potential through flexible recruitment policies and in-depth training programs.



PVCFC New Year's Gathering - Lunar New Year of the Dragon 2024.

## TALENT ATTRACTION AND EMPLOYEE BENEFITS POLICY

PVCFC provides salaries, bonuses, benefits, and other policies in compliance with legal regulations, Corporation standards, and company policies to ensure a decent living for employees. The PVCFC labor union participates in training to stay updated on amendments and additions to the regulations and implementation guidelines of the Vietnam Labor Union, as well as to protect employee interests.

Each year, based on production and business results and legal regulations, PVCFC establishes a wage and bonus fund for management and employees. The company has issued comprehensive regulations regarding employee benefits and reward criteria for both teams and individuals, based on their contributions to achieving the company's business results and operational efficiency.

The reward criteria for teams and individuals encourage employees to demonstrate teamwork, actively participate in initiatives, comply with the Party's policies and State laws, and propose innovations (including technical solutions, management strategies, operational improvements, and applications of technological advances) that enhance productivity, improve work efficiency, or result in recognized research topics effectively applied within the company.

# ATTRACTING AND RETAINING TALENT (Cont.)

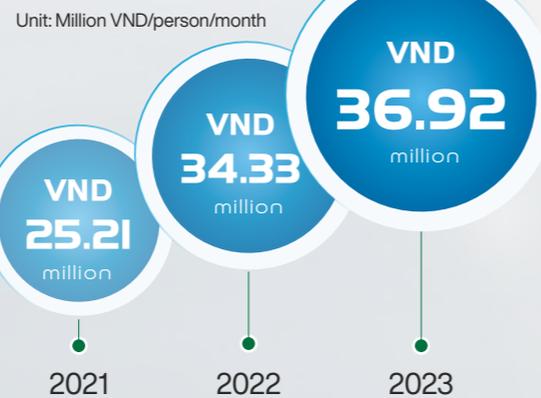
## TALENT ATTRACTION AND EMPLOYEE BENEFITS POLICY (Cont.)

PVCFC continually creates a convenient and safe working environment while effectively implementing labor policies, wages, bonuses, and social and health insurance, in accordance with legal regulations, Corporation standards, and company policies:

**1.** Wages and Benefits: Salaries, bonuses, overtime payment, and other allowances are provided based on the wage and bonus management regulations and employee welfare policies. Benefits are distributed according to the Collective labor agreement and employee policies.



**2.** Average Salary: The average salary of employees is stable and gradually increasing over the years, specifically:



The total amount paid to the Social Insurance Agency in 2023

**3.** The company fully and timely contributes to social insurance, health insurance, and unemployment insurance in accordance with the Labor Code and the Social Insurance Law. In 2023, the company had no pending contributions. The total amount paid to the Social Insurance Agency in 2023 was VND 87,655,922,050 including: **Social Insurance: VND 64,073,507,975, Health Insurance: VND 14,557,303,540, Unemployment Insurance: VND 9,025,110,535**

**4.** The company rigorously conducts occupational health and safety training and provides personal protective equipment as required. The company also pays hazardous work allowances and in-kind benefits to employees working in dangerous environments as per State regulations.



# ATTRACTING AND RETAINING TALENT (Cont.)

## TALENT ATTRACTION AND EMPLOYEE BENEFITS POLICY (Cont.)

**5.** The company offers expanded personal accident insurance (PVI Care) for all employees, participates in voluntary retirement insurance, and human life insurance (“Post-Paid Benefits”) to enhance employee attraction and stabilize their living conditions.

**6.** The company provides housing for employees and supports them financially when they meet the criteria for housing but the available units are insufficient. Currently, there are 359 apartments allocated, accommodating 515 out of 1,096 employees, accounting for 47.0%. Additionally, 58 employees receive housing rental assistance, making up 9.98% of those eligible.

**7.** Providing housing for employees and financial support for employees who meet the criteria for housing but the housing fund is insufficient to provide.

**8.** In addition to ensuring compliance with labor policies, wages, and social benefits, PVCFC emphasizes external recruitment and internal talent development. The company has established several regulations aimed at enhancing workforce capabilities.

**9.** Activities focused on the mental well-being of employees are always emphasized, such as: giving gifts for birthdays, International Women’s Day (March 8), Vietnamese Women’s Day (October 20), organizing team-building activities to connect employees, supporting those facing difficult circumstances, and hosting cultural exchange and sports programs to create a supportive environment and foster unity within the company. PVCFC has successfully established a physical fitness model for employees and their families living in company housing through 19 sports clubs, including: Men’s/Women’s/Children’s Football, Men’s/Women’s Volleyball, Table Tennis, Basketball, Badminton, Tennis, Swimming, Aerobics, Gymnastics, Martial Arts, Running/Walking, Reading, English, Coaching, Chess.



Opening Ceremony of the Tennis Tournament at the PVCFC Sports Festival in 2023.



PVCFC’s Women’s Day (March 8th) Celebration Program.

# ATTRACTING AND RETAINING TALENT (Cont.)

## TALENT ATTRACTION AND EMPLOYEE BENEFITS POLICY (Cont.)



**10.** Organizing various activities such as public cultural performances, company-wide sports events, and summer classes for employees' children, including swimming, martial arts, dancing, chess, badminton, football, basketball, and the Kid Runs race. Additionally, the company hosts programs for the Mid-Autumn Festival, International Children's Day (June 1), summer camps focused on music and painting, a night of Trinh Cong Son's music, a MasterChef competition, Family Day, career exploration programs for employees' children and high school students, as well as training programs for union staff.



**11.** Expert Policy: This policy aims to guide and establish a career development pathway for the company's personnel, focusing on high-level technical expertise. It also seeks to attract and recruit talented individuals from the external job market.



**12.** Internship Program: Through this initiative, PVCFC has the opportunity to identify and engage passionate individuals with the necessary skills and professional competencies that align with the company's goals and development strategy. By 2025, PVCFC plans to establish an "Internal Trainer Development Program" aimed at enhancing knowledge, skills, and leveraging the existing potential within the company.

# ATTRACTING AND RETAINING TALENT (Cont.)

## TALENT ATTRACTION AND EMPLOYEE BENEFITS POLICY (Cont.)

### EMPLOYEE TURNOVER AND RECRUITMENT RATE (\*) (According to the consolidated report data) GRI 401-1



#### EMPLOYEE TURNOVER RATIO

The trend in employee turnover has steadily decreased, with a total of

**26** EMPLOYEES

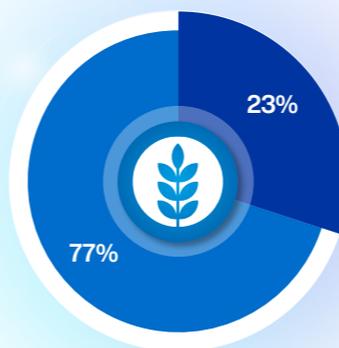
leaving the company this year. This represents a reduction of 21.21% compared to the same period in 2022 and a decrease of 39.53% compared to the same period in 2021. PVCFC has a stable and cohesive workforce, reflecting the sustainability of its personnel.

Gender Breakdown:

Female: 6 out of 26 employees (23.08%)

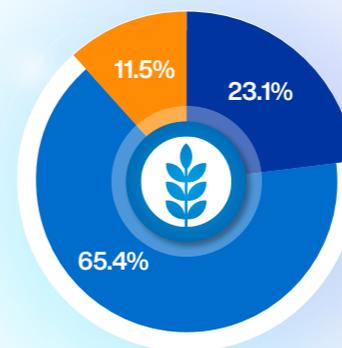
Male: 20 out of 26 employees (76.92%)

Turnover ratio by gender



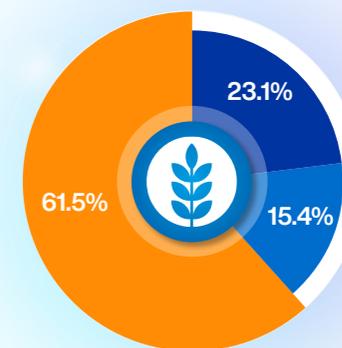
- Female (6 people)
- Male (20 people)

Turnover ratio by age



- <30 years old (6 people)
- 30-50 years old (17 people)
- >50 years old (3 people)

Turnover ratio by region



- Northern (6 people)
- Central (4 people)
- Southern (16 people)



#### NEW RECRUITMENT RATIO

The company saw an increase of

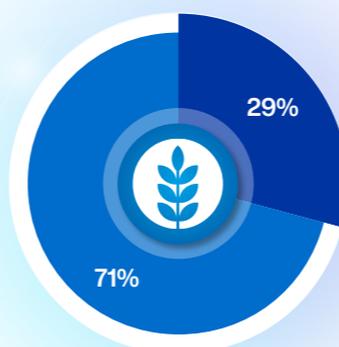
**80** NEW EMPLOYEES

this year, marking a rise of 48.15% compared to the same period in 2022. The breakdown is as follows: Gender Breakdown:

Female: 23 out of 80 employees (28.75%, with no female managers added during this period)

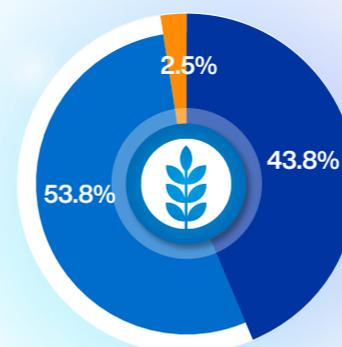
Male: 57 out of 80 employees (71.25%, including 3 male managers out of 48)

New hire ratio by gender



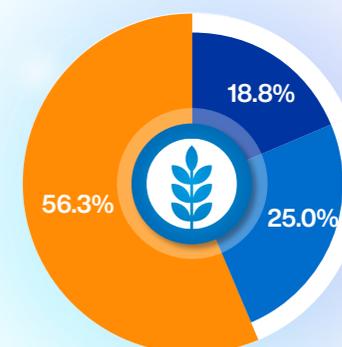
- Female (23 people)
- Male (57 people)

New hire ratio by age



- <30 years old (35 people)
- 30-50 years old (43 people)
- >50 years old (2 people)

New hire ratio by region



- Northern (15 people)
- Central (20 people)
- Southern (45 people)

(\*): Assured data.

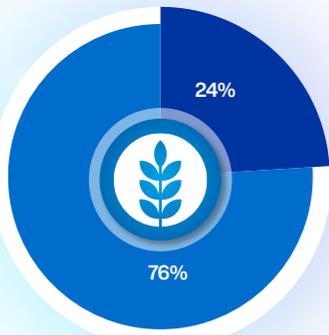
# ATTRACTING AND RETAINING TALENT (Cont.)

## TALENT ATTRACTION AND EMPLOYEE BENEFITS POLICY (Cont.)

### DIVERSITY OF MANAGEMENT LEVELS AND EMPLOYEES (\*) (According to the consolidated report data)

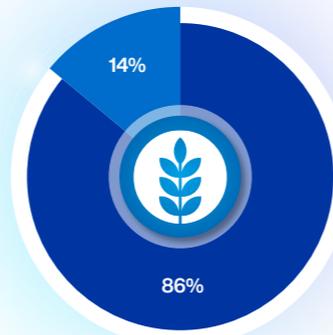
GRI 405-1

Board ratio by gender



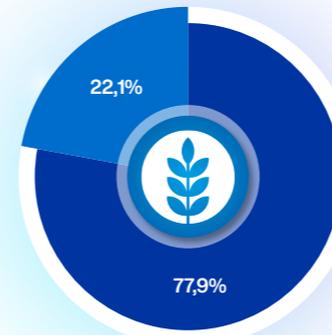
- Female (6 people)
- Nam (19 people)

Management ratio by gender



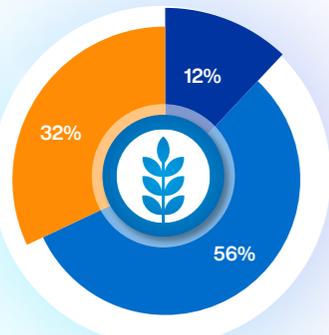
- Female (27 people)
- Nam (162 people)

Staff ratio by gender



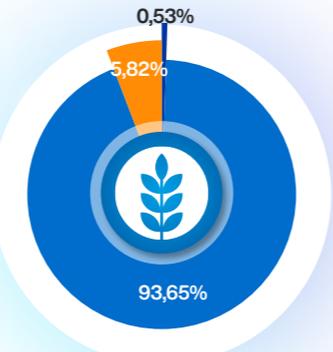
- Female (244 people)
- Nam (862 people)

Board ratio by age



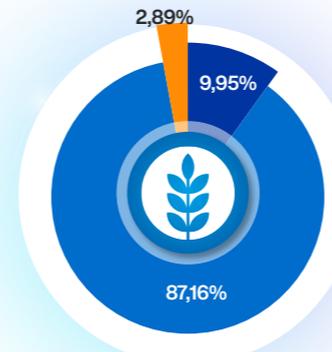
- <30 years old (3 people)
- 30-50 years old (14 people)
- >50 years old (8 people)

Management ratio by age



- <30 years old (1 people)
- 30-50 years old (177 people)
- >50 years old (11 people)

Staff ratio by age



- <30 years old (110 people)
- 30-50 years old (964 people)
- >50 years old (32 people)

GRI 401-3



### Maternity Leave in 2023

(According to the consolidated report data)

Total Employees on Maternity Leave **16**

Return and Retention Ratio: 100% of employees who took maternity leave in 2023 returned to work and were retained.



(\*): Assured data.

# TRAINING AND DEVELOPMENT

GRI 404

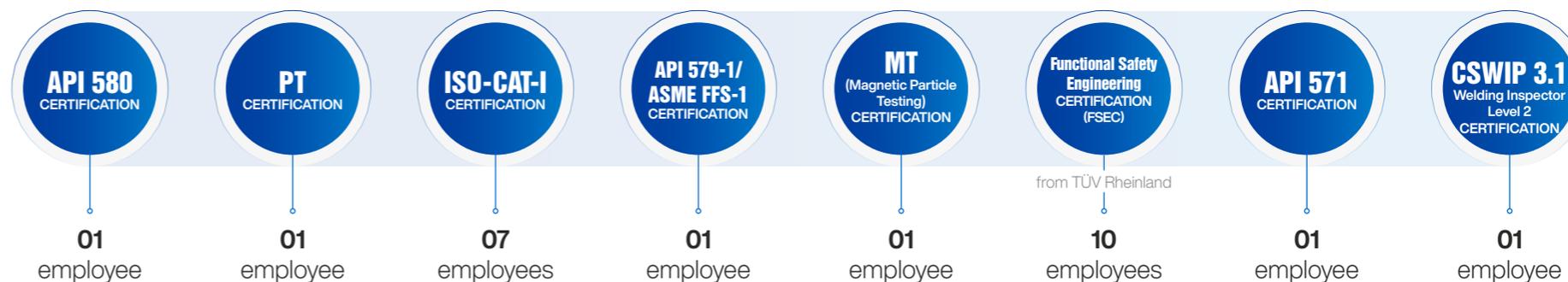
## TRAINING AND DEVELOPMENT STRATEGY



The training and development of human resources is a key focus for the company's leadership, ensuring that all employees have opportunities to participate. Additionally, the company emphasizes regular performance evaluations for 100% of employees, which helps individuals leverage their strengths and contribute to the sustainable development of the organization.

- Training and Development Strategy
- Training Plan: PVCFC has developed a training plan focusing on specialized courses, management and leadership training, ongoing skill development, language training, and internal training programs.
- Diverse Training Forms: The Company offers various training modalities, including in-person and online sessions, to provide flexibility and facilitate participation. This approach enhances the effectiveness of training while maintaining stability in management, production, and business operations.
- Annual Training Budget: PVCFC ensures that the annual training budget meets the ongoing needs for employee development, maintaining high quality to support job requirements and the strategic directions of the company.
- Recognizing that people are central to the sustainable development of PVCFC, the Company's strategic human resource development plan aims for 2025. The General Director approved Decision No. 2859/QD-PVCFC on December 24, 2021, which outlines detailed strategic objectives for the 2021–2025 period. This plan focuses on building a team of experts and sourcing personnel to ensure the expertise and competencies necessary for implementing the company's development strategy and business operations across several key areas, including: Corrosion Management; Technology Optimization and Design; Equipment Condition Diagnosis; Automation Control Systems; Operation of Urea Technology Equipment; Dynamic Equipment; Electrical Systems and Equipment. Each year, PVCFC reviews its expert talent pool to identify promising candidates for expert development.

• The team at PVCFC is committed to continuous learning and skill enhancement, achieving valuable international certifications, including:



# TRAINING AND DEVELOPMENT (Cont)

## COMMITMENTS AND GOALS

- Alignment with Company Strategy: PVCFC is committed to adhering to the company's overall strategy by refining regulations and processes related to training and human resources. This aims to create the best conditions and mechanisms for learners and to foster a continually developing learning culture.
- Training Management Guidelines: The Board of Directors issued Decision No. 1619/QD-PVCFC on July 11, 2022, approving and implementing the organization and management of the company's training activities.



## SENIOR MANAGEMENT POLICIES

- Training Implementation: PVCFC is utilizing the Impact Platform by FranklinCovey to deliver 25 courses over 12 months, aimed at enhancing and supplementing more than 40 essential skills for senior and middle management (100 employees). This system improves the learning mindset and saves time on in-person participation, allowing learners the flexibility to engage in 25 training sessions.
- Career Development Pathway: The company places significant emphasis on establishing a clear career development path and high-level technical expertise for its leading experts. Specific conditions, criteria, and standards have been set for evaluating and certifying experts systematically. On February 24, 2022, the General Director issued Decision No. 285/QD-PVCFC, approving the guidelines for managing and utilizing company experts.

## METHODS OF COMMUNICATION WITH STAKEHOLDERS

- PVCFC engages with and hires training services from reputable domestic and international institutes/schools/training units that have expertise in specialized fields, with experienced and capable instructors.
- PVCFC has signed MOUs with specific universities such as Hanoi University of Science and Technology, Ho Chi Minh City University of Technology, PetroVietNam University, University of Technical Education, University of Industry, and Can Tho University.



# TRAINING AND DEVELOPMENT (Cont)

## SPECIFIC ACTIVITY GROUPS TO ACHIEVE THE OBJECTIVES

- Comprehensive Training Programs:** In 2023, PVCFC organized specialized training sessions covering management, leadership, ongoing skill development, language training, and internal training. The programs were conducted in both in-person and online formats to offer flexibility, facilitating employee participation and enhancing the effectiveness of training while maintaining smooth business operations.
- Training for Senior and Middle Management:** Courses and seminars were held on topics such as “How Corporate Culture Enhances Management Effectiveness” and “Board Culture and Governance through Cultural Leadership” targeted at management personnel from mid-level and above.
- Cultural Development Project Training:** A training program entitled “7 Effective Habits” and “Leading with the Speed of Trust” was conducted for all company employees. These sessions included extracurricular activities themed around “Effectiveness and Responsibility,” aimed at strengthening the corporate culture within PVCFC.

