MAPÚA UNIVERSITY

2021-2022 SUSTAINABILITY REPORT

www.mapua.edu.ph

658 Muralla St., Intramuros,
Manila, Philippines

MAPUA UNIVERSITY
Sustainability Report (2021-2022)

Contents

Overview 5

MAPUA Materiality Process 5

ECONOMIC 6

A. Economic Performance 6

Figure 1a. 2021 Economic Value Generated, Distributed and Retained 6

Figure 1b. 2022 Economic Value Generated, Distributed and Retained 6

Figure 2a. 2021 Economic Value Distributed 7

Figure 2b. 2022 Economic Value Distributed 7

B. Procurement Practices 8

Table 1. 2021 vs. 2022 Proportion of spending on local suppliers 8

C. Anti-corruption 9

ENVIRONMENT 10

A. Resource Management 10

i. Energy Consumption 10

Table 2. Summary of 2019 to 2022 Energy consumption within the organization 10

Figure 3. Fuel Consumption 10

Figure 4. Electricity Consumption 11

ii. Water Consumption 11

Table 3. Summary of 2019 to 2022 Water Consumption 11

Figure 5. Water Consumption 12

iii. Materials Used by the Organization 12

Table 4. Summary of 2019 to 2022 Materials used by the Organization 12

Figure 6. Paper Consumption 13

B. Environmental Impact Management 13

i. Air Emissions 13

Table 5. Summary of 2019 to 2022 GHG Emissions (Scope 1 and Scope 2) 13

Figure 7a. GHG Emissions Scope 1 14

Figure 7b. GHG Emissions Scope 2 14

ii. Solid and Hazardous Wastes 15
a. Solid waste 15
Table 6. Summary of 2019 to 2022 Solid Waste Generated 15
Figure 8. Solid Waste Generated 15
b. Hazardous Waste 16
Table 7. Summary of 2019 to 2022 Hazardous Waste Generated 16
Figure 9. Hazardous Waste Generated 16
iii. Effluents 17
C. Environmental Compliance 17
SOCIAL 18
A. Employee Management 18
i. Employee Hiring and Benefits 18
Table 8. Employee Data 18
ii. Employee Training and Development 18
Table 9. Employee Training Data 18
iii. Labor-Management Relations 19
Table 10. Labor- Management Relations Data 19
iv. Diversity and Equal Opportunity 20
Table 11. Diversity and Equal Opportunity Data 20
B. Workplace Conditions, Labor Standards, and Human Rights 22
i. Occupational Health and Safety 22
Table 13. Occupational Health and Safety Data 22
ii. Labor laws and human rights 22
C. Supply Chain Management 23
Table 14. Sustainability Topics Considered in Supplier Accreditation 23
D. Customer Management 23
i. Customer Satisfaction 23
Table 15. Customer Satisfaction: Net Promoter Score and Happiness Survey 23
ii. Health and Safety 24
iii. Customer privacy 24
Table 16. Customer Privacy Data 24
E. Data Security 25

UN SUSTAINABLE DEVELOPMENT GOALS 25

Table 17. Contribution to UN SDGs 25

A. Quality and Accessible Education (SDG 4) 26

Table 18. 2021 Board Passing Rates for Top-Performing Courses 27

Table 19. 2022 Board Passing Rates for Top-Performing Courses 27

B. Research and Development (SDG 9 and SDG 17) 27

Table 20. 2021 vs. 2022 Research and Development Investment and Output 27

Overview

This report outlines Mapua University's sustainability performance based on the material topics identified particularly in terms of societal, environmental, governance and economic impact and value. It is divided into 4 main sections focusing on economic, environmental, social and governance aspects, and the University's contribution to the attainment of United Nations Sustainable Development Goals (SDGs). Each section contains metrics to measure business performance under international and globally recognized reporting standards specifically the Global Reporting Initiative (GRI) standards.

MAPUA Materiality Process

Application of the materiality principle (or the materiality process) in identifying the material topics.

Trainings and workshops were previously conducted and attended by the Mapua University ("Mapua") Senior Management and key personnel specifically on identifying material topics. Reviews were conducted on the role of sustainability within the company where sustainability issues were communicated with the top executives in the company, and perspectives widened to determine performance, driven not just by financial metrics, but also non-financial aspects. The materiality principles employed are as follows:

1. Understanding the Sustainability Context: This was conducted and enabled Mapua to think outside financial aspects and allow a framework driven by sustainability to guide the discussions on how their core business can contribute to society.

2. Identifying material topics: An initial list of material topics was identified by Mapua and further validated through group discussions with sustainability point persons, including middle management, heads, stakeholder touch points (to grasp stakeholder perspectives), and data handlers and verifiers whose functions are highly related to the theme of each group. In finalizing the material topics, Mapua used the guide questions:

   (a) Is it a key capital/risk/opportunity?
   (b) Does our key business activities impact it?
   (c) Does our supply chain contribute significant impacts?
   (d) Does our product/service contribute significant impacts to the topic?
   (e) Is there a trend that will make the topic material in the future?

3. Defining Performance and Management Approach: Once the list of material topics was identified, Mapua included metrics to measure business performance under international and globally recognized reporting standards specifically the GRI standards, and to further enhance this, management approaches were created to better improve and monitor performance against the set metrics. Regular reviews are also conducted to determine the relevance of each material topic and metric related to such topics.

4. The UN Sustainable Development Goals (SDGs) were also used as guidelines for identifying Mapua' societal, environmental, and economic impact and value. The University also monitors the applicable UN SDGs relevant to school operations and activities.

ECONOMIC

A. Economic Performance

Mapua's ability to provide quality and accessible education is directly related to how it generates, manages and distributes the economic value generated.

In 2021, 67% of Mapua's economic value generated was distributed as payment for suppliers, employee wages and benefits, operating expenses, providers of capital, government, and community investments/donations, with 33% of the economic value retained.

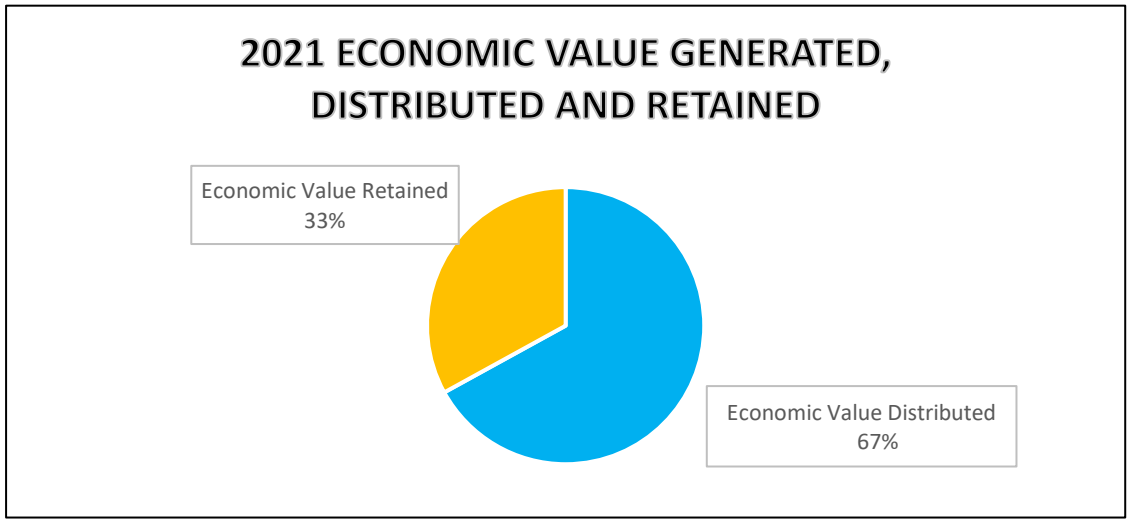

Figure 1a. 2021 Economic Value Generated, Distributed and Retained

In 2022, 59% of the economic value generated was distributed among suppliers, employees, providers of capital, government, and community investments/donations while 41% was retained.