- Expert Training:** PVCFC places a strong emphasis on developing experts, having implemented a program that has successfully cultivated 6 specialists across various fields, including corrosion management, technology optimization and design, equipment condition diagnosis, water treatment, automation control systems, and Urea technology operation. Additionally, there are 2 candidates in dynamic equipment and electrical systems who meet competency frameworks, alongside 4 candidates who have achieved Level 1 expert competency in fields such as Electrical Systems, Equipment Testing, Microbiology, and Agriculture.
- Corporate Culture Training:** Courses on corporate culture are conducted regularly, including manuals and business conduct codes (COC), offered 1-2 times a year. Participation and completion rates exceed 85%.
- E-learning Training:** Internal training sessions on information security awareness, anti-terrorism, and soft skills are provided through the e-learning system to help employees develop supplementary skills for their jobs.
- Onboarding for New Employees:** All new hires participate in a comprehensive onboarding program, with a 100% participation rate. In 2023, the company collaborated with the Labor Union to organize factory tours, visits to U Minh Forest, and the Ho Chi Minh Memorial site, including a direct dialogue session with the General Director. The average training hours amount to 26 hours per employee per year.
- Internship and Talent Development:** PVCFC has implemented programs for interns, providing training and financial support for students during a 3-month internship. This initiative not only contributes to social welfare and enhances education for the youth but also helps the company build a pipeline of quality talent. In 2023, PVCFC connected with universities to assess and recruit interns, resulting in 11 out of 25 interns achieving excellence, with 2 officially hired by the company.



*PVCFC creates more sustainable and prosperous value.*



*PVCFC Internship Welcome Program.*

## TRAINING AND DEVELOPMENT (Cont)



PVCFC organized training sessions to enhance the level of professional competence, knowledge, skills, and expertise to ensure business operations for employees. Specific Training Data:

2021: Total training hours were **24,698** hours.

2022: Total training hours were **24,705** hours.

2023: Total training hours were

**30,993** HOURS

with an average of

**23.5** HOURS PER PERSON PER YEAR

Training Hours by Employee Classification:

**28,171** HOURS/YEAR

**Senior Management** (executives; department heads and equivalents)

**1,100** HOURS/YEAR

**Middle Management** (deputy department heads and equivalents, workshop heads, team leaders)

**1,722** HOURS/YEAR

## TRAINING RESULTS AND ANALYSIS FOR 2023 AT PVCFC DETAILED RESULTS

-  Training Budget: The training budget for 2023 was fully met, achieving 100% of the plan. The allocated budget was VND 13 billion, and the actual expenditure was also VND 13 billion.
-  Employee Training Participation: The participation rate of employees in training reached 115.37% of the plan.
-  The training has significantly enhanced employees' professional skills, ensuring the factory operates safely, reliably, and steadily. Employees are now more proactive in performing comprehensive plant maintenance without the need to hire external experts.
-  The PVCFC roadmap is currently implementing job descriptions and assigning KPIs to evaluate performance based on the completion of assigned tasks.
-  On the other hand, PVCFC provides a team of experts and specialized personnel to support other units within the Corporation in maintenance, operations, and production activities.
-  PVCFC has a workforce under 39 years old, accounting for nearly 70% of total employees. With a young, dynamic, and eager-to-learn attitude, training efforts are focused on this group to ensure effective training outcomes and to meet the Company's future goals.
-  The age similarity among PVCFC personnel allows for targeted and appropriate training programs. Additionally, the team is easily accessible and effectively utilizes the E-learning system, which helps save on in-person training budget resources and enhances self-learning capabilities. This flexibility increases their knowledge and personal value. The team is well-suited in terms of age and is being prepared for future roles within the Company.

# LABOR RIGHTS

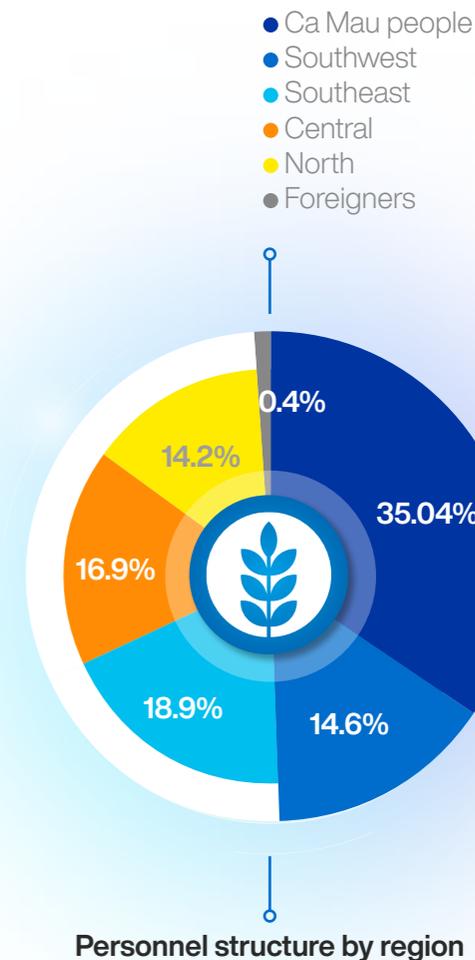
GRI 405; GRI 408

## GENDER COMPOSITION OF WORKFORCE



**People are at the center of development and are the driving force behind PVCFC's sustainable growth. PVCFC is committed to gender equality and has consistently focused on this issue. It has become one of the first Vietnamese companies to receive the Gender Equality Certification using the GEARS tool (Gender Equality Assessment, Results and Strategies), with certification awarded on April 20, 2023.**

The PVCFC workforce primarily consists of local personnel: individuals from Ca Mau accounting for 35.04%, employees from other provinces in the Southwest region account for 14.6%, the Southeast region represents 18.9%, Central Vietnam constitutes 16.9%, and the Northern region comprises 14.2%. Foreign workers employed abroad account for 0.4% of the total workforce at PVCFC. This diverse sourcing of personnel across regions enhances the company's ability to adapt to its business operations. In 2023, new hires primarily came from the Southwest region, with employees from Ca Mau representing 33% of total new hires compared to the same period in 2022, marking a 38% increase in new personnel compared to the same period in 2021. The workforce primarily consists of Kinh ethnic group members, accounting for 99.1%. Minorities such as Hoa, Khmer, Cao Lan, and Chaoro make up 9% of the total personnel at PVCFC. Individuals with no religious affiliation represent 97.26%, while other religions—such as Cao Dai, Catholicism, Hoa Hao, Buddhism, Christianity, Tu An Hieu Nghia (Four graces of filial piety)—account for 2.74% of the total workforce. PVCFC does not differentiate based on religion or nationality in the recruitment and hiring process.




  
 As of December 31, 2023, the total number of employees at the Company is

**1,320** PERSON

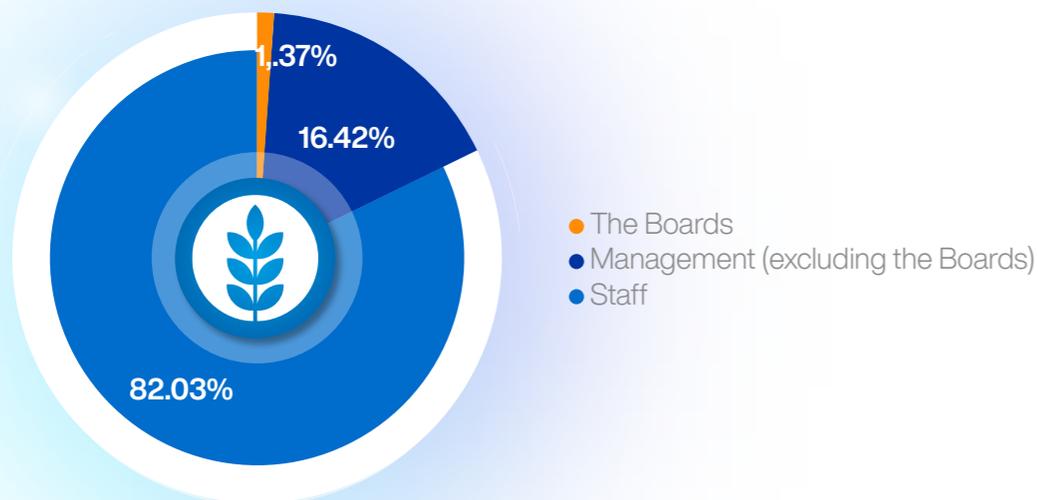
representing an increase of 4.35% compared to the same period in 2022. Among them, the number of female employees is 277, accounting for 20.98%. Given the Company's business model, the operation and production team constitutes the majority of the workforce and works in shifts to ensure the plant operates 24/7. As a result, the arrangement of female employees in operational roles is limited, particularly due to night shifts and challenges related to reproductive health and childcare.



PVCFC's Women's Day (March 8th) Gathering.

## LABOR RIGHTS (Cont.)

### MANAGEMENT STRUCTURE BY GENDER AT PVCFC AND PPC



**The Boards (Board of Directors, Board of Management, Supervisory Board, Chief Accountant):** 25 out of 1,320 employees, accounting for 1.89%, a decrease of 7% compared to the same period in 2022. Among these, 6 are female, representing 24%. The number of female executives has increased by 2% compared to 2022.

**Management (excluding the Boards):** 189 out of 1,320 employees, making up 14.32% of the total workforce, a decrease of 2% compared to the same period in 2022. Among these, 27 are female managers, accounting for 14.28% of all departmental and unit leaders, which is 2% of the total workforce. In 2023, the number of female managers at this level increased by 1 compared to 2022.

**Staff:** 1,106 out of 1,320 employees, accounting for 83.78%.

**At PVCFC, there is no disparity in average income between the two genders.**

**The company currently determines salaries based on three aspects:** job position, skills, and work performance, ensuring that there is no income gap between genders.

### POLICIES ON LABOR RIGHTS

The Board of Directors of the Company issued Decision No. 2975/QD-PVCFC on December 5, 2022, approving and implementing the democratic regulations of the Petrovietnam Ca Mau Fertilizer Joint Stock Company. The adoption of all communication policies includes

- Each year, PVCFC organizes regular dialogue meetings between employees and management (representatives of employers) with the Labor Union (representatives of employees). During these meetings, PVCFC shares information about policies, production and business plans, strategic directions, and addresses questions from employees regarding their rights and benefits.
- According to an internal satisfaction survey conducted in 2023, the satisfaction level reached 83.4%, an increase of 0.6% compared to 2022 (82.8%). The satisfaction rate among employees with 10 or more years at the company is high, with 96.5% expressing satisfaction. This indicates that the policies and benefits for employees at PVCFC are continuously monitored and adjusted to ensure fairness and protect employee rights.
- In 2023, PVCFC hired consultants to conduct randomized surveys and in-person interviews with senior and middle management regarding the PVCFC Culture. The survey on the "Humane and Happy Working Environment" revealed that 93% of employees feel the company cares deeply about their material and mental well-being.
- PVCFC follows a process to review and compile dialogue questions, sending them to functional departments for responses according to regulations and providing comprehensive announcements addressing policies and human rights for employees.
- PVCFC conducts introductory training for new employees to ensure they receive complete information about PVCFC as well as communication regarding policies, rights, and benefits while working at the company.
- Additionally, PVCFC regularly posts and updates regulations and guidelines regarding employee benefits on the internal communication platform, Facebook at Work. PVCFC also communicates through comprehensive channels and labor union representatives across administrative, production, and business units to ensure that all employees are promptly and fully informed of policies and benefits without discrimination among departments within the company.

# LABOR RIGHTS (Cont.)

## POLICIES ON LABOR RIGHTS (Cont.)

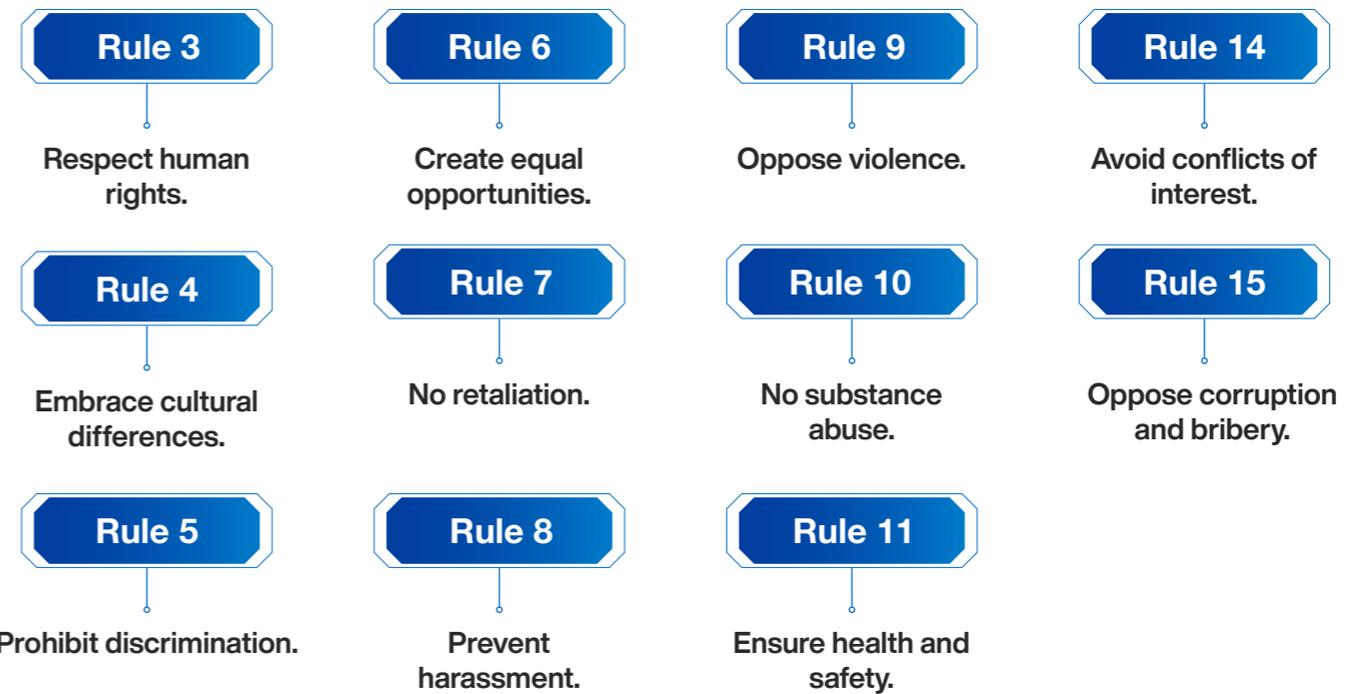


On August 22, 2022, the Board of Directors of PVCFC issued Decision No. 2048/QD-PVCFC regarding the adoption of the Code of Business Conduct (COC). The COC serves as a foundation for PVCFC to develop programs and policies, as well as make decisions that ensure accuracy while aiming for higher governance standards, ensuring compliance. It also guides personnel interactions to become more professional and efficient, contributing to the formation of a sustainable competitive advantage for PVCFC.



PVCFC's Business Management Innovation Program.

The Code of Conduct in daily operations plays a crucial role. Some of the rules related to employee rights include:



This Code also reflects the company's policy of non-discrimination based on gender, religion, political views, age, and other factors.

The company has a policy against using child labor, forced labor, or any form of compulsory labor, as outlined in the company's recruitment regulations (Section 8.2, Article 8 of the Recruitment Policy). (GRI 408-1)

# A MORE PROSPEROUS LIFE FOR CUSTOMERS/FARMERS

GRI 416



## WELFARE OF FARMERS/CUSTOMERS

Understanding the concerns of farmers, Ca Mau Fertilizer is one of the brands that always leads in providing comprehensive nutritional solutions for crops. Additionally, the company is committed to sharing expertise to help maintain productivity, reduce costs, and improve the quality of agricultural products each season, ensuring that farmers enjoy sustainable and prosperous “golden harvests.”

# WELFARE OF FARMERS/CUSTOMERS (Cont.)

## TRAINING AND TECHNICAL SUPPORT



To train and provide technical support for farmers, in 2023, PVCFC widely organized programs to accompany farmers and held workshops on fertilizer usage and cultivation processes.



In the program accompanying farmers, PVCFC organized

**180** DEMONSTRATION MODELS

to experience Ca Mau NPK fertilizer technology for rice and fruit crops.



These models were implemented throughout the Mekong Delta and Central Highlands. PVCFC collaborated with research institutes, agricultural extension centers, and local agricultural services to help farmers increase crop yields and product quality, achieving a profit increase of 10-15% compared to traditional farming practices. Additionally, the program enables farmers to access quality fertilizers while eliminating inferior products.

In addition, collaborated with agricultural extension centers and local agricultural services in the Mekong Delta and Central Highlands to implement 26 demonstration models to experience PolyS NPK on rice and fruit crops, covering an area of 13 hectares.

Specifically for rice, during the same period, PVCFC worked with agricultural extension centers to deploy 20 demonstration models for N46.TRUE and 20 models for N46.C+. With a total of 20 hectares in the Mekong Delta, these implemented models have initially helped farmers reduce fertilizer usage and lower investment costs.

Simultaneously, PVCFC organized workshops on fertilizer usage and cultivation processes. Two technical workshops on effective nutritional solutions for rice in Dong Thap and An Giang attracted approximately 450 farmers and technical staff from the Department of Agriculture, agricultural extension services, and plant protection offices. Two technical workshops on effective nutritional solutions for fruit crops attracted around 550 farmers, agents, and technical staff from various agricultural departments and agencies in Dak Lak and Dak Nong provinces, in collaboration with fertilizer distributors, PVCFC organized three technical workshops on effective nutritional solutions for coffee, durian, and rice crops. The workshops attracted around 900 attendees, including farmers, dealers, and local officials. These events were successful and received positive feedback regarding business promotion, brand image, and PVCFC products.

In 2023, PVCFC collaborated with fertilizer distributors from the Mekong Delta, Southeast region, and Central Highlands to organize 10 field workshops to summarize demonstration models for rice and fruit crops. This program directly helped around 500 attendees access quality PVCFC fertilizer products and improve their farming practices.

Also in 2023, PVCFC partnered with secondary fertilizer distributors to attract approximately 10,000 farmers and distributors to workshops introducing fertilizers. Distributors and farmers were presented with and had the opportunity to experience PVCFC's high-quality product line, particularly Ca Mau NPK.

# WELFARE OF FARMERS/CUSTOMERS (Cont.)

## TRAINING AND TECHNICAL SUPPORT (Cont.)



In 2023, PVCFC conducted a total of over

**>150**  
 MODEL REVIEW WORKSHOPS  
 AND TECHNICAL SEMINARS

**<180**  
 DEMONSTRATION MODELS FOR  
 FUNCTIONAL UREA AND CA MAU  
 POLYPHOSPHATE NPK PRODUCTS

representing a 150%-200%  
 increase compared to 2022 and 2021



In 2023, PVCFC conducted a total of over 150 model review workshops and technical seminars, along with nearly 180 demonstration models for functional urea and Ca Mau Polyphosphate NPK products, representing a 150%-200% increase compared to 2022 and 2021. For the plan in 2024, PVCFC will implement demonstration models and product experiences equivalent to 2023, but the number of model review workshops and technical seminars at mid and small scales will increase by 200% compared to 2023. In 2024, PVCFC will collaborate with distributors in areas where farmers use PVCFC less frequently to help them learn more about PVCFC products.

The workshops were successful and had a positive impact on business, promoting the image and brand of PVCFC and Ca Mau Polyphosphate NPK products. They helped establish strong relationships and credibility with regulatory agencies, dealers, and partner customers, particularly farmers. Through this program, PVCFC further affirmed its commitment to accompanying and sharing quality fertilizer products and optimal cultivation techniques with farmers to achieve the highest production efficiency. As a result, PVCFC built strong connections and credibility with regulatory agencies, distributors, customers, and farmers.

# WELFARE OF FARMERS/CUSTOMERS (Cont.)

## CUSTOMER BENEFITS



PVCFC's policy towards farmers focuses on comprehensive cooperation and a commitment to ensuring farmers' welfare, helping them improve their lives through key policies as follows:



### Product Quality and Safety:

PVCFC continuously researches and introduces many new, high-quality products to the market, meeting the nutritional needs of different crops. This adds value for farmers while minimizing risks to human health and the environment.

### Affordable Pricing and High Accessibility:

PVCFC offers fertilizers at affordable prices, ensuring accessibility for smallholder farmers, especially in remote areas, by utilizing effective distribution channels. PVCFC's extensive distributing network across regions actively monitors local farming conditions, promptly reflecting and proposing suitable support solutions that benefit farmers.

### Transfer of High-Tech Agriculture:

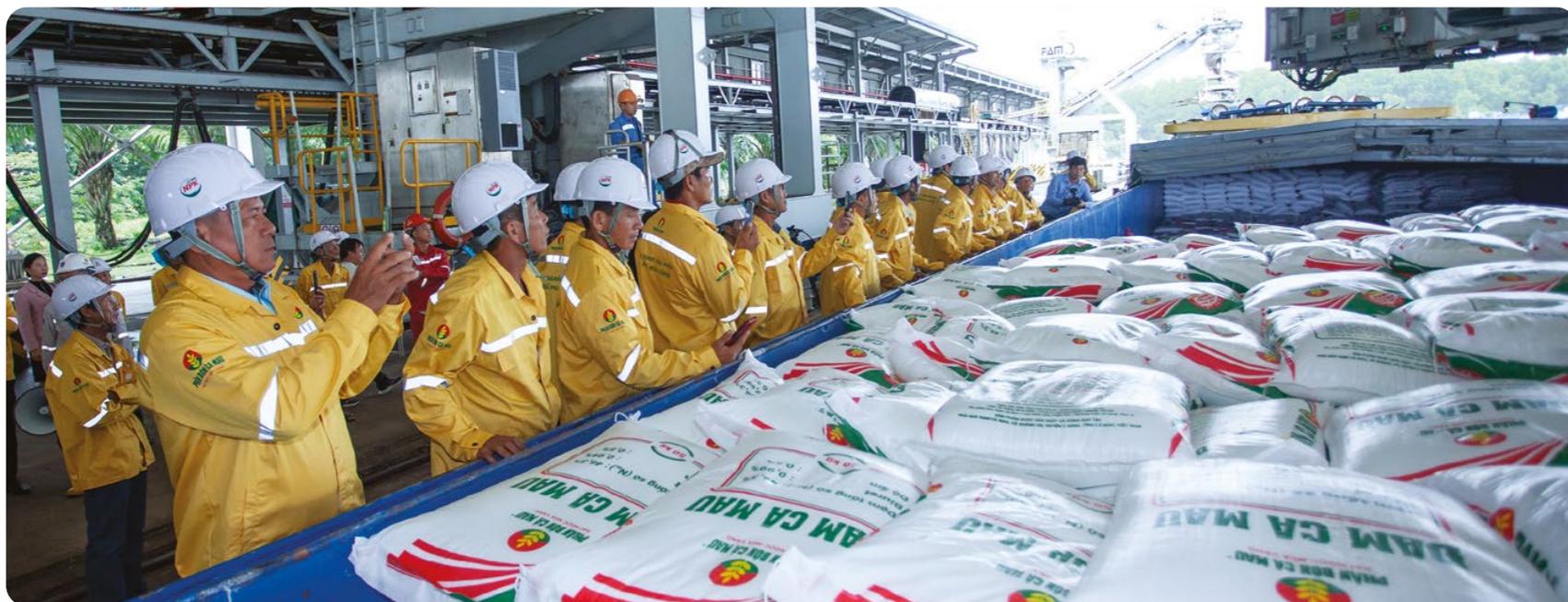
PVCFC facilitates the transfer of technical advances and new solutions in crop nutrition management and agricultural practices. The company collaborates with agricultural extension centers and central and local agricultural authorities to implement training programs and extension services for farmers, enhancing their knowledge and experience in using quality fertilizers effectively and economically. Additionally, PVCFC helps guide farmers in applying new technical advances and adopting sustainable agricultural practices.

### Consumption Support:

PVCFC is making maximum efforts to harmonize the interests of the business with those of farmers. The company provides not only fertilizers but also collaborates with companies in the agricultural value chain, such as seed and plant protection companies, as well as export processing units. This partnership helps farmers reduce production costs while increasing their income, contributing to the enhancement of the value of Vietnamese agricultural products.

# WELFARE OF FARMERS/CUSTOMERS (Cont.)

## EXPANDING COOPERATION WITH STAKEHOLDERS



**“Experience with Ca Mau NPK”**  
- The trial fertilizer program helping 5,000 farmers in 2023 and 10,000 farmers in 2024 to use high quality NPK products with Polyphosphate technology from PVCFC, bringing “golden harvest”.



In 2023, PVCFC collaborated with its distribution system (primary, secondary level, etc.) to organize visits for approximately

# 1,800

FARMERS TO THE  
CA MAU FERTILIZER  
PLANT

This program aimed to help farmers better understand the production process and product quality of PVCFC. In 2024, continuing the success of the “Factory Visit – Golden Harvest” program, PVCFC plans to expand this initiative to 2,500 distributors and farmers, allowing them to experience the program. This series of events also provides an opportunity for farmers and scientists to interact and share cultivation techniques, promoting effective fertilizer use and optimizing agricultural benefits and outcomes.

Specially, the media series **“Factory Visit – Golden Harvest 2023”** allowed not only farmers present at the factory to view the production process and modern equipment but also provided an opportunity for farmers to witness the scale and capabilities of a plant that produces the quality fertilizers they use in their daily farming activities. This initiative helps reassure farmers in their agricultural practices.

From August 2023 to April 2024, PVCFC collaborated with research institutes, agricultural extension centers, and local government agricultural agencies to implement the program **“Choose Ca Mau Fertilizer – Choose a Lasting Partner.”** This series for rice, fruit, and industrial crops includes 10 livestreams, 10 videos filmed in fields, and 5 videos showcasing rice demonstration models. In 2022, PVCFC conducted a similar series with 24 livestreams and 6 videos. The programs have been well-received by many farmers and distributors, sharing knowledge and experience in agricultural practices.

Notably, the series also conveys effective and economical fertilizer usage practices to achieve high, stable yields and quality products, resulting in significant and sustainable economic benefits. This initiative serves as a channel for introducing the quality products of PVCFC to support the agricultural production of farmers, businesses, cooperatives, and farms.

## WELFARE OF FARMERS/CUSTOMERS (Cont.)

### EXPANDING COOPERATION WITH STAKEHOLDERS (Cont.)



In 2023, PVCFC signed information sponsorship agreements with over 20 media outlets as part of its cooperation program and more than 30 media outlets for various events. Concurrently, PVCFC collaborated on advertising and reporting programs with major television channels that garner a high rating and audience interest, such as VTV1, VTV9, THVL, HTV, and local stations. As a result, PVCFC ranks among the top companies in the industry for media coverage, leading in online news and magazines. PVCFC achieved

**6,785** NEWS ARTICLES

securing the top position in the industry without any negative coverage, contributing to maintaining a positive brand image for PBCM among farmers and dealers.



The model for high-quality rice production in An Giang and Dong Thap, supported by PVCFC in collaboration with local government departments, has shared appropriate cultivation techniques suited to the local soil and demonstrated effective farming models within the program.

The Fourth Global Conference on Sustainable Food Systems, held through media coverage, connected with government agricultural agencies to address the challenges faced by farmers and propose effective solutions.

The program **“Rising Rice Prices: Solutions for Long-Term Benefits for Farmers,”** attended by leaders from 13 provinces and the Department of Agriculture and Rural Development in the Mekong Delta, presented various solutions and opportunities to enhance export competitiveness and address profitability issues for farmers through a series of articles and reports.



The agricultural television program **“Elevating Vietnamese Agricultural Products,”** broadcast on VTV9, shares useful information about market prices and disease management, helping farmers cultivate safely, effectively, and sustainably. It features real stories of farmers who have implemented effective agricultural solutions to improve the quality of their products to meet high market demands.

Media plays a crucial role in spreading the values of sustainability and prosperity. Through various media channels, it has reached diverse audiences, from farmers in remote areas to dealers and investor shareholders. The collaboration with mass media has promoted discussions on tax policies, workshops, and forums, aiming for sustainable farming practices that bring numerous benefits to farmers.

## WELFARE OF FARMERS/CUSTOMERS (Cont.)



### COMMITMENT TO CUSTOMER SERVICE/BENEFITS


**PVCFC is a well-known brand among farmers nationwide, thanks to its quality products and a series of meaningful accompanying activities. In addition to the trust and loyalty of millions of farmers, PVCFC enjoys substantial support from a network of distributors across the country.**

PVCFC takes pride in the strong backing from its esteemed distributors throughout Vietnam. This extensive business network has enabled the brand's products to reach farmers directly, optimizing their cultivation processes and helping them achieve harvests.

Recognizing the critical importance of reliability from its customer base and farmers, PVCFC is committed to enhancing the value of "Harmony" in benefits through specific initiatives outlined below. These efforts aim to provide the best product quality and services while ensuring the optimal rights of customers and end-users.

In addition, the leadership at PVCFC understands that the company's mission is to contribute to ensuring the supply of fertilizers and food security by pioneering nutritional solutions for crops.

# WELFARE OF FARMERS/CUSTOMERS (Cont.)

## PRODUCT AND SERVICE QUALITY

Regarding product quality, PVCFC continuously researches and improves its production processes, applying scientific and technological advancements to maintain and enhance the quality, versatility (for different types of crops), and adaptability (across various regions) of its products. Furthermore, enhancing product quality extends beyond fertilizers to include packaging quality, which improves product preservation and storage efficiency.

To protect customer rights, maintain legal compliance, and uphold brand reputation, PVCFC has established procedures for handling complaints and recalling defective products. These processes adhere to the required protocols and legal standards to mitigate any impact on the environment and human health while optimizing customer benefits. Specifically:

### Customer Complaint Resolution Process:



# WELFARE OF FARMERS/CUSTOMERS (Cont.)

## PRODUCT AND SERVICE QUALITY (Cont.)

In 2023, the Company handled a total of 28 cases through its standard processes and received and addressed 800 cases via its hotline.

### Product Recall Process

In the case of defective products, the company follows these steps:

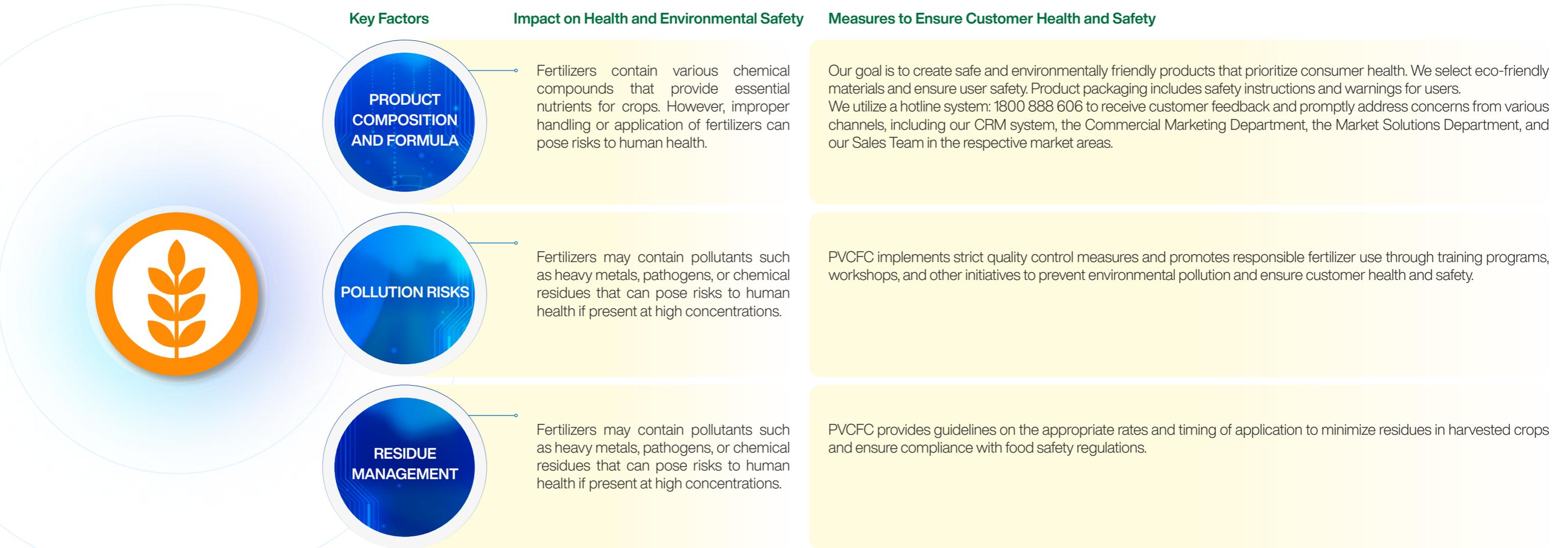



**With the mission of contributing to the supply of fertilizers and the national food security by pioneering nutritional solutions for crops, PVCFC is committed to providing the most suitable services (nutritional solutions for crops) to each customer and farmer.**

# WELFARE OF FARMERS/CUSTOMERS (Cont.)

## CUSTOMER SAFETY AND HEALTH

Ensuring the health and safety of customers is paramount for PVCFC, as our products are directly linked to agricultural activities and food production. Below are some key factors that impact customer health and safety:



## WELFARE OF FARMERS/CUSTOMERS (Cont.)



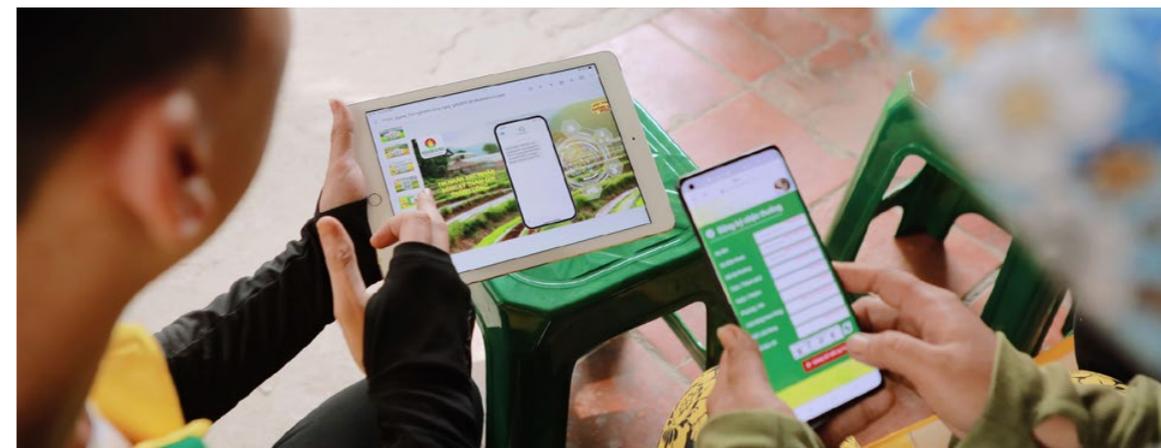
### Safe Products

Currently, inorganic fertilizers still represent a significant portion of PVCFC's product structure. Recognizing the importance of environmental safety and aiming for sustainable development, PVCFC has initiated extensive research to find alternative raw materials to progressively improve and produce "greener" products. This includes collaborating with various organizations on projects such as green hydrogen production (with hydrogen as a key ingredient in Urea production) and researching and producing fertilizers from recycled materials and waste. These efforts aim to gradually increase the proportion of environmentally and human-friendly products, such as organic fertilizers, microbial fertilizers, and NPK fertilizers derived from organic sources.



### Product Quality Management

PVCFC primarily supplies fertilizers that support plant development before harvesting. Plants absorb nutrients from fertilizers through their roots, stems, and leaves. As a result, residues in harvested products are generally negligible. However, excessive or improper application, whether in dosage or timing, can impact soil quality, leading to loss, waste, or reduced crop yield. PVCFC has conducted research to provide comprehensive guidelines on dosage, ratios, and timing for each type of crop and soil to optimize costs and maximize benefits for customers and farmers. Currently, PVCFC has not recorded any incidents involving customers affected by fertilizer residues after using its products and services. The company will continue striving to enhance the quality and safety of its products for customers and consumers.



### Marketing and Product Labeling

PVCFC maximizes communication with customers regarding its policies, quality control measures, and services. The company widely promotes responsible fertilizer use among farmers through various methods, such as organizing regular farmer workshops, technical seminars, field days, factory tours, customer care activities, and providing information on product labels, usage guidelines, and safety data sheets. All PVCFC product packaging clearly displays comprehensive information about the composition, instructions, and recommended usage for each type of crop, along with other safety guidelines.

### Customer Management

Customer information is considered a valuable asset by PVCFC, closely tied to the company's existence and development. Therefore, ensuring the confidentiality of customer information is a top priority and is strictly adhered to in accordance with company policies and legal regulations. As of now, PVCFC has not recorded any incidents of violations regarding customer information confidentiality. The company will continue to maintain compliance to prevent any future breaches.

# PROSPEROUS LIVES FOR ALL

GRI 413

## COMMUNITY ENGAGEMENT ACTIVITIES

GRI 413-1

At PVCFC, social welfare projects are implemented comprehensively and consistently. This initiative is part of the tripartite focus on environmental, social, and governance aspects of sustainable development.



13 YEARS HUMANITARIAN JOURNEY



NO ONE IS LEFT BEHIND

# POLICY AND COMMITMENT TO SOCIAL RESPONSIBILITY AND COMMUNITY DEVELOPMENT

The strategic direction of sustainable development at Ca Mau Fertilizer is reflected not only in business goals and scale but also in a strong commitment to building a greener, more prosperous future for stakeholders.

This direction aligns with the company's growth strategy and competitiveness objectives, developed in compliance with legal regulations and by adopting best practices in the industry, such as International Fertilizer Association (IFA) standards and the United Nations Sustainable Development Goals (SDGs). The approach is internally comprehensive, meeting the expectations of customers and shareholders, and is well-received by relevant authorities.