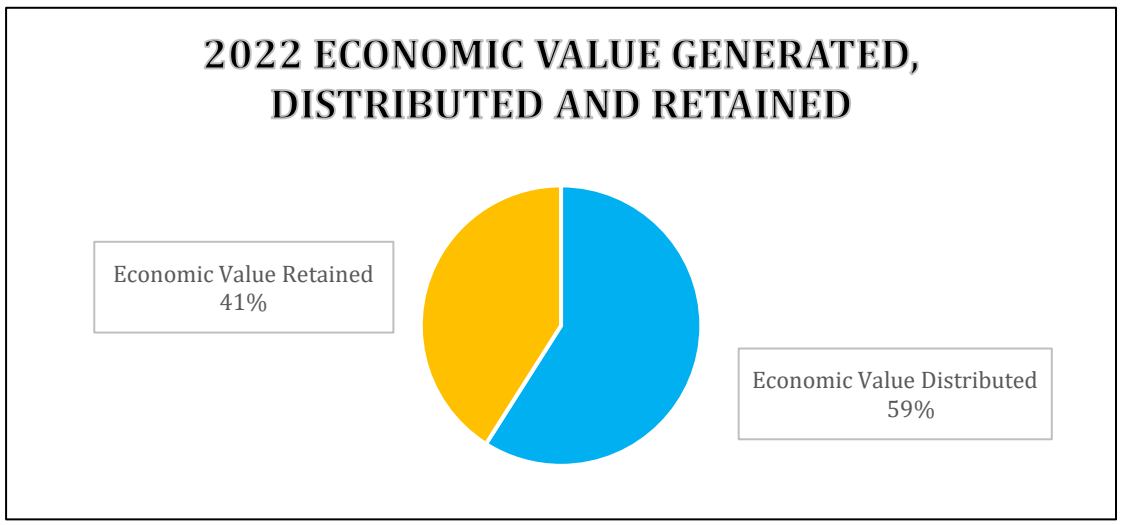

Figure 1b. 2022 Economic Value Generated, Distributed and Retained

On the direct economic value distributed, in 2021 a large part of the value was distributed to employees as wages and benefits (40%) and as payment to suppliers and operating costs (23%). This was also the case in 2022, where majority of the value distributed was for payment of suppliers and operating cost (45%) and payment of employee wages and benefits (45%).

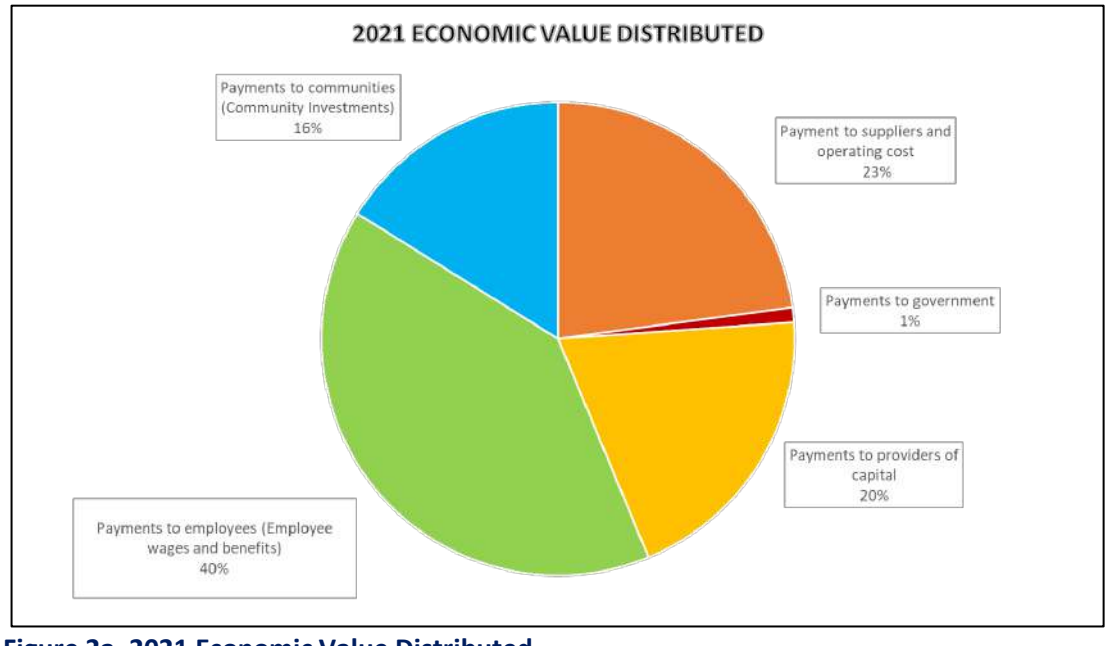

Figure 2a. 2021 Economic Value Distributed

On the direct economic value distributed, in 2021 a large part of the value was distributed to employees as wages and benefits (40%) and as payment to suppliers and operating costs (23%). This was also the case in 2022, where majority of the value distributed was for payment of suppliers and operating cost (45%) and payment of employee wages and benefits (45%).

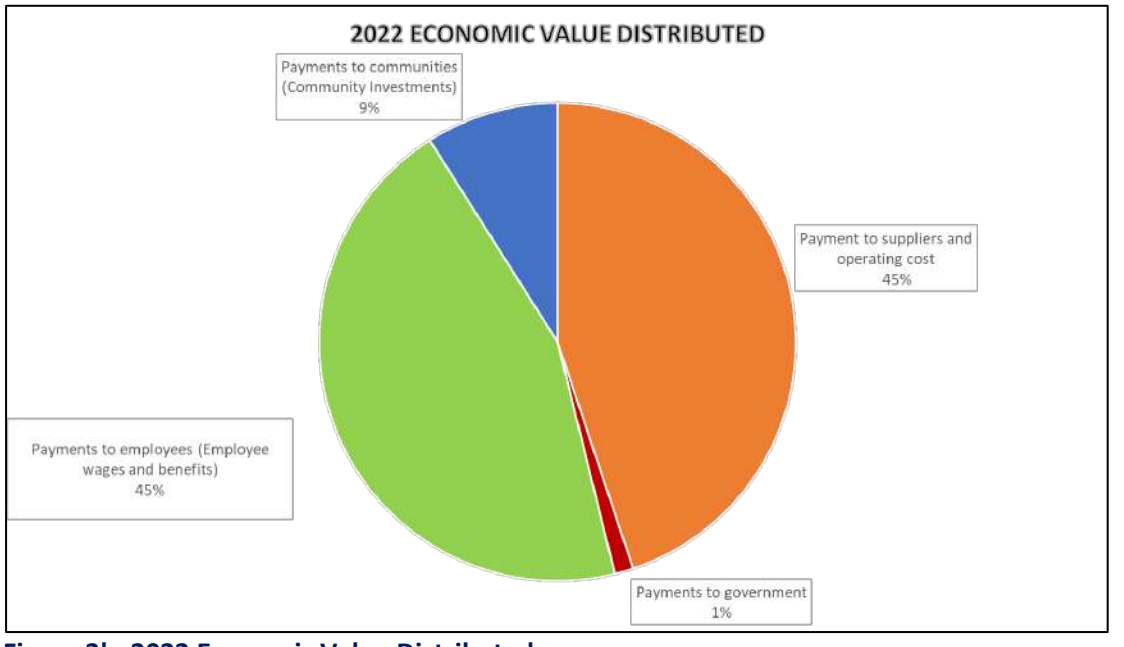

Figure 2b. 2022 Economic Value Distributed

On Mapua's continued dedication to providing quality and accessible education under SDG 4, this was highlighted during the time of the COVID pandemic with the distribution of 16% of its direct economic value generated in 2021 in the form of scholarships, tuition discounts, and corporate social responsibility (CSR) projects and 9% in 2022. CSR projects in 2021 and 2022 include providing technical expertise and assistance to the national and local governments and communities, and community outreach projects, and donations to various causes including COVID related concerns. These projects were initiated and implemented by Mapua, its students and employees.