From a technical perspective, Ca Mau Fertilizer demonstrates its sustainable strategy through its products, production practices, and governance activities. The company offers high-quality fertilizers that align with modern green trends, benefiting the soil and improving the environment. Additionally, it implements numerous projects aimed at reducing greenhouse gas emissions, lowering energy consumption, and seeking alternative fuels.

The company emphasizes a comprehensive approach to social responsibility, spanning from education to welfare.

Starting from vulnerable circumstances in impoverished rural areas across the country, this humanitarian journey has continued for 13 years. Building on the "Petroleum People" tradition of solidarity and support, and with strong commitments to the social welfare resolutions from the Group, each PVCFC member, guided by the leadership, has been determined to achieve and fulfill goals in line with commitments, thereby creating greater value for the community.

To ensure that "No one is left behind," PVCFC closely follows practical needs and collaborates with localities to implement welfare initiatives across various fields, targeting the right individuals and issues. This effort includes providing homes for families, budget support for students, dedicated attention to veterans, and enabling children to attend school. Additionally, these initiatives aim to enhance the overall appearance and vitality of rural areas.

Alongside health check-up programs, hundreds of rural bridges and transportation projects in remote areas; Installation of clean water systems in underserved schools; Regular provision of thousands of water storage containers for impoverished families affected by drought and salt intrusion; Donation of fertilizers to areas impacted by natural disasters and diseases, facilitating easier resettlement for farmers; Distribution of Tet gifts to the needy; Visits to families of policy benefits; Ongoing support for war invalid mothers (Vietnam heroic mothers)

PVCFC is dedicated to its mission as a "Nurturer," extending its impact from agriculture to education, fostering talent under the theme "Nurturing Hope – Cultivating the Future" through literacy today. The company maintains tens of thousands of scholarships annually for disadvantaged students overcoming challenges. In addition to these scholarships, various programs support career guidance, field trips, and educational counseling, reinforcing its commitment to empowering the youth for a brighter future.



To date, over 500 billion VND has been realized in various community support initiatives:

**2,000**  
HOUSES OF UNITY

**65**  
SCHOOL PROJECTS

**15**  
HEALTH CENTERS



# SUSTAINABLE SOCIAL WELFARE JOURNEY



Examining the social welfare journey of PVCFC reveals a focused, enhanced, and profound approach. The company emphasizes key areas that serve as a foundation for a sustainable future.

As Vietnam progresses towards prosperity, PVCFC aligns with corporate responsibility initiatives and is committed to early and collective action to promote sustainable poverty reduction. This effort centers on the most vulnerable groups, starting from the most remote and underserved regions.

PVCFC stands with farmers by providing sustainable agricultural solutions that enhance farming value and elevate Vietnamese produce. This commitment harmonizes the essential elements of Promotion, Prevention, and Protection, which are vital for a sustainable social welfare system.

The company strives for effective business operations to share even more benefits with the community, embedding beautiful humanitarian images into its history, with increasingly vibrant contributions as it grows.

In the past two years, the focus on Promotion, Prevention, and Protection has been evident through practical projects that provide timely support for underprivileged communities. Over VND 4 billion has funded 80 homes of compassion, along with 10 houses of solidarity for those in difficult situations, contributing to a total of 300 homes in Ca Mau.



To foster a greener living environment, the company has planted

**28,000**  
TREES THROUGHOUT CA MAU CITY.

Looking ahead, PVCFC plans to collaborate with localities to plant an additional 100,000 urban trees and 200,000 protective forest trees, contributing to coastal land preservation and environmental protection for the community.

## SUSTAINABLE SOCIAL WELFARE JOURNEY (Cont.)



Just as a solid structure requires a good foundation, PVCFC believes that sustainable growth is built on the commitment to integrate business responsibilities with community obligations, particularly for the most vulnerable and marginalized individuals. This shared responsibility is not only a regular practice but becomes even more profound when the company achieves profitability.

The passionate dedication of the PVCFC team drives their determination to work energetically for the community, striving for a more progressive, compassionate, and prosperous society.

PVCFC continues to champion educational initiatives, offering

**2,440**  
SCHOLARSHIPS VALUED AT  
OVER VND 2.5 BILLION.



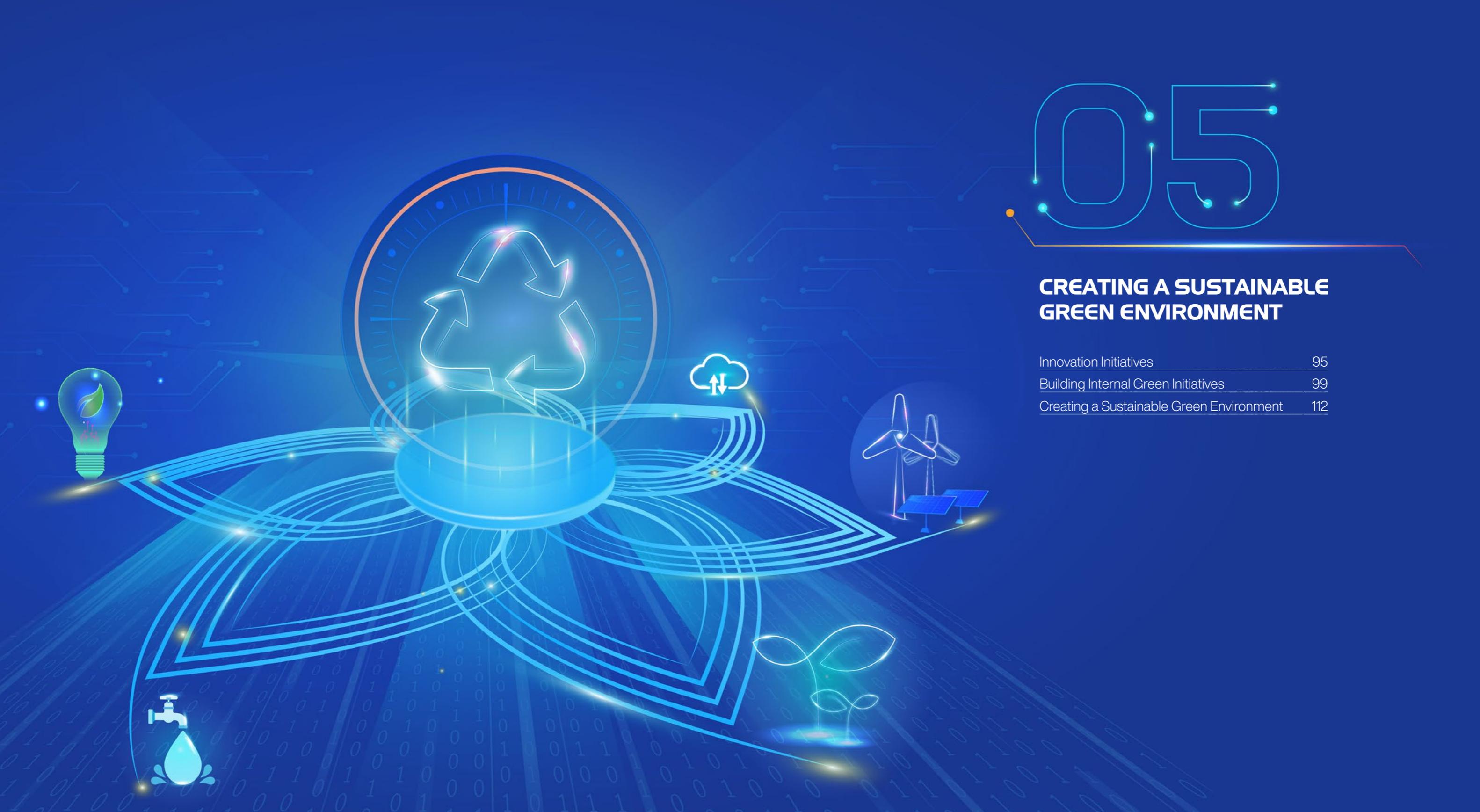
Inauguration Ceremony of Miếu Bà Tân Mỹ Bridge.



# 05

## CREATING A SUSTAINABLE GREEN ENVIRONMENT

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# INNOVATION INITIATIVES

 GRI 301



The fertilizer production technology in general and at the Ca Mau Fertilizer Plant, in particular, is characterized by the use of natural gas (a fossil fuel) as a raw material. Therefore, the issues of greenhouse gas emissions and global warming are of particular concern and focus for PVCFC. Being aware of this, from the project implementation stage, the Company invested in production lines with current technology, specifically: Ammonia production technology from licensors Haldor Topsoe (Denmark) and Basf (Germany); Urea production technology from Saipem (Italy); Granulation technology from Toyo (Japan); and NPK production technology from Espindesa (Spain). In addition to equipping itself with modern technology and equipment, the Company continuously improves techniques, optimizes fuel sources, and seeks new and innovative solutions to save energy and enhance capacity, thereby reducing greenhouse gas emissions at the Ca Mau Fertilizer Plant.



# INNOVATION INITIATIVES (Cont.)

At the Ca Mau Fertilizer Plant, natural gas is used for two purposes: as a feedstock to produce the semi-finished products  $\text{NH}_3$  and  $\text{CO}_2$  after undergoing production processes in the Ammonia unit, and as a fuel which is used in the Primary Reformer furnace and in auxiliary boiler. Due to the characteristics of the technology, the amount of fuel gas used to provide excess heat to generate steam in the reforming section and the amount of fuel gas for the auxiliary boiler to produce high-pressure steam still the main amount of gas consumed at the Ca Mau Fertilizer Plant. In addition to natural gas, permeate gas-a fuel gas recovered from the Ca Mau Gas Processing Plant (GPP), is also reused by us to maximize utilization and avoid direct emissions into the environment. Since its use began in February 2019, permeate gas has primarily been utilized as fuel, partially replacing natural gas. The permeate gas/natural gas ratio is maintained at approximately 2.7%. In 2023, we fully recovered the  $\text{CO}_2$  and the remaining gas after processing to meet technological conditions in permeate gas and using it as a feedstock, with the amount of permeate gas recovered in 2023 reaching 19.96 million  $\text{Sm}^3$ /year. Additionally, we implemented various improvement solutions to increase production and reduce gas consumption by 0.44% compared to 2022.

Solutions	Time of Implementation	Technical results
Recovering permeate gas as a raw fuel	From 2019 – present	Recovered permeate gas: <b>18.35</b> million $\text{Sm}^3$ (in 2022), <b>19.96</b> million $\text{Sm}^3$ (in 2023)
Replacing the distribution system of towers S04301, S04302, C04301	09/2022	Expanded overall capacity of $\text{CO}_2$ removal section, reduced $\text{CO}_2$ slip at the absorber outlet, and increased $\text{NH}_3$ production by <b>5.4</b> tons/day
Separated liquid from flash gas and used washed gas from C0403 as production feedstock	11/2022	Increased $\text{NH}_3$ production by <b>7.1</b> tons/day
Recovering Hydrogen from Offgas	Phase 1: December 2021 Phase 2: November 2022	Increased $\text{NH}_3$ production by <b>18</b> tons/day
Installed E04212C to optimize LTS operations	11/2022	Increased $\text{NH}_3$ production by <b>4.4</b> tons/day



# INNOVATION INITIATIVES (Cont.)



In 2023, with its “Relentless Effort,” the Ca Mau Fertilizer Plant maintained continuous and stable operations for over 350 days without any shutdown incidents. This achievement has been certified by the technology licensor Haldor Topsoe. Additionally, the Ca Mau Fertilizer Plant was awarded a certificate by the licensor Toyo Engineering Company (TEC) for setting a record in maintaining continuous and stable operation of the Granulation unit using TEC Urea Granulation Process for 45 consecutive days. Maintaining continuous operation of the Plant has significantly helped PVCFC reduce emissions into the environment.



# INNOVATION INITIATIVES (Cont.)

For NPK production technology, the raw materials used include: liquid materials (urea solution,  $\text{NH}_3$ ,  $\text{H}_2\text{SO}_4$ , etc.) and solid materials (urea granules, MAP, DAP, SA, MOP, SOP, etc.). Among these, steam plays two important roles: it provides heat and facilitates the granulation process in the granulator. Natural gas, along with air, is used as fuel for the combustion chamber, and the hot gas generated from fuel combustion is used in the drying and cooling stages of the product. The raw materials used to produce NPK fertilizer are derived from non-renewable resources such as natural gas. After being applied to the soil, these material components either dissolve into the soil or evaporate into the air. When used correctly, these products help increase the soil's nutrient content, thereby improving crop yield. Below is a table describing the consumption of raw materials used in NPK production at the Ca Mau Fertilizer Plant over the years:

PRODUCTION OUTPUT

**150,091.54**  
Tons

No	Content	Unit	2021	2022	2023
1	<b>Production Output</b>	<b>Tons</b>	<b>48,132.46</b>	<b>114,330.82</b>	<b>150,091.54</b>
2	Total Material Consumption Rate	%	101.8%	101.6%	100.85%
3	Nitrogen Material Consumption Rate	%	102.3%	99.2%	95.97%
4	$\text{P}_2\text{O}_5$ Material Consumption Rate	%	109.3%	106.3%	101.32%
5	$\text{K}_2\text{O}$ Material Consumption Rate	%	113.2%	103.4%	99.52%
6	S Material Consumption Rate	%	N/A	N/A	103.22%
7	Liquid Anti-Caking Agent	Kg/T.NPK	2.84	2.98	2.77
8	Powder Anti-Caking Agent	Kg/T.NPK	4.45	6.15	6.03
9	MgO	Kg/T.NPK	N/A	N/A	4.84



With the increase in production capacity, the efficiency of material usage has improved each year. In 2023, the total material consumption rate decreased by 0.75% compared to 2022 and by 0.95% compared to 2021. Among the materials,  $\text{K}_2\text{O}$  content saw the largest reduction, with decreases of 3.88% compared to 2022 and 13.68% compared to 2021. This not only helps PVCFC reduce production costs and increase product competitiveness but also lowers the intensity of greenhouse gas emissions (Scope 1).

# BUILDING INTERNAL GREEN INITIATIVES

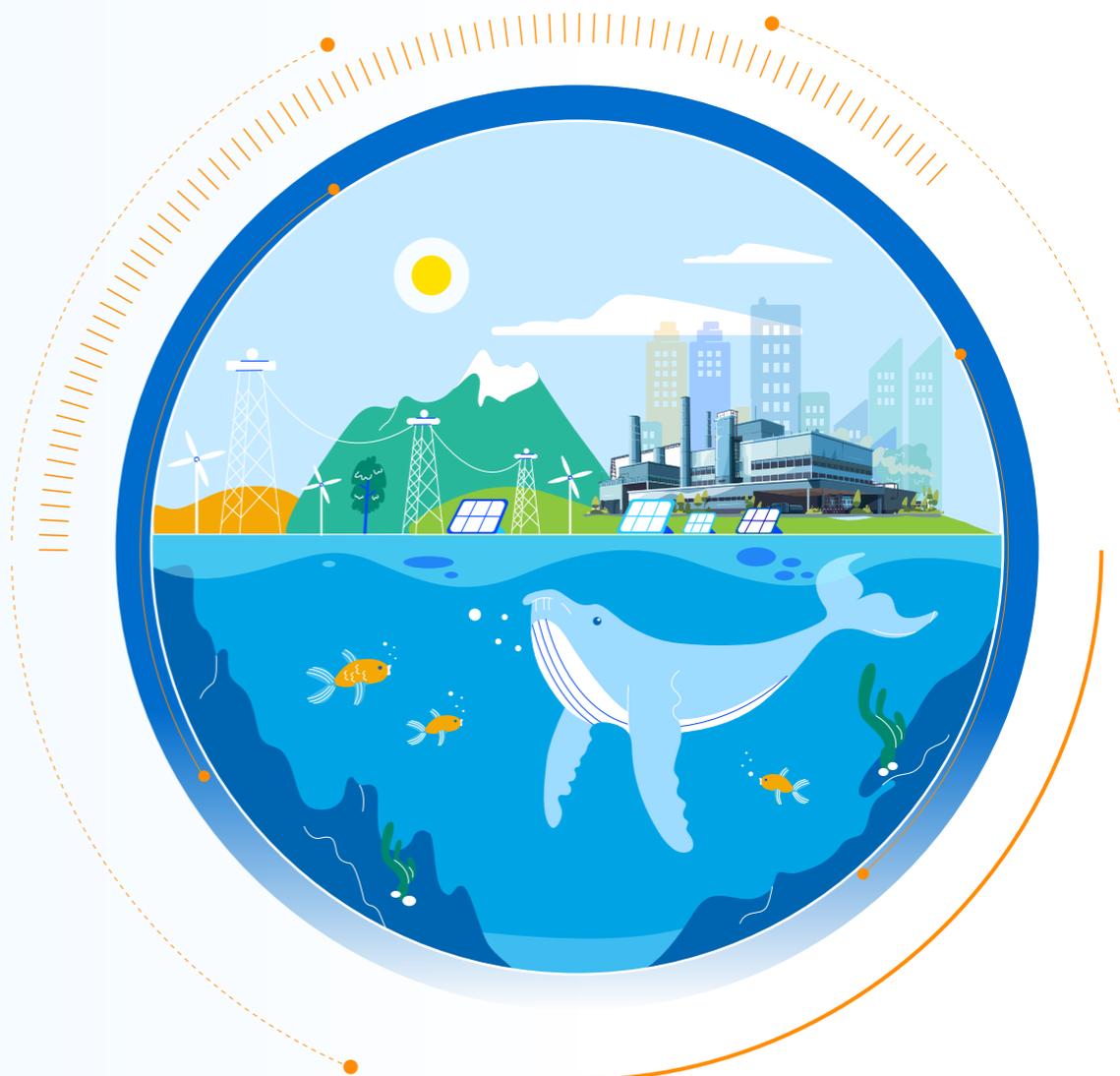
## WATER

For manufacturing plants in general, water usage is essential. At PVCFC, the majority of water consumption at the Ca Mau Fertilizer Plant is used for the following purposes: boiler feed water for steam production; river water for open recirculating cooling water system; fresh water for closed recirculating cooling water system, and other uses serving the requirements of the production technology. Additionally, daily activities generate wastewater at both the Ca Mau Fertilizer Plant and the two offices in Ho Chi Minh City and Ca Mau.

For the PetroVietnam Packaging Joint Stock Company, 100% of the water used comes from the supplied water source. The company does not generate production wastewater. All wastewater used in production is 100% recycled and reused. Sanitary wastewater is treated through septic tanks (wastewater from restrooms) or pre-treated (wastewater from kitchens and handwashing) and then discharged into the industrial zone's drainage system.