Since Mapúa pioneered, tested and instituted the use of online facilities as early as 2016, during the pandemic Mapua has further enhanced its Learning Management System, the Cardinal Edge (powered by Blackboard), to improve the conduct of its synchronous (real-time online classes) and asynchronous online delivery of courses. Mapua continued to enhance its online course offerings to include CHED-approved fully online degree programs in 2021 which were expanded in 2022.

Mapua efforts to pioneer and expand the use of online digital tools has also been recognized, with Mapúa University's ÚOx or Ubiquitous Online Experience Program being awarded the Gold Award for Digital Readiness from the prestigious Wharton-QS Reimagine Education Awards in 2022. In the same year, Mapúa University also debuted on the Times Higher Education (THE) World University Rankings (WUR) 2023 and placed Mapua among the top six percent of the world's higher educational institutions. Mapúa ranked 1501+ among 1,799 universities across 104 countries.

New programs are also being offered to enhance the existing offerings. In 2022, Mapua University, through its parent company, iPeople, inc., partnered with Cintana, a global alliance of schools, to expand the access of Filipino students to high-quality international education in business and health sciences. With this partnership Mapua will collaborate with Arizona State University (ASU) to offer programs which aim to provide highly differentiated education that will be built on three core pillars – international exposure, real-world experiential learning, and digital-enhanced.

B. Procurement Practices

Table 1. 2021 vs. 2022 Proportion of spending on local suppliers

Disclosure	2021	2022	PY % Change
Percentage of procurement budget used for significant locations of operations that is spent on local suppliers[1]	95%	98%	3%

1 "Local suppliers" were defined as suppliers with operations in the Philippines.

Procurement Practices

In addition to providing accessible high-quality education to Filipinos, Mapua contributes to nation-building by purchasing from local suppliers when possible. Procurement spending on local suppliers in 2022 is 98% which is a 3% increase from the percentage in 2021.

As to supplier accreditation, since Mapua is part of the Yuchengco Group of Companies (YGC), all suppliers are vetted and accredited on the YGC Group level. On a YGC group level, suppliers are encouraged to adopt sustainability practices, by requiring them to attest to their compliance with prescribed sustainability practices for vendors which cover social, economic, environmental and ethical criteria as part of the group wide initiatives which started in 2022. In addition, as part of Mapua's digital transformation, Mapua also integrated

the Oracle Fusion application in the procurement and financial processes. This integration aims to facilitate and streamline operations particularly for the procurement process.

C. Anti-corruption

Mapua follows the highest ethical and legal standards set by its parent company, iPeople, inc. and the Yuchengco Group of Companies (YGC). Among the policies issued and enforced in Mapua are the following which are found in the iPeople website:

- YGC Code of Business Conduct and Ethics: https://ipeople.com.ph/wp-content/uploads/2018/08/YGC-Code-of-Business-Conduct-Ethics.pdf
- Related Party Transactions: https://ipeople.com.ph/wp-content/uploads/2018/09/IPO-Policy-on-Related-Party-Transactions.pdf
- Conflict of Interest: https://ipeople.com.ph/wp-content/uploads/2018/08/CODE-OF-BUSINESS-CONDUCT-AND-ETHICS.pdf
- Insider Trading: https://ipeople.com.ph/wp-content/uploads/2018/08/iPeople-Audit-and-Related-Party-Transactions-Charter-Revised-1.pdf
- Whistleblowing Policy: https://ipeople.com.ph/wp-content/uploads/2018/08/IPEOPLE-WHISTLE-BLOWER-POLICY-AND-RECEIVING-GIFTS.pdf

The above-mentioned policies cover all Mapua employees, as well as consultants, contractors, and subcontractors (e.g., housekeeping and security personnel).

ENVIRONMENT

A. Resource Management

i. Energy Consumption

Table 2. Summary of 2019 to 2022 Energy consumption within the organization

Disclosure	Unit	2019	2020	2021	2022
Energy consumption (gasoline)	Liters	865	175	395.59	999
Energy consumption (diesel)	Liters	4,797.50	1,384	1,292.37	987
Energy consumption (electricity)	kWh	4,480,880	1,630,200	2,900,627.21	1,976,950

Energy consumption

Mapua school operations are dependent on a consistent source of energy. Without electricity, the classrooms and equipment will not run, and school operations will be disrupted. Fuel is used for the Company's service vehicles and for the backup generators. Energy consumption significantly impacts the students, faculty, and employees in the school.

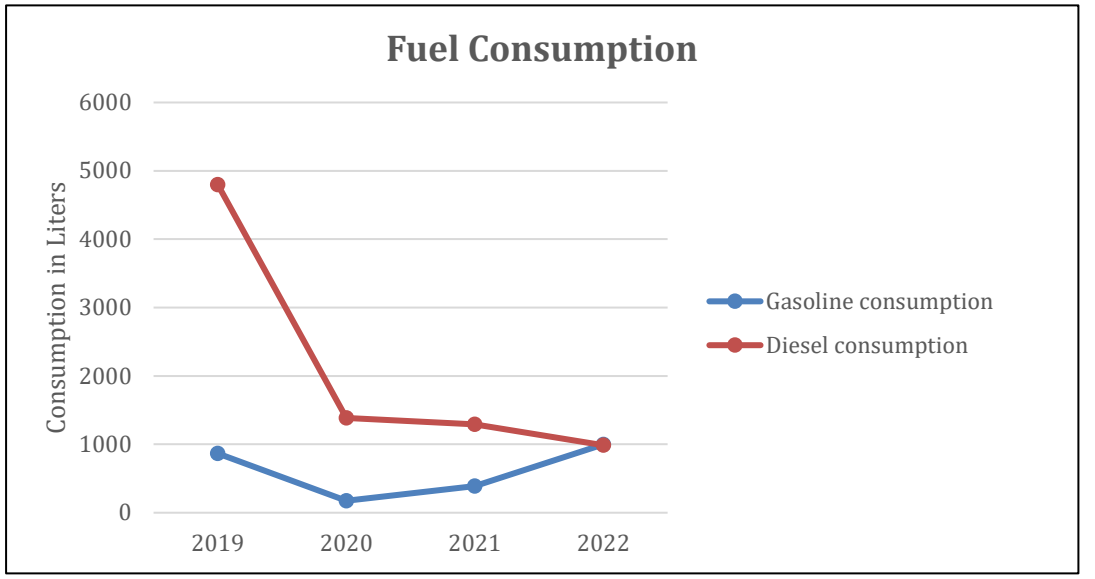

Figure 3. Fuel Consumption

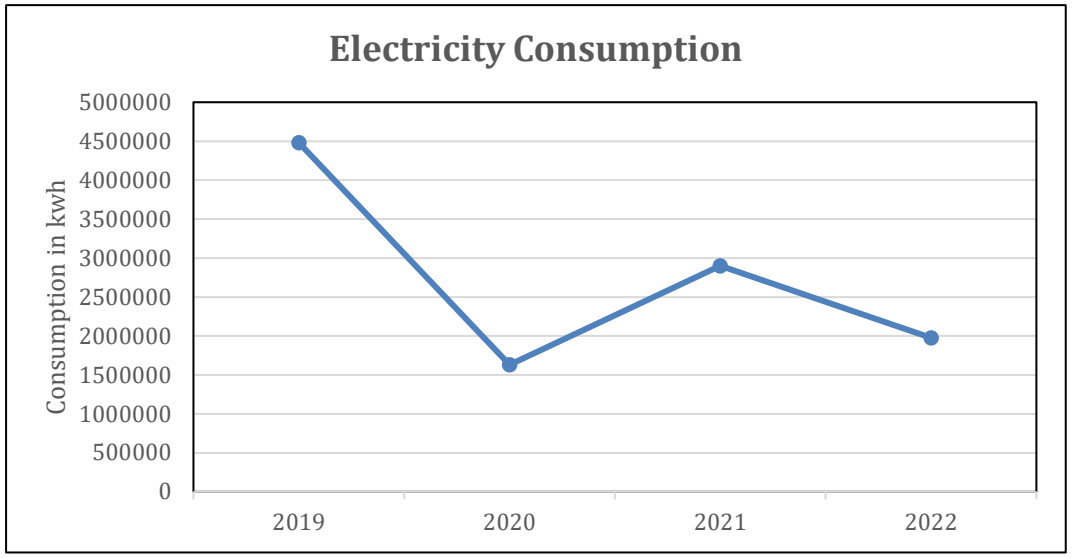

Figure 4. Electricity Consumption

In 2021, there was a significant reduction of energy consumption from the values in 2019 and 2020, due to the effects of the pandemic where there was limited onsite operations and majority of the classes were conducted online. However, in 2022, there was a drastic increase in energy consumption due to the resumption of full face to face classes and normal onsite operations of Mapua, which was implemented on a hybrid basis.