**PVCFC consistently monitors and manages the use of clean water and river water to ensure it is done efficiently and conservatively. Additionally, PVCFC ensures compliance with legal regulations related to water resource management, as follows:**

- 
 Ensure the extraction and use of river water is conducted according to the intended purpose, extraction location, extraction method, and water intake flow rate as permitted by the Ca Mau Provincial People's Committee under Permit No. 11/GP-UBND dated March 26, 2012.
- 
 Comply with the payment of water resource exploitation fees as per the regulations of Decree 54/2024/NĐ-CP dated May 16, 2024.
- 
 Monitor the quality of treated wastewater to ensure it consistently meets the standards of QCVN 40:2011/BTNMT/ as approved by the Ministry of Natural Resources and Environment under Environmental Permit No. 405/GP-BTNMT dated December 30, 2022, before discharge into the environment, preventing any negative impact on the surrounding water environment near the plant.
- 
 The company also develops and publicly implements a plan for environmental incident prevention and response in accordance with the regulations.



# WATER (Cont.)

## WATER CONSUMPTION AND WASTE WATER

The water consumption and wastewater volumes for 2023 are presented in the table below.

The total volume of river water extracted and the total volume of wastewater generated at the Ca Mau Fertilizer Plant depend on the Plant's operating capacity, and currently, both volumes are within the extraction and discharge limits permitted by the relevant government authorities

2023 Indicators	PPC Bac Lieu	Ca Mau Plant	PVCFC, Ca Mau Office	Ho Chi Minh Office	2023
Total volume of water consumed (m <sup>3</sup> *)	14,929	1,214,125	9,141	-	1,238,195

(\*): Assured data.



TOTAL VOLUME OF  
WATER CONSUMED 2023

**1,238,195** m<sup>3</sup>

Content	Unit	2022	2023
<b>Ca Mau Fertilizer Plant</b>			
Total volume of river water extracted at the Ca Mau plant	m <sup>3</sup>	15,081,188	16,445,843
<i>Of which: total volume of cooling river water discharged</i>	<i>m<sup>3</sup></i>	<i>11,760,945</i>	<i>11,894,628</i>
Total volume of water supplied from the clean water plant at the Ca Mau plant	m <sup>3</sup>	1,143,418	1,214,125
Total volume of water consumed at the Ho Chi Minh City Office (*)		N/A	N/A
Total volume of water consumed at the Ca Mau Office	m <sup>3</sup>	10,592	9,141
<b>Total volume of water consumed at PVCFC (**)</b>	<b>m<sup>3</sup></b>	<b>1,154,010</b>	<b>1,223,266</b>
Total volume of wastewater from the Wastewater Treatment System	m <sup>3</sup>	37,277	72,747
<b>Total volume of wastewater at PVCFC</b>	<b>m<sup>3</sup></b>	<b>37,277</b>	<b>72,747</b>
<b>Bac Lieu Packaging</b>			
Total volume of water consumed	m <sup>3</sup>	9,553	14,929
Total volume of wastewater	m <sup>3</sup>	3,240	3,564
<b>Consolidated Data</b>			
<b>Volume of water consumed (**)</b>	<b>m<sup>3</sup></b>	<b>1,163,563</b>	<b>1,238,195</b>
<b>Total volume of wastewater</b>	<b>m<sup>3</sup></b>	<b>40,517</b>	<b>76,311</b>

(\*): Water consumption at PVCFC's office in Ho Chi Minh City is included in the building's service charges, so it is not tracked and reported separately,

(\*\*): The total water consumption of the Ca Mau Fertilizer Plant and the consolidated total consumption do not include extracted river water, Reason: The extracted river water is not used in the production process but is only utilized for its heat, All river water used is returned to the river through discharge (in liquid form) or evaporation (in vapor form),

# WATER (Cont.)

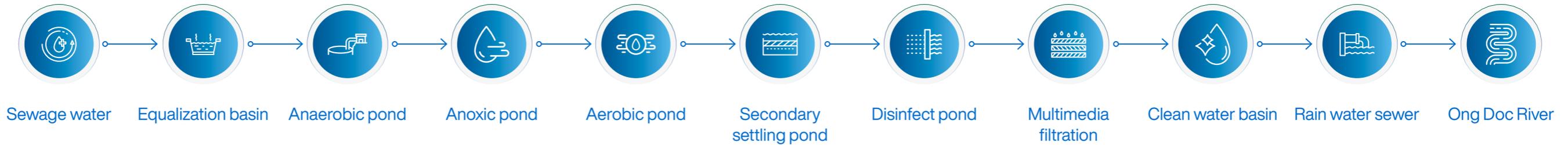
## WASTEWATER QUALITY CONTROL

The Company always considers water as a valuable resource and actively uses it efficiently while strictly managing the quality of wastewater before returning it to the environment. Wastewater is only discharged into the environment (Ong Doc River) after being treated to meet QCVN standards/ permissible values set by the Ministry of Natural Resources and Environment.

The Ca Mau Fertilizer Plant has three environmental protection works for wastewater, which have been in operation since 2012 and are currently operating stably, as detailed below:

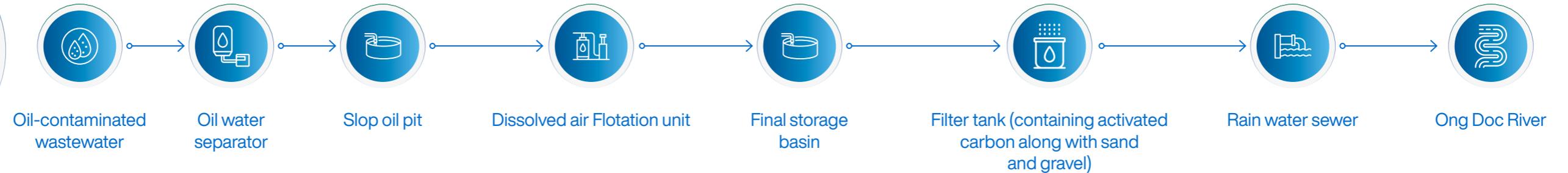
### THE SANITARY WASTEWATER TREATMENT SYSTEM

DESIGN CAPACITY  
**240**  
m<sup>3</sup>/day



### OIL-CONTAMINATED WASTEWATER TREATMENT SYSTEM

DESIGN CAPACITY  
**2,400**  
m<sup>3</sup>/day



### AMMONIA-CONTAMINATED WASTEWATER TREATMENT SYSTEM

DESIGN CAPACITY  
**120**  
m<sup>3</sup>/day



# WATER (Cont.)

## WASTEWATER QUALITY CONTROL (Cont.)



### RIVER COOLING WATER DISCHARGE SYSTEM



Cooling water supply from cooling basin



Open drainage channel for cooling water



Common drainage channel of the Plant



To ensure that the quality of treated wastewater consistently meets QCVN standards, the Company has contracted a qualified organization to perform periodic wastewater monitoring every three months at the outlets of the treatment systems. Additionally, the Plant has installed two continuous automatic wastewater monitoring stations:

- One station is installed at the discharge pipeline of the three treatment systems, which include sanitary wastewater, oil-contaminated wastewater, and ammonia-contaminated wastewater (referred to as the continuous automatic wastewater monitoring station). The monitoring parameters include pH, flow rate, temperature, TSS, NH<sub>4</sub><sup>+</sup>, and COD.
- One continuous automatic monitoring station is installed at the cooling water return discharge channel. The monitoring parameters at this station include pH, flow rate, temperature, and residual chlorine.
- Data collection frequency: For both stations, data is collected every five minutes. The data is transmitted to the Ca Mau Department of Natural Resources and Environment.
- System inspection and calibration: The system is inspected and calibrated periodically, once every 12 months.

## WATER SAVINGS

Thanks to water-saving measures and the awareness of each employee, along with operating the plant at higher capacity, the amount of water consumed per ton of product in 2023 was reduced by 0.15%. It is expected that by the end of 2024, we will implement a project to recover discharge water from the existing RO system, which is estimated to save up to 4.1 billion VND annually and reduce the amount of chemicals used in the water treatment system.

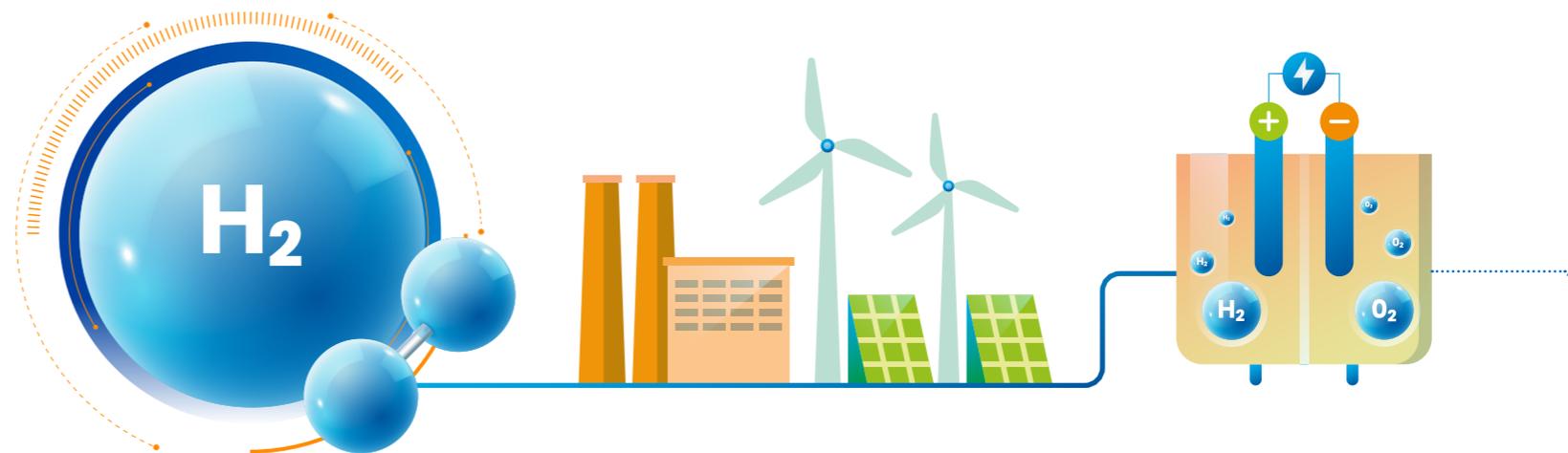
# ENERGY



## TYPES OF ENERGY CONSUMED

The urea fertilizer production technology at the Ca Mau Fertilizer Plant uses key raw materials such as natural gas, electricity, water, and a certain amount of air from the environment. However, the two most important energy sources used are natural gas and electricity, as they account for the majority of energy value and production costs. The use of natural gas and electricity has a direct impact on the environment, green economy, and society, particularly concerning climate change issues. The energy sector is the largest source of greenhouse gas emissions, with 90% of CO<sub>2</sub> and 75% of other greenhouse gases coming from developing countries. Of these emissions, 95% are CO<sub>2</sub>, and the remainder is CH<sub>4</sub> and N<sub>2</sub>O. Emissions are categorized into three groups: fossil fuel combustion (accounting for 70% of total emissions), instantaneous emissions from equipment, and carbon capture and storage activities. Power plants, refineries, and fertilizer production facilities are the main sources of these emissions.

Natural gas is a non-renewable, irreplaceable resource and could be one of the most significant risk factors if there is a shortage of this gas for production at the Ca Mau Fertilizer Plant. In recent years, Vietnam's fertilizer production industry has made strong advancements. From a point where nearly 60% of the supply had to be imported, Vietnam has now become self-sufficient in urea, meeting the demands of agricultural production and developing new types of fertilizers such as DAP and Potassium. Vietnamese companies, including PVCFC, have invested in depth, modernized technology and equipment, and improved the nutritional content and quality of phosphate and NPK fertilizers. Domestic fertilizer production plants can now meet the demand for urea, phosphate, and NPK fertilizers and are moving towards exporting some products. The current domestic demand for fertilizers is about 11 million tons, with inorganic fertilizers accounting for about 90%, while organic fertilizers and some other types account for only about 10%. The stable and sustainable development of the fertilizer production sector not only helps farmers across the country have a stable, high-quality fertilizer supply but also significantly contributes to ensuring national food security.



## RENEWABLE ENERGY



**The development of renewable energy sources is an inevitable trend in the world today. The global energy sector is positively shifting towards “green energy” sources. Vietnam is also on the list of countries with great potential to invest in new renewable energy sources such as solar power, wind power, biomass energy, wave energy, and biogas alongside existing energy sources like electricity, liquefied natural gas (LNG), hydropower, and coal power.**

At PVCFC, we have recognized this trend and have proactively established research groups, organized visits, and studied the production practices at manufacturing plants that use solar energy to produce green hydrogen for other industries, green ammonia production, and green fertilizer production. In parallel, we are actively seeking solutions, discussing, and consulting with licensors on the potential integration of green hydrogen from water electrolysis technology using solar and renewable energy.

# ENERGY (Cont.)

## ENERGY MANAGEMENT METHODS



Every year, PVCFC establishes regulations on technical-economic norms to guide and encourage the production operations sector to seek solutions for reducing consumption and saving energy. In 2023, PVCFC set a goal to continuously improve and optimize production and save energy, with a target to reduce energy consumption by 5% by 2025 compared to the 2022 baseline.

Additionally, to promote activities under the National Program on Economical and Efficient Use of Energy for the period 2019 - 2030, the Company has conducted reviews, assessments, and created an approval plan for the period 2019 - 2030, divided into two main task groups:



**Energy Saving.** Accordingly, PVCFC has implemented several control measures and ensured compliance with the Company's material consumption standards for types of product, consistently managing annual consumption and reducing energy use.

The technological improvement initiatives from 2022 to the present have contributed to reducing CO<sub>2</sub> emissions at PVCFC, specifically as follows:

- A system to recover emissions from the flare system in the Urea unit to use as fuel, partially replacing natural gas and simultaneously reducing direct emissions into the environment.
- A gas recovery system in the Urea unit to use as combustion fuel, helping to reduce energy consumption by 4.81 GJ/h and lowering CO<sub>2</sub> greenhouse gas emissions.
- Replacing high-efficiency trays in the urea reactor, which improves the stability of the equipment at higher loads. This replacement also increases the equipment's efficiency by 0.75% and saves energy.
- In July 2023, we officially commissioned the ORC system, which utilizes excess heat to generate electricity with an operational capacity of 113 kWh. By the end of 2023, PVCFC had reduced electricity consumption by 425.28 MWh/year, equivalent to a reduction in CO<sub>2</sub> emissions at the Natural Gas Power Plant.



### Increasing Operational Capacity to 115% Load by the Strategic Target Year of 2025.

Since 2021, the Ca Mau Fertilizer Plant has consistently maintained a high capacity of 110%, surpassing other plants (109%) and even setting a record of 115.5% operational capacity in 2023 with a relatively low energy consumption. At the end of 2022, the Ca Mau Fertilizer Plant was honored by Haldor Topsoe with the "Top 10% of Plants with the Lowest Energy Consumption in the World" certificate and is among the top 10% of plants globally in terms of high capacity.

In 2023, PVCFC issued an energy management model and is currently reviewing policies and activities to manage energy effectively and comprehensively, aiming to develop an energy management model according to ISO 50001:2018. To seek optimal solutions, PVCFC has registered to participate in the DEPP3 Program, "Vietnam-Denmark Energy Partnership Program Phase 2020-2025," which aims to support the promotion of energy efficiency in industrial sectors through the development and piloting of a Voluntary Agreement Program and capacity building for large energy-consuming enterprises in Vietnam.

Implement plans to harness green energy and partially substitute low greenhouse gas emission energy sources to increase the efficiency of green energy use annually, in compliance with Decree 06/2022/NĐ-CP on greenhouse gas emission reduction and ozone layer protection, and in line with Vietnam's national action plan on its commitment to achieving CO<sub>2</sub> emissions targets at COP 26, with the goal of net-zero emissions by 2050.

# ENERGY (Cont.)

## ENERGY MANAGEMENT METHODS (Cont.)



We are currently implementing “green” projects that will be applied in the future, focusing on the trend of using renewable energy and green energy

-  — Rooftop solar power renewable energy project at the Ca Mau Fertilizer Plant.
-  — Project to integrate green hydrogen production from electrolysis using renewable energy.
-  — Project to recover CO<sub>2</sub> from the existing natural gas stream to reduce CO<sub>2</sub> emissions.
-  — Project to recover CO<sub>2</sub> from the flue gas stream from the main units.

Regarding energy-saving and efficient energy use efforts, PVCFC has been and is currently implementing the following:

-  — Innovation and Improvement Initiatives: PVCFC encourages employees to propose solutions related to equipment, technology, and daily production and work processes. The company conducts acceptance testing, approves proposals, and rewards employees for their initiatives. Some energy-saving solutions implemented during the 2022-2023 period are described above.
-  — Promotion of Efficient and Energy-Saving Practices: PVCFC has developed solutions to save electricity, strictly adhering to regulations on economical and efficient electricity use, and implementing the unit’s annual electricity-saving plan to raise awareness and foster habits of energy conservation in all company activities. The company also aims to reduce energy loss and waste while enhancing the effectiveness of the energy management system. PVCFC regularly instructs units, departments, and sections to practice electricity conservation in a practical, reasonable, and effective manner. Special emphasis is placed on informing all employees and workers about legal regulations on energy conservation, including the Prime Minister’s Directive 20/CT-TTg, directives from the Group, and the unit’s regulations and plans for efficient electricity use (through internal communication channels: website, email, newsletters, etc.). Employees and workers are required to seriously implement electricity-saving measures and to promote and encourage their families, friends, and those around them to do the same.

# ENERGY (Cont.)

## ENERGY USAGE RESULTS IN 2023

The majority of energy is consumed at the Ca Mau Fertilizer Plant.

According to the business production plan through 2025, as approved in Resolution No. 6395/NQ-DKVN of the Vietnam Oil and Gas Group, the goal set for the Ca Mau Fertilizer Plant is to achieve a 5% reduction in energy consumption by 2025 compared to the 2022 baseline. After continuous improvements and production optimization, the energy consumption rate in 2023 was reduced by 4.23% compared to the 2022 baseline.

Content	2022	2023	Note
Urea Production Output (thousand tons/year)	91777	94913	Increase of 3.42 %
Natural Gas Energy Consumption (GJ/ton of bagged urea)	20.21	20.12	Decrease of 0.45 %
Electricity Energy Consumption (GJ/ton of bagged urea)	1.66	1.69	Increase of 1.81 %
Total Energy Consumption (GJ/ton of bagged urea)	21.86	21.81	Decrease of 0.23 %

The energy consumption results by source for PVCFC and PPC in 2023 are as follows

Energy Type	Energy Name	Unit	2023			2022		
			PPC	PVCFC (*)	Total	PPC	PVCFC	Total
Renewable Energy	Solar Power	NA	NA	NA	NA	NA	NA	NA
<b>Total Renewable Energy Consumption (1)</b>			<b>NA</b>					
Non-Renewable Energy	Natural Gas	GJ	NA	20,950,994.34	20,950,994.34	NA	20,257,250.31	20,257,250.31
	Permeate Gas	GJ	NA	752,152.68	752,152.68	NA	691,483.05	691,483.05
	Electricity	GJ	14,905.44	1,700,740.07	1,715,645.51	14,295.24	1,600,443.22	1,614,738.46
	Gasoline	GJ	NA	16,050.54	16,050.54	NA	21,977.50	21,977.50
	Diesel Oil (DO)	GJ	2,765.16	11,775.75	14,540.91	5,538.13	5,532.37	11,070.50
<b>Total Non-Renewable Energy Consumption (2)</b>		<b>GJ</b>	<b>17,670.60</b>	<b>23,431,713.37</b>	<b>23,449,383.97</b>	<b>19,833.37</b>	<b>22,576,686.46</b>	<b>22,596,519.83</b>
<b>Total Energy Consumption (3) = (1) + (2)</b>		<b>GJ</b>	<b>17,670.60</b>	<b>23,431,713.37</b>	<b>23,449,383.97</b>	<b>19,833.37</b>	<b>22,576,686.46</b>	<b>22,596,519.83</b>

(\*): data includes the plant in Ca Mau, HCM Office, and Ca Mau Office.