However, it must be noted that the values in fuel and electricity consumption in 2020 and 2021 were the inadvertent result of the pandemic. Thus, in 2022, there was a notable increase in energy consumption arising from fuel and electricity consumption for Mapua but such increase is still way below the pre-pandemic (2019) values.

In 2021 and 2022. Mapua continued the implementation of preventive maintenance for facilities and equipment, replacement of LED lights from fluorescent units, replacement of non-inverter air conditioning units to inverter-type, as well as behavioral approaches such as checking and shutting off all electrical equipment when not in use. This is in line with environmental programs which were established for Mapua to monitor and reduce consumption of electricity in line with its ISO 14001:2015 Certification.

ii. Water Consumption

Table 3. Summary of 2019 to 2022 Water Consumption

Disclosure	Units	2019 (pre-pandemic)	2020	2021	2022
Water consumption	Cubic meters	29,479	15,490	5,933	12,174

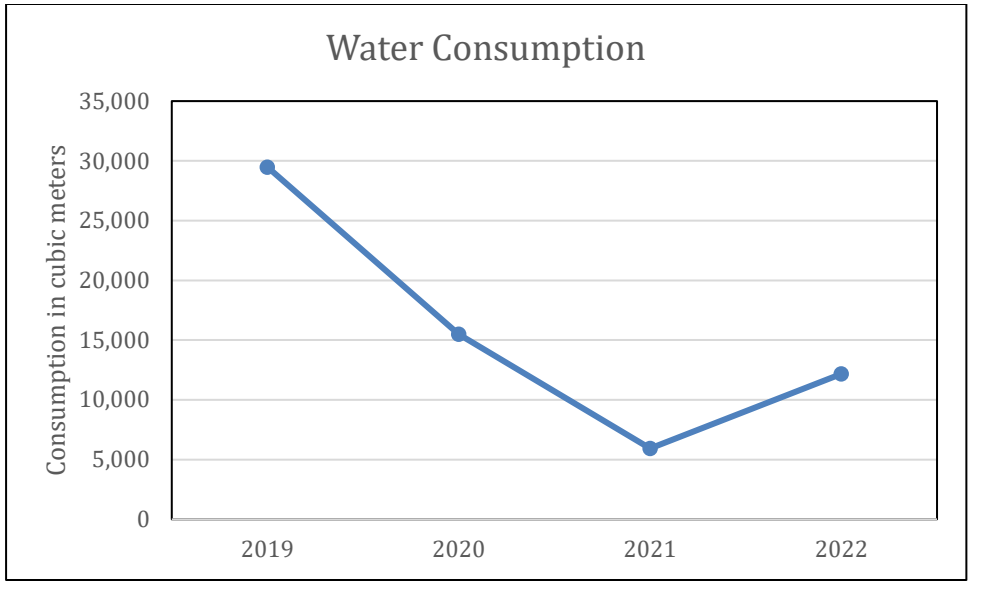

Figure 5. Water Consumption

Water consumption

Mapua's water consumption was significantly reduced in 2021 due to the effects of the pandemic but substantially increased in 2022 due to the resumption of full face to face classes and full onsite operations which negated the previous years' reductions due to the pandemic. But the consumption for 2022 is still significantly lower than the pre-pandemic (2019) levels.

In 2022, Mapua continued to implement various programs and activities to reduce water use such as reducing watering of plants, and quickly fixing leaks or other defects. Water reduction initiatives such as regular preventive maintenance, installation of low-flow fixtures, and usage of rainwater collection systems were already in place which contributed to the reduction in consumption.

iii. Materials Used by the Organization

Table 4. Summary of 2019 to 2022 Materials used by the Organization

Disclosure			2019	2020	2021	2022
	Material	Units				
Renewable	Paper	reams	1,293.42	1604	773	1050

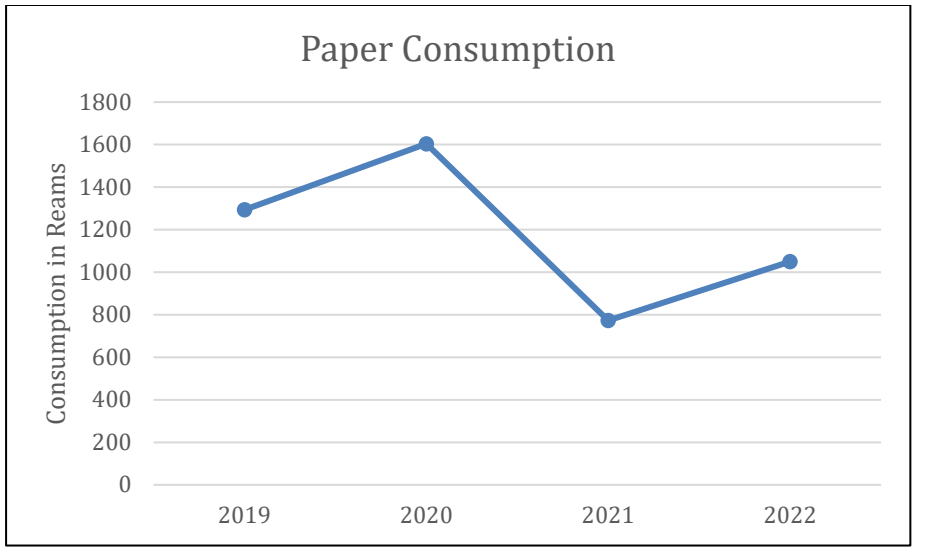

Figure 6. Paper Consumption

Materials consumption

The most significant material that Mapua consumes is paper. Paper is used in all aspects of the schools' operations: from application, admissions, enrollment, teaching, recording of grades, student services, to contracts and administrative work. Employees, faculty, students, suppliers, contractors and academic partners all use paper in a considerable amount.

In 2022, Mapua used 1050 reams of paper which is a drastic increase from the 773 reams in 2021. But this is still significantly lower than the pre-pandemic (2019) totals. This is mainly due to the resumption of full face-to-face classes in 2022, which significantly increased the need for paper. Mapua continues to implement various programs designed to reduce paper consumption.

B. Environmental Impact Management

i. Air Emissions

Table 5. Summary of 2019 to 2022 GHG Emissions (Scope 1 and Scope 2)

Disclosure	Units	2019 (Pre-pandemic)	2020	2021	2022
Direct (Scope 1) GHG Emissions[1]	Tonnes CO2e	20.11	5.18	6.77	10.95
Energy indirect (Scope 2) GHG Emissions[2]	Tonnes CO2e	3,191.28	1,161.03	743.74	1,407.98

1 Scope 1 emissions calculated using Greenhouse Gas Protocol calculation tools: https://ghgprotocol.org/calculation-tools

2 Scope 2 emissions calculated using Grid Emissions Factors (GEFs) provided by the Department of Energy (DOE): https://www.doe.gov.ph/electric-power/2015-2017-national-grid-emission-factor-ngef

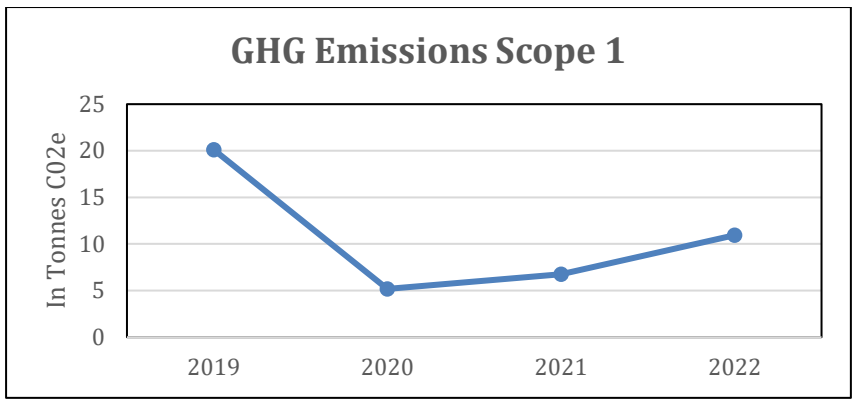

Figure 7a. GHG Emissions Scope 1

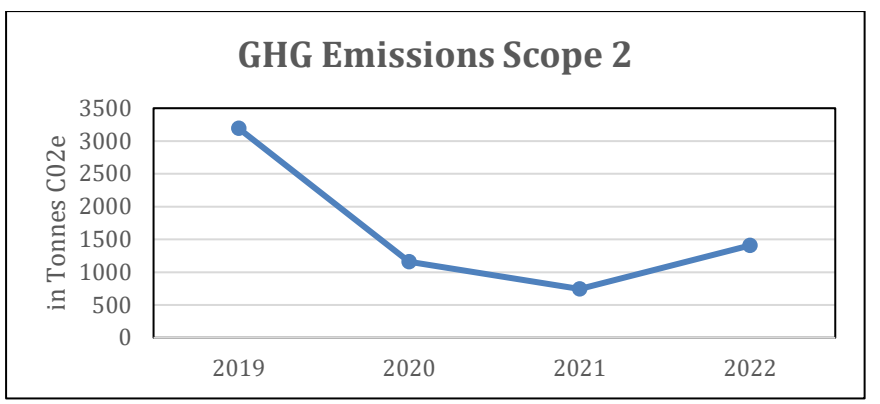

Figure 7b. GHG Emissions Scope 2

GHG Emissions

Greenhouse gases (GHGs) are responsible for anthropogenic climate change, and climate change will have a severe impact on operations through stronger and more frequent weather disturbances, changes in rainfall patterns, flooding, increasing surface temperature, and the like. Therefore, monitoring and controlling Mapua's GHG emissions is also an important contribution to nation-building.

Mapua's GHG emissions are dependent on the type and amount of energy used. Mapus only measures and monitors emissions under Scope 1 and Scope 2. A majority of the GHG emissions are under Scope 2 due to the extensive use of electricity in operations. In 2022, there was a 61.74% increase in Scope 1 direct emissions compared to the 2021 figures, while an 89.31% increase in Scope 2 emissions was recorded due to the increase in energy consumption resulting from the resumption of face-to-face classes and normal onsite operations. Notably, the values for 2022 is slightly higher than the totals in 2020 but relatively lower than the pre-pandemic levels.

Mapua conducts strict implementation of preventive maintenance for facilities and equipment, replacement of LED lights from fluorescent units, replacement of non-inverter air conditioning units to inverter-type, as well as behavioral approaches such as checking and shutting off all electrical equipment when not in use. Environmental programs were established by Mapua to reduce the consumption of electricity and in line with of its ISO 14001:2015 Certification. Mapua does not monitor Scope 3 emissions as of 2022.

ii. Solid and Hazardous Wastes

a. Solid waste

Table 6. Summary of 2019 to 2022 Solid Waste Generated

Disclosure	Units	2019	2020	2021	2022
Total solid waste generated	kg	33,846.11	22,706	4053.64	22834.85
Recyclable	kg	8,897.91	11,423	1143.5	758.55
Compostable	kg	0	0	0	3395.8
Incinerated	kg	0	0	0	0
Residuals/Landfilled	kg	24,948.20	11,282	2910.14	18680.5

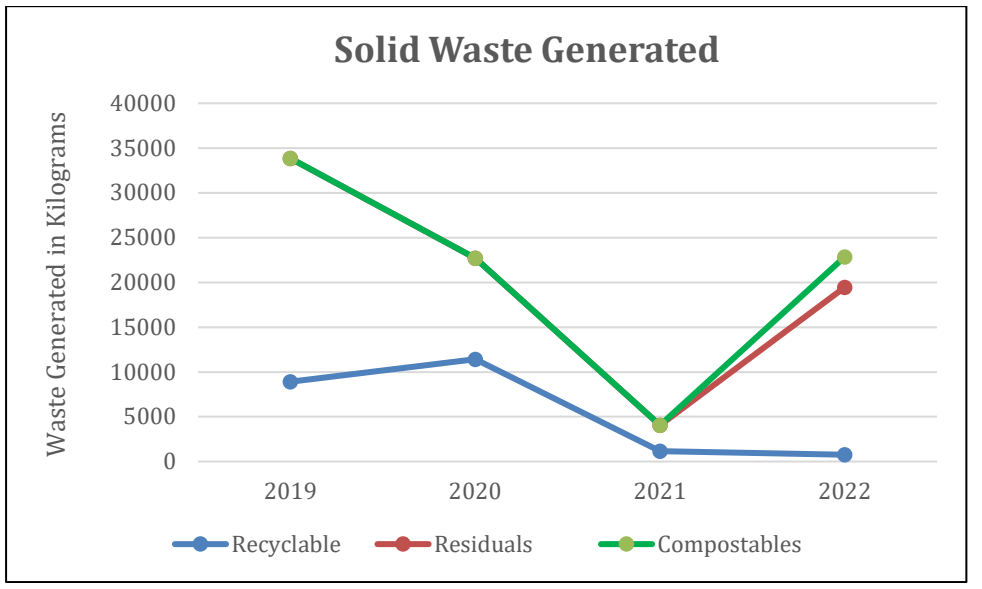

Figure 8. Solid Waste Generated

Solid waste

Solid waste is produced from discarded school and office materials, as well as waste from the kitchens and cafeterias. Solid waste is a risk to both human health and the environment. Improper disposal of solid waste can lead to the spread of diseases and the release of harmful substances into the environment. It is also violation of R.A. No. 9003 and will pose regulatory risks and serve as a poor example to the Mapua's stakeholders, especially to the students. It will also have an impact on aesthetics and cleanliness of the school.

In 2022, there was an overall significant increase in the solid waste generated, resulting from the resumption of face-to-face classes and full on-site operations in the IPO schools' campuses, the amount of solid waste generated quadrupled compared to the totals in 2021 where there was limited onsite operations and almost all of the classes were conducted online. This is because of the resumption

of full face to face classes in 2022 as opposed to 2021 when there was only limited face to face classes with a few students in campus, and limited employees onsite. However, the totals for 2022 are relatively lower than the pre-pandemic (2019) levels.