(\*): Assured data.

2023 Indicators	Bac Lieu Packaging Plant	PVCFC Plant	Ca Mau Office	HCM Office (District 7)	2023
Total electricity consumption in 2023 (MWh) <sup>(*)</sup>	4,140.40	188,692.61	358.73	108.94	193,300.68

Regarding electricity energy, we always focus on reducing and using electricity efficiently, including both purchased and self-generated electricity. We continuously seek technological solutions to utilize excess heat and waste heat to contribute to generating useful electricity, which helps save energy and optimize the operational cycle of the Plant. In 2023, electricity consumption increased in line with the growth in production output, and the total electricity usage intensity at PVCFC decreased by 0.22% compared to 2022, as detailed below:

Content	Unit	2022	2023	Note
Total Electricity Usage	MW/year	178,005.03	189,160.28	Increase of 6.27 %
Usage Intensity	MW/tons of product	0.1725	0.1721	Increase of 0.22 %
Energy Intensity	GJ/ tons of product	1.551	1.547	Decrease of 0.22 %

# WASTE

## SOURCES AND MANAGEMENT METHODS



PVCFC always focuses on controlling solid waste generated at the Ca Mau Fertilizer Plant to ensure compliance with current legal regulations. In PVCFC's operations, the types of waste and the methods by which we manage them are as follows:

 Waste from production is collected, classified, and transferred to qualified units for processing, with the transfer records managed according to Decree 08/2022/NĐ-CP dated January 10, 2022.

 The equipment, systems, and facilities for storing hazardous waste, ordinary industrial solid waste, and domestic solid waste are fully compliant with the requirements set out in Circular No. 02/2022/TT-BTNMT dated January 10, 2022.

The sources of waste and the corresponding management methods at PVCFC are as follows:

### DOMESTIC WASTE

Generated from offices, cafeterias, canteens, restrooms, etc., collected in 240-liter bins with lids (green) at the source and transferred to Ca Mau Urban Environment Joint Stock Company for processing according to regulations. The total amount of domestic waste generated was 112,760 kg in 2023 and 110,426 kg in 2022.

### ORDINARY INDUSTRIAL SOLID WASTE (OISW)

Primarily from the Mechanical Workshop, Electrical Workshop, and Control Workshop, including non-hazardous materials like iron, steel, unused equipment, wood scraps, and waste pallets. Wood scraps, broken pallets, plastics, scrap metal, etc., are collected in 240-liter bins (blue) placed at the source. The waste is then gathered in a temporary storage warehouse with an area of 336 m<sup>2</sup>. The temporary storage warehouse is designed according to regulations (the warehouse floor is made of reinforced concrete, with surrounding rainwater collection trenches, lighting, ventilation systems, and emergency response equipment (firefighting equipment)). For this type of waste, the Company contracts with a qualified organization for processing according to regulations. The total amount of OISW generated was 63,288 kg in 2023 and 66,752 kg in 2022.

### HAZARDOUS WASTE (HW)

Hazardous waste is classified and collected at the source, temporarily stored at the Plant's hazardous waste storage facility, and then transferred to a qualified organization for processing according to legal regulations. Hazardous waste generated is collected in plastic containers with storage volumes ranging from 20 to 660 liters, or 200-liter metal drums, labeled with hazard signs, codes, and the name of the hazardous waste. These containers are placed at the waste generation sites and temporarily stored in a warehouse with an area of 570 m<sup>2</sup>, designed according to regulations (reinforced concrete, sloped warehouse floor with trenches to collect liquids into two collection pits in case of chemical leaks, lighting and ventilation systems, emergency response equipment: firefighting equipment, chemical absorbent pads, and absorbent sand). The Company contracts with a qualified organization to transfer and processing according to regulations, ensuring that the generated waste does not affect the surrounding environment.

# WASTE (Cont.)

## SOURCES AND MANAGEMENT METHODS (Cont.)

Details of hazardous waste quantities are classified by waste name, waste code, and source of generation as listed below:

No	Waste Name	Hazardous Waste Code	Source of Generation
1	Waste sludge from oil/water separators	17 05 02	From the oil-contaminated wastewater treatment system
2	Metals contaminated with hazardous components (HC)	11 04 01	From maintenance activities and laboratory
3	Laboratory chemicals and chemical mixtures waste containing HC	19 05 02	From the laboratory
4	Other insulation materials containing or contaminated with HC	11 06 02	From the Plant's maintenance activities
5	Rigid packaging (previously containing hazardous substances when discarded) made of various materials (composite, etc.)	18 01 04	
6	Rigid plastic packaging (previously containing hazardous waste when discarded)	18 01 03	From the Plant's maintenance and production activities
7	Rigid metal packaging (previously containing hazardous substances, or under pressure, not completely empty, or with hazardous solid linings such as asbestos)	18 01 02	
8	Various engine oils, gearbox oils, and lubricants	17 02 04	From maintenance and repair activities
9	Fluorescent lamps and other active glass waste	16 01 06	
10	Waste lead-acid batteries	19 06 01	From the Plant's production activities
11	Ink cartridges (containing hazardous components in the ink manufacturing materials)	08 02 04	From packaging printing at the Production unit

- **Oil-contaminated waste (Hazardous Waste Code 18 02 01):** This includes cleaning rags, oil-contaminated materials in the ammonia and urea unit. Additionally, a small amount of used oil, grease, and chemicals will be discharged from normal operations and maintenance activities at the plant.
- **Spent catalyst waste (Hazardous Waste Code 19 08 04):** Typically, catalysts are regenerated and returned to the plant's production process. However, the efficiency of these catalysts gradually decreases with each use, and when their effectiveness diminishes and no longer meets technical requirements, new catalysts are introduced as replacements. Spent catalysts are periodically disposed of when they reach the end of their life.



Youth union members conducted environmental cleanup in the Ca Mau Fertilizer Plant area.

# WASTE (Cont.)

## WASTE TREATMENT RESULTS

With the waste management methods described above, the detailed results of waste treatment in 2023 are as follows:

### Ordinary Industrial Solid Waste (OISW)

No	Group of Ordinary Industrial Solid Waste (OISW)	Quantity in 2023 (kg)	Organizations and individuals receiving OISW	Quantity in 2022 (kg)	Percentage processed (%)
(1)	(2)	(3)	(4)	(5)	(6)
1	Directly used as raw materials or fuel for the production process (on-site)	0		0	
2	Reuse and recycle to make raw materials or fuel for other industries (transferred to organizations or individuals receiving OISW), ...	0		0	
3	Waste that needs to be processed				100%
	Primary types of solid waste generated: Scrap iron and steel, waste cartons, wood, nylon bags, plastic packaging	63,288	Cao Gia Quy Environmental Co., Ltd.	66,752	
	<b>Total Amount</b>	<b>63,288</b>		<b>66,752</b>	

### Domestic Waste

No	Group of Domestic Solid Waste (DSW)	Quantity in 2023 (tons)	Organizations and individuals receiving domestic solid waste (DSW)	Quantity in 2022 (tons)	Percentage processed (%)
(1)	(2)	(3)	(4)	(5)	(6)
1	Domestic solid waste generated from the daily activities of employees (leftover food, fruit peels, ...)	112,760	Ca Mau Urban Environment Joint Stock Company	110,426	100%
2	<b>Total Amount</b>	<b>112,760</b>		<b>110,426</b>	

## WASTE (Cont.)

### WASTE TREATMENT RESULTS (Cont.)

#### Hazardous Waste

Group of Ordinary Industrial Solid Waste (OISW)	Hazardous Waste Code	Quantity in 2023 (kg)	Processing method <sup>(i)</sup>	Quantity in 2022 (kg)
Used catalysts contaminated with hazardous components	19 08 04	0	Incineration, Solidification	40,154
Absorbents, filter materials (including oil filters), waste rags, and protective fabrics contaminated with hazardous components	18 02 01	63,668	Incineration, Solidification	33,906
Sludge from oil/water separation equipment	17 05 02	13,578	Incineration, Solidification	48,960
Waste metal scrap contaminated with hazardous components	11 04 01	1,512	Recovery/Recycling, Washing	6,500
Laboratory waste chemicals and chemical mixtures contaminated with hazardous components	19 05 02	1,000	Incineration, Solidification	4,586
Waste insulation materials containing or contaminated with hazardous components (waste insulation)	11 06 02	47,628	Incineration, Solidification	68,994
Used, saturated ion exchange resin beads	07 01 09	0	Incineration, Solidification	24,902
Waste oil from oil/water separation equipment	17 05 04	5,500	Incineration, Solidification	9,086
Waste rigid packaging made of other materials (composite, etc.)	18 01 04	0	Recovery/Recycling, Neutralization	10,702
Waste fluorescent lamps and active metals	16 01 06	560	Separation/Extraction/Filtration/Precipitation, Solidification	308
Used activated carbon	02 11 02	0	Incineration, Solidification	26,200
Waste lead-acid batteries	19 06 01	0	Recovery/Recycling, Incineration	210
Waste rigid plastic packaging containing or contaminated with hazardous components	18 01 03	0	Recovery/Recycling, Incineration/ Solidification	1,640
Various engine oils, transmission oils, and other lubricants	17 02 04	21,168	Recovery/Recycling, Incineration	39,232
Waste rigid metal packaging, including pressure vessels, completely emptied	18 01 02	1,100	Recovery/Recycling, Incineration/ Solidification	9,346
Waste ink cartridges	08 02 04	0	Incineration, Solidification	200
<b>Total Amount</b>		<b>155,714</b>		<b>324,926</b>

**Organizations and individuals receiving domestic solid waste (DSW):** Moc An Chau Foreign Trade Warehousing and Forwarding Joint Stock Company – Environmental permit No. 140/GPMT-BTNMT dated 07/07/2022

**Percentage processed (%):** 100%

## WASTE (Cont.)

### MANAGEMENT OF PLASTIC PACKAGING

The company consistently fulfills its recycling responsibilities for the quantity of commercial packaging used to contain fertilizers distributed in the Vietnamese market. In fulfilling this recycling responsibility, the company chooses to make financial contributions to the Vietnam Environmental Protection Fund in accordance with the provisions of Decree No. 08/2022/NĐ-CP dated January 10, 2022.



### NOISE POLLUTION MANAGEMENT

Noise pollution, especially high-intensity noise, can affect workers' hearing if they are exposed for extended periods. Therefore, the company places great emphasis on finding solutions to reduce noise in order to minimize its impact on employees working at the plant and the surrounding residential areas.

The main sources of noise in the production activities at Ca Mau Fertilizer Plant come from the ammonia and urea workshops; the equipment in these workshops operates continuously 24 hours a day and is designed to run fully automatically, meaning that very few workers need to be present in these areas. Additionally, workers operating in these workshops are fully equipped with personal protective equipment as required, so the level of noise impact within the plant premises on workers' health is negligible.

#### Noise Pollution Management Methods:

- 
 Periodically inspect and maintain equipment to ensure the system operates stably and minimizes noise generation.
- 
 Establish green buffer zones between the project area and residential areas by planting new trees around the plant area to reduce noise and contribute to ecological restoration.
- 
 Ships docking at the fertilizer loading terminal must strictly comply with waterway traffic regulations and avoid sounding horns during residential quiet hours.

# CREATING A SUSTAINABLE GREEN ENVIRONMENT

## CLIMATE CHANGE GRI 305



The fertilizer business is significantly affected by climate change and also contributes to its impacts. Climate change is increasing the complexity of crop-related diseases, affecting crop yields, soil fertility, and is a major global concern, particularly in Vietnam. Mitigating the impact of climate change is a crucial and necessary task in the company's production, business operations, and research and development activities.

Climate change poses serious challenges for businesses, manifested in two main types of risks: physical risks and transition risks. Physical risks include the direct impacts of extreme weather events such as storms, floods, and droughts, which cause property damage and production disruptions. Transition risks, on the other hand, relate to the shift towards a low-carbon economy, requiring businesses to face new policies, technologies, and changes in consumer behavior. To adapt and develop sustainably, PVCFC has proactively assessed risks, formulated sustainable development strategies, and invested in sustainable solutions. Based on this, the company has developed policies, regulations, and procedures for operations, production, business activities, and research and development to minimize the impact of production and product consumption on climate change. Environmental impact assessments have been a priority for PVCFC since the initial phase of the Ca Mau Fertilizer Plant's operation (in 2011). The company has initiated scientific research projects related to emission reduction, cultivation solutions, and efficient fertilizer use. This commitment is reflected in regulations that ensure compliance and consistency, communicated to every PVCFC employee.



# CLIMATE CHANGE (Cont.)

## CLIMATE CHANGE RESPONSE POLICY

Research on greenhouse gas emissions in rice cultivation and enhancing R&D activities in response to climate change.

**PVCFC is focusing on advancing research and development efforts related to reducing greenhouse gas emissions. Some specific research initiatives include:**

- Annual Research Tasks: Research on cultivation solutions and agricultural services to develop nutrient solution packages for various crops that ensure productivity and quality while also reducing greenhouse gas emissions during fertilizer use.
- Participation in the Project “Sustainable Development of 1 Million Hectares of High-Quality, Low-Emission Rice Associated with Green Growth in the Mekong Delta by 2030”: This is a key project in the National Strategy on Climate Change through 2050, approved by the Prime Minister in Decision No. 896/QĐ-TTg dated July 26, 2022.
- Research on Applying the “4Rs” Fertilization Principle: This involves the recommended nutrient management practices by the International Fertilizer Association (IFA), which require the right source, right rate, right time, and right place for fertilizer application.
- Focusing on Research and Development of New Fertilizer Products: Future product development will emphasize reducing greenhouse gas emissions.
- PVCFC is also focusing on researching and developing new fertilizer lines that are better adapted to climate change, such as fertilizers that require less water and fertilizers that can better withstand saline or heavily acidic soils.
- Additionally, PVCFC continues to develop and improve fertilizers (such as Bio Urea, N46 Plus, etc.) to enhance nitrogen absorption rates, improve soil conditions, reduce the amount of fertilizer needed, and consequently decrease the greenhouse gases emitted into the environment during fertilizer use.

## GREENHOUSE GAS EMISSIONS REPORT

PVCFC strictly adheres to regulations on greenhouse gas emissions reporting. As a fertilizer manufacturing and trading company, PVCFC complies with Government Decree No. 06/2022/NĐ-CP on regulations for mitigating greenhouse gas emissions and protecting the ozone layer, and Circular No. 38/2023/TT-BCT on measuring, reporting, and verifying greenhouse gas emissions reduction and inventory for the industrial sector. In 2023, we conducted information gathering and assessment as per the following guidelines:

In 2022, direct fuel consumption for the technological system included fuel for auxiliary boilers, reforming units, and the flare system. The total gas consumption in 2023 (555.98 million Sm<sup>3</sup>/year) increased by 3.42% compared to 2022 (357.57 million Sm<sup>3</sup>/year). The energy consumption per ton of NH<sub>3</sub> in 2023 was 35,494 GJ/Ton NH<sub>3</sub>, a decrease of 4.3% compared to 2022 (35,648 GJ/Ton NH<sub>3</sub>). This indicates that projects and improvements made a significant contribution to reducing energy consumption and CO<sub>2</sub> emissions. Currently, PVCFC has not fully implemented CO<sub>2</sub> greenhouse gas emissions reporting according to GHG Protocol guidelines, but the review of data and statistics has been tracked and compared annually. The calculation bases are as follows:



**Electricity Emissions:** According to the announcement by the Department of Climate Change, Ministry of Natural Resources and Environment on December 31, 2022, the emission factor for Vietnam’s electricity grid in 2021 is 0.7221 tCO<sub>2</sub>/MWh.



**Natural Gas (1000 m<sup>3</sup>)** according to IPCC: 2.114 tCO<sub>2</sub>/unit.



**Diesel Oil (DO) (1000 liters)** according to IPCC: 2.73 tCO<sub>2</sub>/unit.



**Gasoline A92, A93 (1000 liters):** 2.408 tCO<sub>2</sub>/unit.

# CLIMATE CHANGE (Cont.)

## GREENHOUSE GAS EMISSIONS REPORT (Cont.)

Emission Activities	Unit	2022	2023	Note
<b>A. Direct Emissions (1+2)</b>	<b>tons of CO<sub>2</sub>/year</b>	<b>381,662.650</b>	<b>393,389.360</b>	<b>Increase of 3.07%</b>
Combustion Fuels	tons of CO <sub>2</sub> /year	379,729.900	391,404.710	Increase of 3.07%
Natural Gas	tons of CO <sub>2</sub> /year	340,928.500	352,603.310	
Permeate Gas	tons of CO <sub>2</sub> /year	38,801.400	38,801.400	
Vehicle Fuels	tons of CO <sub>2</sub> /year	1,932.750	1,984.650	Increase of 2.69%
Diesel Oil (DO)	tons of CO <sub>2</sub> /year	409.910	872.500	
Gasoline A92, A95	tons of CO <sub>2</sub> /year	1,522.840	1,112.150	
<b>B. Indirect Emissions</b>	<b>tons of CO<sub>2</sub>/year</b>	<b>128,537.432</b>	<b>136,592.638</b>	<b>Increase of 6.27%</b>
Electricity Consumption	tons of CO <sub>2</sub> /year	128,537.432	136,592.638	
<b>Total Emissions (A+B)</b>	<b>tons of CO<sub>2</sub>/year</b>	<b>510,200.082</b>	<b>529,981.998</b>	<b>Increase of 3.88%</b>
<b>Emission Intensity</b>	<b>tons of CO<sub>2</sub>/ton of product</b>	<b>0.494</b>	<b>0.482</b>	<b>Decrease of 2.47%</b>

Based on current calculations, in 2023 the total emissions increased by 3.88% due to a 4% increase in plant capacity compared to 2022. However, the emission intensity per ton of product produced decreased by 2.47%, indicating the effectiveness of the improvements and emission reduction solutions implemented at the Ca Mau Fertilizer Plant.