Solid waste management in the schools is practiced through consistent reminders on solid waste management, waste segregation at source, recycling programs, waste reduction programs (e.g., promotion of Bring Your Own containers/cups/utensils to reduce single-use plastic). Solid waste disposal is done by DENR-accredited waste haulers and disposed at accredited landfills.

b. Hazardous Waste

Table 7. Summary of 2019 to 2022 Hazardous Waste Generated

Disclosure	Units	2019 (Pre-pandemic)	2020	2021	2022
Total weight of hazardous waste generated	kg	26,825.18	1,877	1,716	1,320.7
Total weight of hazardous waste transported	kg	26,825.18	1,877	1,716	1,320.7

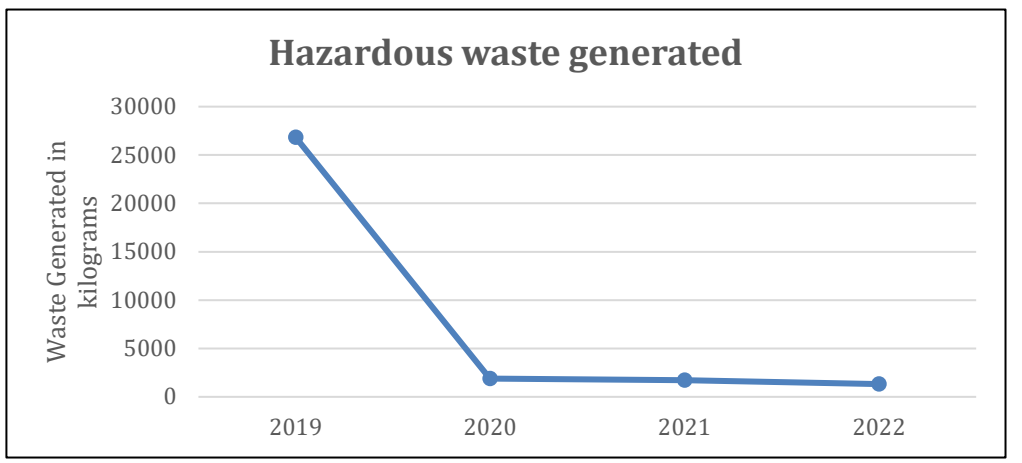

Figure 9. Hazardous Waste Generated

Hazardous Waste

Hazardous waste poses a serious risk to human health and safety and the environment. Risks include accidental spills, deliberate releases into the environment, improper storage, and improper disposal. These risks, if left unmanaged, may lead to injuries, potential fatalities, potential death of flora and fauna, and severe pollution of the environment. This may also result in legal and regulatory repercussions for the Company. Since 2020, there is a steady level in the amount of hazardous waste generated. The values in 2022 are still substantially lower than the pre-pandemic levels.

Hazardous wastes are a serious health and safety concern. As such, all existing regulations on hazardous waste handling, storage, transport, and treatment/disposal are strictly observed. Majority of the hazardous wastes produced by the schools are chemical waste from the school laboratories. Students who work with chemicals in their laboratory classes (prior to the suspension of face-to-face

classes due to the COVID pandemic in March 2020) are taught proper laboratory safety techniques. They are also not allowed to work without proper supervision and safety equipment, such as lab gowns and goggles. Laboratory assistants are licensed chemists to ensure that they know how to safely handle hazardous wastes. Appropriate personal protective equipment (PPE) is also provided. The wastes are stored in a secured, on-site hazardous waste storage room. Treatment/disposal is done via DENR-accredited hazardous waste haulers and treaters. Records are kept by the schools with the Certificate of Treatment provided by these treaters for the hazardous waste hauled and/or treated.

iii. Effluents

Effluents

Improper wastewater discharge has a negative effect on the environment through pollution, increased sedimentation, and potentially spreading diseases. It may lead to legal and regulatory issues for Mapua. Mapua is connected to a centralized sewage treatment plant (STP) of the Maynilad which is government accredited water concessionaire. This is in compliance with DENR requirements on wastewater discharge.

C. Environmental Compliance

Environmental Compliance

No fines or violations were noted in 2021 and 2022. Mapua strives to comply with all environmental laws applicable to its operations. Any non-compliance has regulatory risk, resulting in fines and/or sanctions which could disrupt the schools' operations and/or classes. The Company did not receive any fines or sanctions for the reporting period. The company ensures that all subsidiary schools comply with applicable environmental laws. Mapua has its own Pollution Control Officer who is tasked to closely monitor the school's compliance.

SOCIAL

A. Employee Management

i. Employee Hiring and Benefits

Table 8. Employee Data

Disclosure	Units	2021	2022
Total number of employees[1]	#	501	496
a. % female employees	Percentage	52%	53%
b. % male employees	Percentage	48%	47%
Attrition rate[2]	rate	1.47%	1.01%
Ratio of lowest paid employee against minimum wage	ratio	1.05:1	1.05:1

1 Permanent Employees
2 Attrition rate is computed as (number of new hires – number of turnover)/(average of total no. of employees of previous year and total no. of employees of current year. May also be considered as Labor Turnover.

Employee data and benefits

Mapua requires highly educated and competent faculty to provide the best education to its students and establish its reputation of providing quality and accessible education. In 2022, the risks reported include delays in hiring qualified personnel, lack of qualified personnel for the position, and high personnel turnover. Inadequate number of faculty may result in operational disruptions (as some subjects may not be offered), and burnout of existing faculty (due to taking additional load to fill the gaps).

Faculty members are vital to the schools' operations and Mapua addresses the risk of losing good faculty by offering competitive salaries; providing benefits which are comparable to the other schools and above the minimum set by law; opportunities for training and development and for further study is given; research opportunities and incentives for research publications; and support for local and international paper presentations.

ii. Employee Training and Development

Table 9. Employee Training Data

Disclosure	Units	2021	2022
Total training hours provided to employees*	hours	312	4787.5
a. Female employees	hours	150	2770.0
b. Male employees	hours	162	2017.5
Average training hours provided to employees*	hours/employee	0.45	6.93

*Includes both permanent and temporary employees

Employee training and development

Aside from supporting further education, Mapua invests in its people through continuous in-house and external training to promote career and professional growth. Without this continued investment, Mapua risks high employee attrition, operational disruptions, low quality of education provided to students, and loss of Company reputation.

Mapua has regular assessment programs to assess the needs of their teaching and non-teaching employees. It also provides opportunities for training, certifications, and attendance in seminars and conferences to upgrade their skills. Faculty members are given opportunities for further study and research; incentives for publication; and support for paper presentations both local and international.

Most of the training conducted in 2021 and 2022 for faculty and staff were in relation to the shift to online delivery on classes and services. Mapua also has a strong in-house training programs with CPD credits and in-house training for employees (Mapua). Majority of the trainings were conducted online, and which aimed to improve the online or remote delivery of courses. These online trainings or webinars included topics on the use digital tools and online processes, and certifications.

iii. Labor-Management Relations

Table 10. Labor- Management Relations Data

Disclosure	Units	2021	2022
% of employees covered by Collective Bargaining Agreements	%	82	75
Number of consultations conducted with employees concerning employee-related policies	#	As needed	As needed

Mapua has two separate Collective Bargaining Units (unions) and are covered by two separate Collective Bargaining Agreements (CBAs), namely: the Faculty Association of Mapua Institute of Technology (FAMIT) [faculty union] and the Mapua Institute of Technology Labor Union (MITLU) [non-teaching employees' union].

The unions represent all permanent employees of Mapua University, except for the confidential permanent employees and the Deans of the Schools. CBAs providing for employee benefits and other terms are effective for a period of three to five years. Financial items in the CBA are negotiated after three (3) years, while non-financial or political items are negotiated every five (5) years.

Proactively engaging with the union through informal dialogues and regular Labor Management Council (LMC) meetings and the adherence to transparent and frequent communication under CBA processes reduces the probability of employer-employee dispute. Through engaging and negotiating in good faith, the company and the union execute agreements that are fair and equitable to all concerned.

iv. Diversity and Equal Opportunity

Table 11. Diversity and Equal Opportunity Data

Disclosure	Unit	2021	2022
% of female workers in the workforce[1]	Percentage	52%	53%
% of male workers in the workforce[1]	Percentage	48%	47%
Number of employees from indigenous communities and/or vulnerable sector*	#	0	0

*Vulnerable sector includes, elderly, persons with disabilities (PWDs), vulnerable women, refugees, migrants, internally displaced persons, people living with HIV and other diseases, solo parents, and the poor or the base of the pyramid (BOP; Class D and E).
1 Includes both Permanent and Temporary employees.