For the PPC Plant, the two main products are Packaging and Fertilizers; where direct emissions are from the use of DO oil in Fertilizer production, while indirect emissions are mainly from electricity consumption in Packaging production. The direct emissions in 2023 decreased by 50.02% due to a significant reduction in Fertilizer production compared to 2022, while the indirect emissions increased due to higher Packaging production. The total emissions in 2023 decreased by 2.48% compared to 2022, mainly due to the reduction in Fertilizer production, and the emission intensity per ton of product was 3.43% lower than in 2022, as follows:

Emission Activities	Unit	2022	2023	Ghi chú
<b>A. Direct Emissions (1+2)</b>	<b>tons of CO<sub>2</sub>/year</b>	<b>406.94</b>	<b>203.38</b>	<b>Decrease of 50.02%</b>
1. Combustion Fuels (Diesel Oil (DO))	tons of CO <sub>2</sub> /year	267.19	75.35	
2. Fuel for vehicles/equipment (Diesel Oil (DO))	tons of CO <sub>2</sub> /year	139.75	128.03	
<b>B. Indirect Emissions</b>	<b>tons of CO<sub>2</sub>/year</b>	<b>2,867.39</b>	<b>2,989.78</b>	<b>Increase of 64.27%</b>
Electricity Consumption	tons of CO <sub>2</sub> /year	2,867.39	2,989.78	
<b>Total Emissions (A+B)</b>	<b>tons of CO<sub>2</sub>/year</b>	<b>3,274.33</b>	<b>3,193.16</b>	<b>Decrease of 2.48%</b>
<b>Emission Intensity</b>	<b>tons of CO<sub>2</sub>/ton of product</b>	<b>0.72</b>	<b>0.69</b>	<b>Decrease of 3.43%</b>

# CLIMATE CHANGE (Cont.)

## SOLUTIONS TO REDUCE CLIMATE CHANGE IMPACT



Alongside technical improvements aimed at increasing production efficiency by reducing the consumption of key production materials such as gas, electricity, water, and chemicals, the company has also focused on reducing direct emissions intensity (Scope 1) and part of indirect emissions (Scope 2). The company has also developed several products with superior features to enhance usage efficiency, such as N46 Plus and BIO Urea (Scope 3). However, calculating the emission reduction intensity for Scope 3 is still not specifically guided both domestically and internationally. The company is also collaborating with research units/partners to continue improving and developing a roadmap for calculating emissions for these new products.

IN 2023, PVCFC PLANTED  
**300,000**  
trees

CONTRIBUTING TO THE GOVERNMENT'S "1 MILLION TREES" PROGRAM, AIMING FOR NET-ZERO EMISSIONS BY 2050.



Additionally, the company has emphasized the effective implementation of energy transition and greenhouse gas emissions reduction efforts. In 2023, PVCFC established the Energy Transition and Greenhouse Gas Emissions Reduction Steering Committee to clearly assign tasks and responsibilities to each group and individual. The committee is also responsible for planning and implementing projects such as: integrated food-grade CO<sub>2</sub> production systems, CO<sub>2</sub> recovery projects from sources like CO<sub>2</sub> separation in the fuel gas stream (containing 8% CO<sub>2</sub>), CO<sub>2</sub> recovery from reforming furnace flue gas, rooftop solar energy systems of about 5 MWh at the Ca Mau Fertilizer Plant, and increasing plant capacity by 5% using green hydrogen from electrolysis technology.

Moreover, we have laid out short-and long-term plans to achieve energy consumption reduction and greenhouse gas emissions reduction goals for the 2023-2030 period, with an estimated reduction of 60,000 tons of CO<sub>2</sub> per year, as follows:

Period	Solution	Estimated CO <sub>2</sub> Reduction
Period 2023-2030	1. Reducing energy consumption based on production capacity, with the current production capacity at 115%	36 thousand tons CO <sub>2</sub> / year
	2. Applying ORC technology to generate electricity from excess heat sources	1.5 thousand tons CO <sub>2</sub> / year
	3. Installing a Membrane system to separate and recover CO <sub>2</sub> from the production feedstock stream	17 thousand tons CO <sub>2</sub> / year
	4. Using solar energy to produce green hydrogen through electrolysis technology	5.8 thousand tons CO <sub>2</sub> / year

The company strictly complies with legal regulations on emissions into the environment. All emission sources from the plant are tightly controlled in terms of both quantity and quality, ensuring they always meet the regulatory requirements before being released into the environment.

- Emission monitoring locations: Primary reforming stack, auxiliary boiler stack, granulation stack, with monitoring parameters including dust, CO, NO<sub>x</sub>, SO<sub>2</sub>, NH<sub>3</sub>, noise, and vibration according to QCVN: 19/20/09/BTNMT and 21/2009/BTNMT.
- 2023 periodic monitoring results at all locations were within the allowable limits. In addition to conducting periodic environmental monitoring, the company has also installed automated continuous monitoring systems to supervise emissions at several locations and parameters, such as: Granulation stack emissions: flow rate, pressure, dust, temperature, and NH<sub>3</sub>; Ammonia stack emissions: temperature, flow rate, pressure, dust, NO<sub>x</sub>, SO<sub>2</sub>; NPK stack emissions: temperature, pressure, dust.
- The automated, continuous monitoring data is collected every 5 minutes and transmitted directly to the Ca Mau Provincial Department of Natural Resources and Environment.

# BIODIVERSITY



**The overuse of chemical fertilizers, unbalanced fertilization, improper application, and excessive use over long periods can have negative impacts on the environment, degrading soil health, harming beneficial organisms, and affecting human health.**

**PVCFC is committed to protecting biodiversity through the following groups of activities:**



## **Research and Development of Microbial Fertilizers, Organic Fertilizers, Organic Microbial Fertilizers, and Mineral Fertilizers to Improve Soil Microorganisms, Prevent Erosion, and Enrich the Soil**

- Organic fertilizers are produced from organic materials such as manure, soybean residues, plant leaves, and organic waste. The use of organic fertilizers helps reduce the need for chemical fertilizers and minimizes environmental impact due to their eco-friendly, biodegradable, and nutrient-rich properties.
- Organic microbial fertilizers contain microorganisms capable of nitrogen fixation, phosphorus solubilization, and potassium solubilization, which enrich the soil.
- Organic microbial fertilizers contain microorganisms capable of biosynthesizing substances or factors that stimulate plant growth (e.g., IAA, ACC deaminase, and Siderophore) or have the ability to form symbiotic/endophytic relationships with plants, thereby enhancing the growth and development of plants.

**Additionally, the company is conducting research on microbial products used as biological pesticides to control insects, nematodes, and plant diseases, such as:**

- Microbial products containing bacterial and fungal strains capable of controlling nematodes harmful to plants.
- Microbial products containing bacterial and fungal strains capable of controlling insects harmful to plants.
- Microbial products containing bacterial and fungal strains capable of controlling diseases caused by bacteria, fungi, or viruses.

**Based on this direction, during the 2021-2025 period, a range of organic and organic microbial fertilizers, consisting of four formulas, has been developed: One traditional organic fertilizer formula; One organic mineral fertilizer formula; One organic microbial fertilizer formula; One bio-organic fertilizer formula.**

**These developments include the following specific initiatives:**

- Pre-feasibility study on certain microbial strains for nematode parasitism to support the production of organic fertilizers.
  - Isolation of 204 bacterial strains with ongoing efforts to select the four most effective strains. Sequencing of four gene regions of the isolated fungal strains using molecular biology methods.
  - IAA Growth Stimulating Substances: Organic microbial fertilizers containing microorganisms capable of biosynthesizing substances or factors that stimulate plant growth (e.g., IAA, ACC deaminase, and Siderophore) or form symbiotic/endophytic relationships with plants, thereby enhancing plant growth and development.
- Isolation and Identification of Rhizobia Bacteria from root nodules of mung bean plants (*Vigna radiata* L): Identified 15 strains of isolated bacteria with many beneficial traits for plant growth and development. Some prominent traits include nitrogen fixation, phosphorus solubilization, IAA production, siderophore production, and resistance in heavy metal environments. Besides the Rhizobia group, 26 other bacterial strains were also isolated and identified. *Bacillus* sp. strains are considered to have many beneficial applications for plants. In this study, *Enterobacter* sp. strains were highly prevalent among the isolates and demonstrated many favorable traits, such as growth in a wide pH range, temperature tolerance, and high salt concentrations.

## BIODIVERSITY (Cont.)



### Pursuing the Circular Agriculture Approach

Circular Agriculture (CA) is an economic model that maximizes the efficient use of resources and minimizes waste through reuse, repair, recycling, and regeneration of products and materials. Unlike the traditional “produce, use, and dispose” agricultural model, Circular Agriculture focuses on keeping resources within a circular loop to minimize negative environmental impacts and create sustainable value for society. As one of the largest fertilizer manufacturing and trading companies in Vietnam, PVCFC is proud to be a significant part of the CA process, helping farmers increase productivity, reduce costs, and minimize environmental impact. PVCFC participates in the circular agriculture chain through the following activities:

- Research and guidance for farmers on proper fertilizer use to reduce emissions: Proper fertilization in the right amounts brings positive environmental and social impacts, such as reducing soil, water, and air pollution, and limiting the impact on biodiversity.
- Research on soil improvement and nutrient-balancing functional product lines to maintain soil health: These functional fertilizers supplement active ingredients that enhance absorption and slow down fertilizer breakdown, thereby contributing to emission reduction in the environment. Additionally, they ensure that crops receive sufficient nutrients for optimal growth, preventing nutrient surplus in the soil (nutrient surplus can lead to soil pollution).



### Conduct research and monitoring of soil and water quality used by farmers during the usage process to implement appropriate countermeasures

- Perform soil analysis before each experiment/trial/efficiency assessment to develop suitable fertilizer formulas, helping to save fertilizer and propose appropriate dosages for each type of crop in different soil regions.

## BIODIVERSITY (Cont.)



### Using “Fertilizers Correctly”

PVCFC has always been a leader in researching and guiding the proper use of fertilizers according to the “5 Rights” principle (right soil type, right crop type, right dosage, right timing, and right method) as stipulated in the Law on Crop Production and related Decrees:

- **Right soil type, right crop type:** PVCFC has researched specialized fertilizers for each type of crop and soil to provide recommendations on how to use them. For example: N.46. True: Helps reduce lodging in rice, increases tillering, and promotes branching; N46. Plus, N46. RICH, N46.C+, Urê Bio: Enhances fertilizer efficiency and reduces nitrogen loss.
- **Right dosage:** PVCFC has conducted research on the project “Research on Suitable Fertilizer Types and Nutritional Solutions for Mango, Durian, Pomelo, and Jackfruit in the Acid Sulfate Soils of the Dong Thap Muoi Region,” with the following recommendations:
  - Identification of a product range including 10 types of Ca Mau NPK fertilizers that meet the growth and development needs of mango, durian, pomelo, and jackfruit in the business stage on the acid sulfate soils of Dong Thap Muoi
  - Based on this product range, the research team has developed 4 fertilization processes for mango, durian, pomelo, and jackfruit in the business stage in the acid sulfate soils of Dong Thap Muoi
  - Training and transferring Ca Mau fertilization processes for mango, durian, pomelo, and jackfruit in the acid sulfate soils of Dong Thap Muoi to technical staff, agricultural extension officers, and farmers to achieve stable yields and good quality
- **Right timing:** The project “Research on Solutions to Improve Fertilizer Efficiency for Rice on Major Soil Groups in the Mekong Delta” (2018) was conducted to determine fertilizer needs at each growth stage.
  - The research assessed fertilizer responses and developed fertilization formulas for major rice-growing soils in the Mekong Delta using the “Site-Specific Nutrient Management” method
  - According to the results of the project, fertilization following Site-Specific Nutrient Management (SSNM) helps farmers increase their average profit by approximately 10% compared to the fertilization practices of local farmers.



- **Correctly:** PVCFC has carried out the S&T task “Developing a soil fertility map and fertilizer recommendations for rice and fruit trees based on ecological zones in the Mekong Delta” to assist farmers in determining the most effective fertilization spots.
  - The development of a soil fertility distribution map according to ecological zones for the provinces in the Mekong Delta identified 246 fertility units based on the classification of soil chemical indicators such as pH, EC, Organic Matter, CEC, and total N, P, K content
  - Statistics on nutrient requirements in the soil according to ecological zones show that the cultivated land for rice in the Mekong Delta, the primary fruit cultivation land in the Mekong Delta, the Dong Thap Muoi ecological subregion, the Ca Mau Peninsula subregion, and the Tien – Hau River alluvial subregion are included
  - According to the results of the task, 65 fertilizer recommendation formulas for rice in the ecological zones of the Mekong Delta have been developed, which can be applied to rice cultivation in the freshwater alluvial ecological zone, covering the largest area of 1,567,472.78 hectares, distributed across 6 ecological subregions. Additionally, the research has developed 57 of the most common fertilizer recommendation formulas for major fruit crops in the Mekong Delta, such as pomelo, orange, longan, durian, mango, and dragon fruit

# BIODIVERSITY (Cont.)



## Research on Soil Health

In all studies, PVCFC has highlighted the issue of increasing fertilizer loss due to farmers applying amounts that exceed recommended levels. Additionally, the current method of broadcasting fertilizers on the field surface leads to significant losses due to leaching, runoff, and volatilization, with 40–50% of nitrogen, 60% of phosphorus, and 50% of potassium being lost. Furthermore, soil acidification, salinization, and nutrient degradation are major challenges in cultivation and meeting the nutrient demands of various crops in the Mekong Delta. The issue raised is the need to identify the current fertility status of the main soil groups based on existing and ongoing research data in the Mekong Delta, in order to develop appropriate management methods and recommend suitable fertilizer application rates for crops on each soil group, thereby helping to reduce costs and increase farmers' income.

According to the company's needs and goals, PVCFC has gradually introduced new environmentally friendly product lines to support the sustainable development of the nation's agriculture. Mastering, updating, and managing the database on the current soil fertility status in the Mekong Delta, as well as determining the nutritional needs of the region's key crops, are essential for the company's business direction and product development strategy. The application and updating of the status map of the main soil groups and crops in the Mekong Delta, integrating the database of soil characteristics and the nutritional needs of key crops, and identifying the difficulties and challenges for each soil group and crop have become more accessible.

On this basis, PVCFC has collaborated with Can Tho University to develop a digital map of soil fertility and fertilizer recommendations for crop cultivation in the Mekong Delta. The integration of "big data" will be valuable tools to support the company's research, product development, and business operations, aiming to enhance business efficiency and reduce labor costs.



*PVCFC cooperates with agricultural experts to advise farmers on effective farming techniques.*

## THE SUSTAINABILITY REPORT

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# OVERVIEW OF THE SUSTAINABILITY REPORT



Throughout the development process, PVCFC has consistently positioned sustainable development as a strategic priority, integrating with economic growth objectives while ensuring a balance of interests among stakeholders and environmental sustainability, aimed at the prosperity of the community and society. In addition to the annual disclosures on environmental, social, and governance included in the Annual Report, in 2023, the Sustainability Report has been prepared as a separate document

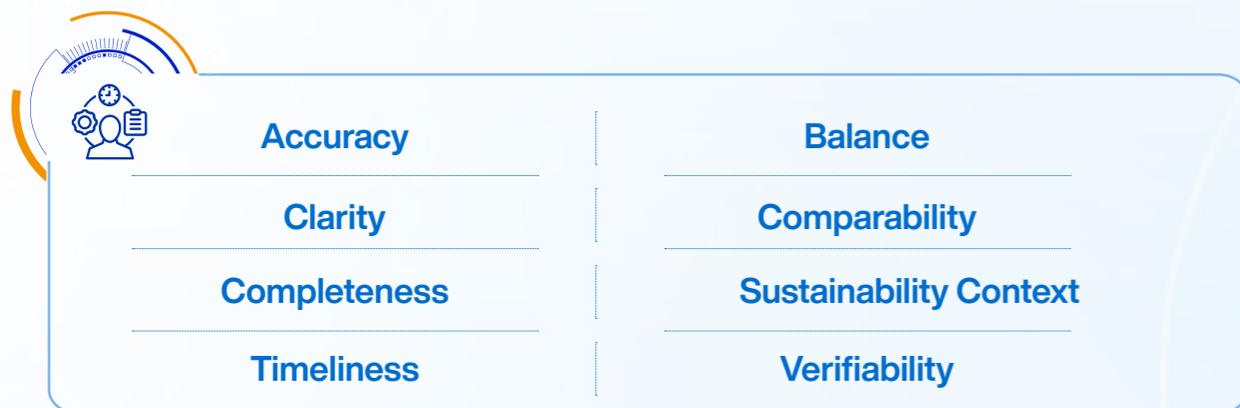
to officially announce the key objectives and strategic directions related to PVCFC's sustainable development for the fiscal year ending December 31, 2023. Through the implementation of the Sustainability Report, PVCFC not only addresses economic factors but also recognizes and evaluates its responsibilities and contributions to social and environmental aspects. This approach helps PVCFC balance the upcoming operational plans in pursuit of sustainable development goals for both the company and society in the forthcoming financial years.

# REPORTING STANDARDS

PVCFC prepares the 2023 Sustainable Development Report with reference to the Global Reporting Initiative (GRI) Universal Standards 2021, referencing the United Nations Sustainable Development Goals (SDGs). This report focuses on relevant aspects of the fertilizer industry, specifically goals 2, 12, 13, and 15, aimed at promoting global sustainable development. Additionally, we refer to the guidelines, recommendations, and policy advice related to the sustainable management and use of fertilizers from the Food and Agriculture Organization (FAO). We also strive to comply with the standards and best practices established by the International Fertilizer Association (IFA) to ensure the safe, effective, and sustainable production, distribution, and use of fertilizers. This commitment contributes positively to achieving sustainable green agricultural development in Vietnam while increasingly meeting the needs of customers.

# PRINCIPLES OF REPORT DEVELOPMENT

This Sustainability Report focuses on analyzing key issues and areas that significantly impact PVCFC's business operations while reflecting the deep concerns of stakeholders. We apply the GRI 2021 Principles of Sustainability Reporting in preparing this report, specifically as follows:



# REPORTING PERIOD

This report is prepared for the fiscal year ending December 31, 2023, similar to the company's consolidated financial statements. Several environmental and social indicators include data from PetroVietnam Packaging Joint Stock Company, a subsidiary of PVCFC. Therefore, the figures in this report may differ from those in the Annual Report.

# SCOPE OF THE REPORT

The report is conducted in Vietnam, focusing on the fertilizer production and business sector. Unless specifically stated otherwise for individual sections, this consolidated Sustainability Report is prepared for PetroVietnam Ca Mau Fertilizer Joint Stock Company (PVCFC) and its subsidiary, PetroVietnam Packaging Joint Stock Company (PPC). The data for the parent company will include the Ca Mau Fertilizer Plant, the office in Ca Mau, and the office in Ho Chi Minh City.

The Sustainability Report is prepared with reference to the Company's internal Sustainability Report regulations with reference to Global Reporting Initiative.