Diversity and equal opportunity

Mapua endeavors to diminish inequalities among its students and employees by enforcing non-discrimination policies that are universally applicable, irrespective of gender, race, religious beliefs, or economic status. Mapua implements policies that provide equal opportunity to all employees regardless of sex, gender identity, race, or religion. This is evident in hiring faculty members and employees where such are not considered as factors in hiring.

At present, a number of employees are solo parents and thus belong to the vulnerable sector. These members of the vulnerable sector are given the benefits and consideration due to them in accordance with law and existing company policies.

Such activities for solo parents and adult learners include online lectures and trainings conducted in partner communities of Mapua, as stated in the table below:

Table 12. List of 2021- 2022 Online Trainings and Seminars for Solo Parents and Adult Learners

ADULT EDUCATION/TRAINING
Basic Electrical Circuits
PC Troubleshooting and Networking
Python App Development
Micro Video Lectures for ALEAP
Basic Welding Workshop

Mapua's CSR projects on diversity and equal opportunity (SDG 1, 4, 5 and 10) continue to cater to women and children. Majority of the CSR projects also focuses on child education. Young members of the vulnerable sectors who are supported through education early on in their lives, have a greater chance to finish their schooling and to become gainfully employed later on.

Other projects continued to focus on child education which were conducted by Mapua for partner communities in Pandacan, Manila. Modules and micro-video lectures to supplement classroom subjects which were setup in 2021 are still being continued with auxiliary online learning resources in Mapua Dunong-Lingkod website (https://dunonglingkod.mapua.edu.ph), which is under Mapua's Social Office for Social Orientation and Community Involvement Programs (SOCIP), such as those mentioned in the table below:

Table 13. List of 2021-2022 Online Modules for Children

CHILD EDUCATION
English Made Easy
Exploring Singaporean Mathematics
Art, Art Baby
Mathang-Isip
Letralino (smooth drive to our future)
Literacy and Talent Program for Children
Pagbasa at Pagintindi para sa Kinabukasan
VocabuStory
Glow Slime (The Science of Slime)
Matematika Sa Pandacan Tungo Sa Magandang Kinabukasan
MATHikayat
Back To Your Roots
MATHALINO
Pangunahing Kaalaman, Kailangan ng Kabataan
Explore Beyond Stories
Mga Alaala ni Bonifacio
LEARN-ingning
Concepts and Principles of Ecology
Principles of Environmental Science
Science Lessons
Good Health and Well-Being
Basic Mathematics
Four Basic Math
Mathcraft
English Made Easy
Voting Awareness
Ways to take Care of the Environment
Waste Segregation
Embracing the New Normal
Netiquette
Basic Welding
LMS Best Practices
Use of Canva as an LMS

B. Workplace Conditions, Labor Standards, and Human Rights

i. Occupational Health and Safety

Table 13. Occupational Health and Safety Data

Disclosure	2021 Quantity	2022 Quantity	Units
Safe Man-Hours	268,128	372,456	Man-hours
No. of safety drills	2	4	#

Occupational Health and Safety

Mapua considers the health and safety of its students, faculty, and staff as a top priority. Risks include unsafe facilities, lack of accessible healthcare in times of emergency, and lack of knowledge on proper safety procedures and what to do in times of emergency – all of which lead to potential loss of human life and reputation, as well as regulatory penalties.

Standard policies and procedures govern responses to health and safety incidents. In 2021, Mapua strictly implemented its Health and Safety Protocols based on IATF, CHED, DOH and DTI regulations on prevention and control of COVID-19 and ensured that there is strict compliance cross all the IPO schools. Health and safety reminders and bulletins on COVID 19 were also regularly communicated school-wide through postings in the website, emails, and social media. The strict implementation continued until 2022.

Safety drills are also conducted regularly as required by law and the schools' policies, however for 2022, the only scheduled drills during the middle and latter part of the year were conducted due to the COVID pandemic. First aid training is also given to both employees and students. Policies and emergency procedures are in place and may be readily implemented in case of natural disasters such as floods, fires, earthquakes, and other situations such as bomb threats and pandemic events (i.e., COVID pandemic). In addition, as a minimum health standard each school has a clinic staffed with healthcare providers to address injuries or sickness that occur on-campus.

ii. Labor laws and human rights

Mapua strictly observes human rights laws, particularly those against forced labor and child labor. While forced labor and child labor are not explicitly addressed in company policy, it is addressed as a matter of practice as the Company complies with all relevant national and local laws in the areas where it operates in.

As a matter of policy, Mapua not tolerate bullying or harassment of any kind and has strict anti-bullying policies for students. These policies are specifically included in the student manual, in compliance with existing laws against bullying. These policies also provide for the instances covered and the procedure for handling cases of bullying, including intervention, remedial measures, and penalties in case of violation.

Online seminars, briefings and orientations are also conducted to ensure that employees and students are aware of the policies and to make sure that they comply with the provisions of the manuals.

C. Supply Chain Management

Supply chain management is performed at the YGC Group level. All vendors are screened and vetted, and purchases adhere to procurement policies, procedures and guidelines. The YGC Group has a supplier accreditation policy.

Table 14. Sustainability Topics Considered in Supplier Accreditation

Do you consider the following sustainability topics when accrediting suppliers?

Topic	Y/N	If Yes, cite reference in the supplier policy
Environmental performance	Y	Now included in the YGG group supplier Accreditation Policy
Forced labor	Y	Now included in the YGG group supplier Accreditation Policy
Child labor	Y	Now included in the YGG group supplier Accreditation Policy
Human rights	Y	Now included in the YGG group supplier Accreditation Policy
Bribery and corruption	Y	Code of Ethics for Suppliers, section on Bribes, Kickbacks, and Gifts from Suppliers

D. Customer Management

i. Customer Satisfaction

Table 15. Customer Satisfaction: Net Promoter Score and Happiness Survey

Disclosure	Score	Did a third party conduct the customer satisfaction study (Y/N)?
Customer Satisfaction		
Net Promoter Score	4	No. Done internally by the school
Student Happiness Survey	4.3	No. Done internally by the school

Customer management

Mapua ensures that its offered programs undergraduate, and postgraduate, comply with applicable laws and regulations and meet the needs and expectations of students and parents in terms of knowledge and experience gained, overall school experience, and value for money.

Methodologies for student evaluations of the schools' services vary per school and grade level. In 2021-2022, Mapua required students to provide online evaluations of teachers and the schools' services and asked to answer the Net Promoter Score and Student Happiness surveys. The feedback from the evaluation is used to improve the schools' delivery of services and develop programs and plans which address various student issues and concerns.

ii. Health and Safety

Mapua considers health and safety of students and employees to be a top priority. Risks include the spread of diseases and pandemic events, natural disasters such as floods, fires, earthquakes, and other situations such as bomb threats. Policies and emergency procedures, safety and health protocols are in place and may be readily implemented in case of pandemic events or natural disasters. Orientations and briefings and safety and emergency drills are regularly conducted. Videos on safety procedures in case of earthquakes and fires were also made as part of the information and awareness campaigns to ensure employees and students know what to do in case of fires, floods, earthquakes, and other emergency situations.

Health and safety protocols on the COVID pandemic continued to be implemented in 2021- 2022 despite the lifting of many of the restrictions imposed during the pandemic, in accordance with IATF, DOH and CHED regulations, including implementing a group-wide COVID vaccination and booster program for employees.

The Mapua Health and Safety Committee regularly meet to update policies and discuss issues on health and safety. Mapua also has written policies and guidelines to address complaints concerning health and safety. Schools are required to have licensed healthcare professionals (doctors, nurses, and dentist) on-site to provide adequate healthcare to students and employees. Aside from these, they also have designated Health and Safety Officers. To involve the population, awareness campaigns and seminars on health and safety are regularly conducted, as well as fire and earthquake drills. For 2021 to 2022, the awareness campaigns continued to be conducted online through regular postings and bulletins in websites and social media.

iii. Customer privacy

Table 16. Customer Privacy Data

Disclosure	2021	2022	Units
No. of substantiated complaints on customer privacy*	**1**	**1**	#
No. of complaints addressed	**1**	**1**	#
No. of customers, users and account holders whose information is used for secondary purposes	**0**	**0**	#

** Substantiated complaints include complaints from customers that went through the organization's formal communication channels and grievance mechanisms as well as complaints that were lodged to and acted upon by government agencies.*

Customer privacy

As a matter of policy, Mapua respects and upholds data privacy rights and ensure that all personal data collected from students, their parents or guardians, employees, and other third parties are processed pursuant to provisions of the Data Privacy Act of 2012 as reflected in the Mapua University Data Privacy Manual.

Mapua has a designated Data Privacy Officer (DPO) who is tasked to ensure compliance with the Data Privacy Act by implementing the data privacy policies of the University. The DPO is the Head of the Data Privacy Response Team which is tasked to implement the policies, investigate and recommend actions for the resolution of data privacy issues and cases. Mapua also regularly conducts seminars and orientations on the data privacy to ensure that students and employees strictly comply not only with the Data Privacy Act, but also with the provisions of the Manual of Regulations on Private Higher Education (MORPHE) and the Manual of Regulations on Private Schools (MRPS) on the confidentiality of student records and information. Mapua also has policies and protocols in place to handle complaints and inquiries on data privacy.

E. Data Security

Mapua's IT policies on data security are strictly implemented and regularly updated by their respective departments. Data security drills and exercises are also conducted. Students, faculty, and staff are informed about data security through awareness campaigns on the prevention of cybersecurity crimes and data security issues. Mapua also has existing data management policies, guidelines, and procedures for handling and reporting data breaches.

UN SUSTAINABLE DEVELOPMENT GOALS

Table 17. Contribution to UN SDGs

SDG		2021	2022
SDG 1	No Poverty	✓	✓
SDG 2	Zero Hunger		
SDG 3	Good Health and Well-being	✓	✓
SDG 4	Quality Education	✓	✓
SDG 5	Gender Equality	✓	✓
SDG 6	Clean Water and Sanitation	✓	✓
SDG 7	Affordable and Clean Energy		
SDG 8	Decent Work and Economic Growth	✓	✓
SDG 9	Industry, Innovation and Infrastructure	✓	✓
SDG 10	Reduced Inequalities	✓	✓
SDG 11	Sustainable Cities and Communities		
SDG 12	Responsible Consumption and Production	✓	✓
SDG 13	Climate Action	✓	✓
SDG 14	Life Below Water	✓	✓
SDG 15	Life on Land		
SDG 16	Peace, Justice and Strong Institutions		
SDG 17	Partnerships for the Goals	✓	✓

A. Quality and Accessible Education (SDG 4)

Scholarships. Mapua provided scholarships to deserving students amounting to a total of ₱25,893,530 in 2021 and ₱71,222,496 in 2022. Mapua also assisted students in applying for government scholarships. Discounts on tuition and fees were also given to students as a result of the COVID-19 pandemic.

Mapua's achievements in graduating students who are ready for higher education and/or employment is seen in high graduates' employment rate. 83% of graduates received job offers within 120 days of graduation in 2021 and 78% in 2022. Mapua also continues to assist students in applying online for jobs through a centralized and revamped online internship program, online career coaching and career fairs, and activities designed to mimic the job application process.

World Recognition. As a testament to Mapua continuing efforts to help improve the quality of education in the schools, and elevate the same to world class standards, Mapúa University debuted on the Times Higher Education (THE) World University Rankings (WUR) 2023 and has been placed among the top six percent of the world's higher educational institutions. Mapúa ranked 1501+ among 1,799 universities across 104 countries, and one of **only four (4)** universities from the Philippines who made it to the list. The achievement is a result of Mapua's 20-year campaign focused on teaching quality and capability, research, and international linkages. In 2022, Mapua was also ranked 551-600 in Quacquerelli Symonds (QS) Asian University Rankings 2023 and was also awarded an overall 4-star rating in the QS Stars.

For the 3rd straight year, Mapúa has been included in the Times Higher Education (THE) Impact Rankings which measures the social, economic and environmental impact of the school based on the United Nations Sustainable Development Goals (SDGs), increasing its overall rank to 601–800 out of 1,406 institutions worldwide in 2022, from the 801–1000 rank in 2021. It has been ranked in all 17 SDGs in 2022 which is an increase from six SDGs in 2021.

Mapua's online delivery of courses also achieved recognition in 2022 with Mapúa University's ÚOx or Ubiquitous Online Experience Program being awarded the Gold Award for Digital Readiness from the prestigious Wharton-QS Reimagine Education Awards 2022. This is the first time a Philippine higher education institution (HEI) has received a top category award in the global competition, which honors groundbreaking approaches towards digital education, which increase student learning outcomes and improve student employability.

Board Examination Performance. For those taking board exams, the schools have correlation programs designed to assist and ensure that the examinees are prepared to take the board examinations. This is supplemented by holding review sessions that, in turn, translate to higher passing rates in the board examinations. However, due COVID-19 pandemic, most board examinations scheduled in early and mid-2021 were postponed to a later date in 2022. The IPO schools consistently have passing rates which are well-above the national passing rates, which is proof of the quality of graduates that the schools are producing. The following table shows the passing rates for top-performing courses for 2021 and 2022:

Table 18. 2021 Board Passing Rates for Top-Performing Courses

Top-Performing Courses	Board Exam Passing Rate (%) (Overall with re-takers)	National Average Passing Rate (%)
Civil Engineering	70.81%	36.67%
Electronics Engineering	66.67%	47.84%
Electrical Engineering	85.37%	64.40%
Chemical Engineering	54.55%	47.28%
BS Chemistry	71.43%	36.31%

Table 19. 2022 Board Passing Rates for Top-Performing Courses

Top-Performing Courses	Board Exam Passing Rate (%) (Overall with re-takers)	National Average Passing Rate (%)
Architecture	90.00%	62.13%
Civil Engineering	63.78%	42.35%
Electrical Engineering	78.72%	50.20%
Mechanical Engineering	74.74%	56.11%
Environmental and Sanitary Engineering	94.44%	50.28%
BS Chemistry	100.00%*	85.16%*

* Board exam results for Chemical Technician.

B. Research and Development (SDG 9 and SDG 17)

Table 20. 2021 vs. 2022 Research and Development Investment and Output

Disclosure	Unit	2021	2022
Research and Development Spending	Php	57,276,100.69	36,238,907.56
Research Papers Published in ISI and/or SCOPUS Indexed Journals	Number	451	471
Commercialized Research	Number	0	2

Research and Development. Research and Development is a key metric for Mapua. While Research and Development in itself is not an SDG goal, it underpins the success of the SDGs. Mapua spent a total of ₱57,276,100.69 and ₱36,238,907.56 in 2021 and 2022, respectively for Research and Development (amount does not include research funding received from external sources, such as government, funding agencies, etc.). Mapua published 451 research papers in ISI and/or SCOPUS-indexed journals in 2021 and 471 in 2022.

Mapua University also serves as an incubator for commercialized research. Mapua aims to replicate the previous success of its first commercialized research resulting from a research project funded by the Department of Science and Technology- Philippine Council for Industry, Energy, and Emerging Technology Research and Development (DOST-PCCEIERD), the Universal Structural Health Evaluation and Recording (USHER) System which is designed to assess and provide real time status on the structural health of buildings and other structures. In 2022, the DOST-Mapua Think and Tinker Laboratory was formally launched. It is a technology business incubator (TBI) that intends to build and develop digital learning tools and solutions for education with a focus on various

emerging technologies and industries was formally launched. Another potential project for commercialization is Mapua University's WEHLO (Localized Weather, Environment and Hydromet Solutions) which is currently in the market validation and spin-off set-up stage.