# REPORT FORMAT

This report is published on a digital platform on the website

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# CONTACT INFORMATION

We welcome your sincere feedback to enhance the transparency and completeness of this report. Please kindly send any comments related to sustainable development to:

Mr. **Do Thanh Hung** - Corporate Secretary

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# AUDIT/ASSURANCE OF RELATED INFORMATION

PVCFC is committed to adhering to the principles of accuracy and clarity in presenting data and information in the Report. Therefore, in addition to internal controls, we also seek assurance from independent third party as follows:

- Deloitte Vietnam provides independent limited assurance for the following indicators: total electricity consumption (MWh); total water consumption (m<sup>3</sup>); employee turnover and new hiring rates (%); and total Workforce by Employment Level, Gender, and Age Group (persons). Limited assurance report from Deloitte are presented below.
- The consolidated financial indicators (assets, revenue, profit, and State budget contributions) are audited by Deloitte Vietnam Audit Co., Ltd.
- In 2024, PVCFC completed an energy audit (a major energy usage facility conducts audits every three years) with consulting from Bach Khoa Energy Saving Joint Stock Company and a team of energy experts from Denmark. The energy audit report was submitted to the Department of Industry and Trade of Ca Mau Province, which responded confirming compliance with Law No. 50/2010/QH12 on energy saving and efficiency, Decree 21/2011/NĐ-CP detailing and implementing measures for the Energy Saving and Efficiency Law, and Circular 25/2020/TT-BCT regarding the planning and reporting on energy saving and efficiency efforts, as well as conducting energy audit.
- The energy consumption for production at the Ca Mau Fertilizer Plant has been certified by Haldor Topsoe from Denmark, the technology licensor for ammonia production.

## WASTE MANAGEMENT INDICATORS

- Household Waste: Verified by Ca Mau Urban Environment Joint Stock Company.
- Industrial Solid Waste: Verified by Cao Gia Quy Environmental Co., Ltd.
- Hazardous Waste: Verified by Moc An Chau Logistics Corporation.
- Automatic and continuous monitoring data is collected at a frequency of every 5 minutes and is transmitted directly to the Department of Natural Resources and Environment of Ca Mau Province.
- In 2023, 99.86% of the data from the wastewater monitoring stations, cooling water discharge stations, and emissions monitoring stations at the particulate matter stacks were transmitted to the Department of Natural Resources and Environment of Ca Mau Province. Additionally, 96.975% of the data from the ammonia and NPK emissions monitoring stations were also transmitted, excluding days when the plant was closed for maintenance or due to internet network issues. The recorded results showed that no parameters exceeded the permissible limits.



No.: /VN1A-HN-BC

### INDEPENDENT AUDITORS' LIMITED ASSURANCE REPORT ON SELECTED SUSTAINABILITY INDICATORS

To: **The Board of Directors**  
**Petrovietnam Camau Fertilizer Joint Stock Company**

#### Report on Selected Sustainability Indicators

We have been engaged with Petrovietnam Camau Fertilizer Joint Stock Company ("the Company") to perform a limited assurance engagement on selected Sustainability Indicators for the year ended 31 December 2023 in Sustainability Report 2023 of the Company ("selected KPIs").

#### The Board of Directors' Responsibilities

The Board of Directors is responsible for the preparation and presentation of the selected KPIs in the Company's Sustainability Report 2023 in accordance with criteria and reporting scope as presented in page 122 of this report. This responsibility includes design, implementation and maintenance of systems and procedures related to the preparation of selected KPIs in the Company's Sustainability Report 2023 that is free from material misstatement, whether due to fraud or error; selecting and applying appropriate criteria; using of assumption and estimates that are reasonable in the circumstances.

#### Our Independence and Quality Control

We have complied with the independence and other ethical requirements of the International Code of Ethics for Professional Accountants issued by the International Ethics Standards Board for Accountants, which is founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behaviours.

We apply International Standard on Quality Management 1 and accordingly maintain a comprehensive system of quality management including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

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# AUDIT/ASSURANCE OF RELATED INFORMATION (Cont.)

## WASTE MANAGEMENT INDICATORS (Cont.)

**Deloitte.**

**INDEPENDENT AUDITORS' LIMITED ASSURANCE REPORT ON  
SELECTED SUSTAINABILITY INDICATORS (Continued)**

**Auditor's Responsibilities**

Our responsibility is to express a limited assurance conclusion on the selected KPIs in the sustainability report based on the procedures we have performed and the evidence we have obtained in accordance with the International Standard on Assurance Engagements (ISAE) 3000 (Revised) "Assurance Engagements other than Audits or Reviews of Historical Financial Information". This Standard requires that we comply with ethical requirements, plan and perform the engagement to obtain limited assurance about whether the selected KPIs are free from material misstatement.

The accuracy and completeness of the selected KPIs depends on the contingent limitations due to nature, methodology for determining, calculating and estimating those selected KPIs. Thus, our limited assurance report should be considered in conjunction with the Company's sustainability report procedures.

The procedures performed in a limited assurance engagement vary in nature and timing from, and are less in extent than for, a reasonable assurance engagement. Consequently, the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had we performed a reasonable assurance engagement.

**Subject Matter and Scope of limited assurance engagement**

We performed limited assurance procedures on selected KPIs as follows:

No.	Selected KPIs	GRI	Scope	Page
1.	Total electricity consumption in 2023	GRI 302-1	(i)	106
2.	Total water consumption in 2023	GRI 303-5	(ii)	100
3.	Rate of turnover and new hire in 2023	GRI 401-1	(i)	70
4.	Total employees by level, by gender and by age group in 2023	GRI 405-1	(i)	71

- (i) The coverage includes Petrovietnam Camau Fertilizer Joint Stock Company (Camau Office, Camau Factory and Representative Office in Ho Chi Minh City) and Petrovietnam Packaging Joint Stock Company (the Company's subsidiary).
- (ii) The coverage includes Petrovietnam Camau Fertilizer Joint Stock Company (Camau Office and Camau Factory) and Petrovietnam Packaging Joint Stock Company (the Company's subsidiary).

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**Deloitte.**

**INDEPENDENT AUDITORS' LIMITED ASSURANCE REPORT ON  
SELECTED SUSTAINABILITY INDICATORS (Continued)**

We performed limited assurance procedures on selected KPIs for the year ended 31 December 2023 as presented in the Sustainability Report 2023 of the Company. Our limited assurance engagement is not related to prior periods and not extended to any other information of the Sustainability Report 2023, therefore, we do not express the conclusion on such information

**Criteria**

The selected KPIs above were assessed in accordance with the Company's internal sustainability reporting policies with reference to Global Reporting Initiative ("GRI") and the reporting scope as described in page 122 of the Company's Sustainability Report 2023.

**Summary of procedures performed**

Our limited assurance conclusion is based on the evidence obtained from performing the following procedures:

- Primarily interview personnel who are responsible for the preparation and presentation of the selected KPIs;
- Review the internal process for collection, aggregation and reporting of the selected KPIs; and
- Inspect, on a sample basis, of vouchers, internal report provided by the Company and invoices provided by relevant suppliers supporting the preparation and presentation of the selected KPIs.

**Conclusion**

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 selected KPIs for the year ended 31 December 2023 have not been prepared, in all material respects, in accordance with the Company's internal sustainability reporting policies and the reporting scope as described in page 122 of the Company's Sustainability Report 2023.

**Use of this report**

This report has been prepared solely for the Board of Directors of the Company for the purpose of reporting on the selected KPIs for the year ended 31 December 2023 in the Company's Sustainability Report 2023 and should not be used for any other purposes. We do not therefore accept any obligations or responsibilities to any other parties than the Board of Directors of the Company, for the use of this report.



**Deputy General Director**  
 Audit Practising Registration Certificate No. 0723-2023-001-1  
**DELOITTE VIETNAM AUDIT COMPANY LIMITED**  
 27 August 2024  
 Hanoi, S.R. Vietnam

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# GRI CONTENT INDEX

<b>Statement of use</b>	PVCFC has reported the information cited in this GRI content index for the 2023 fiscal year ending December 31, 2023 with reference to GRI Standards.
<b>GRI 1 used</b>	GRI 1: Foundation 2021

GRI Standard	GRI Index	Page Number
<b>GRI 2: General Disclosures 2021</b>	2-1: Organizational details	Page 9
	2-2: Entities included in the organization's sustainability reporting	Page 122
	2-3: Reporting period, frequency, and contact point	Page 122
	2-4: Restatements of information	Page 122
	2-5: External assurance	Page 122-123
	2-6: Activities, value chain, and other business relationships	Page 12-17; Page 26-27
	2-7: Employees	Page 76
	2-8: Workers who are not employees	N/A
	2-9: Governance structure and composition	Page 24-25
	2-10: Nomination and selection of the highest governance body	Page 58
	2-11: Chair of the highest governance body	Page 24-25
	2-12: Role of the highest governance body in overseeing the management of impacts	Page 56-59
	2-13: Delegation of responsibility for managing impacts	Page 55
	2-14: Role of the highest governance body in sustainability reporting	Page 55
	2-15: Conflicts of interest	Page 52
	2-16: Communication of critical concerns	N/A

GRI Standard	GRI Index	Page Number
	2-17: Collective knowledge of the highest governance body	N/A
	2-18: Evaluation of the performance of the highest governance body	Page 47-49
	2-19: Remuneration policies	Page 67
	2-20: Process to determine remuneration	Page 67
	2-21: Annual total compensation ratio	Page 67
	2-22: Statement on sustainable development strategy	Page 4-5; Page 41-44
	2-23: Policy commitments	Page 4-5
	2-24: Embedding policy commitments	Page 29
	2-25: Processes to remediate negative impacts	N/A
	2-26: Mechanisms for seeking advice and raising concerns	Page 31-37
	2-27: Compliance with laws and regulations	Page 30; 52
	2-28: Membership associations	Page 34
	2-29: Approach to stakeholder engagement	Page 31-37
	2-30: Collective bargaining agreements	Page 35
	<b>GRI 3: Material Topics 2021</b>	3-1: Process to determine material topics
3-2: List of material topics		Page 39-40
3-3: Management of material topics		Page 43-44

# GRI CONTENT INDEX

GRI Standard	GRI Index	Page Number
<b>GRI 201: Economic Performance 2016</b>	201-1: Direct economic value generated and distributed	Page 6
	201-2: Financial implications and other risks and opportunities due to climate change	Page 29
	201-3: Defined benefit plan obligations and other retirement plans	N/A
	201-4: Financial assistance received from government	N/A
<b>GRI 202: Market Presence 2016</b>	202-1: Ratios of standard entry level wage by gender compared to local minimum wage	Page 67
	202-2: Proportion of senior management hired from the local community	Page 76
<b>GRI 203: Indirect Economic Impacts 2016</b>	203-1: Infrastructure investments and services supported	N/A
	203-2: Significant indirect economic impacts	N/A
<b>GRI 204: Procurement Practices 2016</b>	204-1: Proportion of spending on local suppliers	N/A
<b>GRI 205: Anti-corruption 2016</b>	205-1: Operations assessed for risks related to corruption	N/A
	205-2: Communication and training about anti-corruption policies and procedures	N/A
	205-3: Confirmed incidents of corruption and actions taken	Page 47
<b>GRI 206: Anti-competitive Behavior 2016</b>	206-1 Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	N/A
<b>GRI 207: Tax 2019</b>	207-1 Approach to tax	Page 46
	207-2 Tax governance, control, and risk management	N/A
	207-3 Stakeholder engagement and management of concerns related to tax	N/A
	207-4 Country-by-country reporting	N/A

GRI Standard	GRI Index	Page Number
<b>GRI 301: Materials 2016</b>	301-1: Materials used by weight or volume	Page 98
	301-2: Recycled input materials used	Page 96; Page 106
	301-3: Reclaimed products and their packaging materials	N/A
<b>GRI 302: Energy 2016</b>	302-1: Energy consumption within the organization	Page 106
	302-2: Energy consumption outside of the organization	N/A
	302-3: Energy intensity	Page 106
	302-4: Reduction of energy consumption	Page 104-105
	302-5: Reductions in energy requirements of products and services	Page 104-105
<b>GRI 303: Water and Effluents 2018</b>	303-1: Interactions with water as a shared resource	Page 99
	303-2: Management of water discharge-related impacts	Page 101-102
	303-3: Water withdrawal	Page 100
	303-4: Water discharge	Page 100
	303-5: Water consumption	Page 100
<b>GRI 304: Biodiversity 2016</b>	304-1: Operational sites in or adjacent to protected areas and areas of high biodiversity value outside protected areas	N/A
	304-2: Significant impacts of activities, products, and services on biodiversity	N/A
	304-3: Habitats protected or restored	Page 116-119
	304-4: IUCN Red List species and national conservation list species with habitats in areas affected by operations	N/A

# GRI CONTENT INDEX

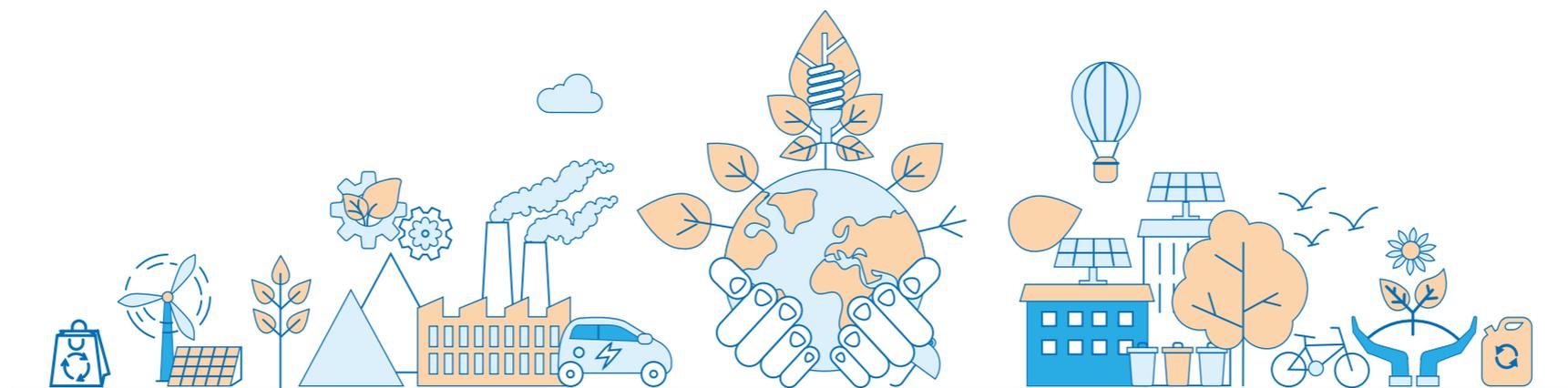
GRI Standard	GRI Index	Page Number
<b>GRI 305: Emissions 2016</b>	305-1: Direct (Scope 1) GHG emissions	Page 114
	305-2: Energy indirect (Scope 2) GHG emissions	Page 114
	305-3: Other indirect (Scope 3) GHG emissions	N/A
	305-4: GHG emissions intensity	N/A
	305-5: Reduction of GHG emissions	Page 115
	305-6: Emissions of ozone-depleting substances (ODS)	N/A
	305-7: Nitrogen oxides (NOX), sulfur oxides (SOX), and other significant air emissions	N/A
<b>GRI 306: Waste 2020</b>	306-1: Waste generation and significant waste-related impacts	N/A
	306-2: Management of significant waste-related impacts	N/A
	306-3: Waste generated	Page 108
	306-4: Waste diverted from disposal	Page 109-110
	306-5: Waste directed to disposal	Page 109-110
<b>GRI 308: Supplier Environmental Assessment 2016</b>	308-1: New suppliers that were screened using environmental criteria	Page 61-61
	308-2: Negative environmental impacts in the supply chain and actions taken	N/A
<b>GRI 401: Employment 2016</b>	401-1: New employee hires and employee turnover	Page 70
	401-2: Benefits provided to full-time employees that are not provided to temporary or part-time employees	Page 67-69
	401-3: Parental leave	Page 71
<b>GRI 402: Labor/ Management Relations 2016</b>	402-1 Minimum notice periods regarding operational changes	N/A

GRI Standard	GRI Index	Page Number
<b>GRI 403: Occupational Health and Safety 2018</b>	403-1: Occupational health and safety management system	Page 63
	403-2: Hazard identification, risk assessment, and incident investigation	Page 65
	403-3: Occupational health services	Page 63-65
	403-4: Worker participation, consultation, and communication on occupational health and safety	Page 63-65
	403-5: Worker training on occupational health and safety	Page 65
	403-6: Promotion of worker health	Page 63-65
	403-7: Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	N/A
	403-8: Workers covered by an occupational health and safety management system	N/A
	403-9: Work-related injuries	Page 65
	403-10: Work-related ill health	Page 65
<b>GRI 404: Training and Education 2016</b>	404-1: Average hours of training per year per employee	Page 75
	404-2: Programs for upgrading employee skills and transition assistance programs	Page 72-74
	404-3: Percentage of employees receiving regular performance and career development reviews	N/A
<b>GRI 405: Diversity and Equal Opportunity 2016</b>	405-1: Diversity of governance bodies and employees	Page 71
	405-2: Ratio of basic salary and remuneration of women to men	N/A
<b>GRI 406: Non-discrimination 2016</b>	406-1 Incidents of discrimination and corrective actions taken	Page 76

# GRI CONTENT INDEX

GRI Standard	GRI Index	Page Number
<b>GRI 407: Freedom of Association and Collective Bargaining 2016</b>	407-1 Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	N/A
<b>GRI 408: Child Labor 2016</b>	408-1 Operations and suppliers at significant risk for incidents of child labor	Page 78
<b>GRI 409: Forced or Compulsory Labor 2016</b>	409-1 Operations and suppliers at significant risk for incidents of forced or compulsory labor	Page 78
<b>GRI 410: Security Practices 2016</b>	410-1 Security personnel trained in human rights policies or procedures	N/A
<b>GRI 411: Rights of Indigenous Peoples 2016</b>	411-1 Incidents of violations involving rights of indigenous peoples	Page 78
<b>GRI 413: Local Communities 2016</b>	413-1 Operations with local community engagement, impact assessments, and development programs	Page 80-84; 91-93
	413-2 Operations with significant actual and potential negative impacts on local communities	N/A

GRI Standard	GRI Index	Page Number
<b>GRI 414: Supplier Social Assessment 2016</b>	414-1 New suppliers that were screened using social criteria	N/A
	414-2 Negative social impacts in the supply chain and actions taken	N/A
<b>GRI 415: Public Policy 2016</b>	415-1 Political contributions	N/A
<b>GRI 416: Customer Health and Safety 2016</b>	416-1 Assessment of the health and safety impacts of product and service categories	Page 86-89
	416-2 Incidents of non-compliance concerning the health and safety impacts of products and services	N/A
<b>GRI 417: Marketing and Labeling 2016</b>	417-1 Requirements for product and service information and labeling	N/A
	417-2 Incidents of non-compliance concerning product and service information and labeling	N/A
	417-3 Incidents of non-compliance concerning marketing communications	N/A
<b>GRI 418: Customer Privacy 2016</b>	418-1 Substantiated complaints concerning breaches of customer privacy and losses of customer data	Page 89





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