EUROPEAN CHAMBER OF COMMERCE OF THE PHILIPPINES

SUSTAINABILITY WHITEBOOK 2023

TABLE OF CONTENTS

EUROPEAN CHAMBER OF COMMERCE OF THE PHILIPPINES
19th Floor, Philippine AXA Life Center Bldg.,
Sen. Gil Puyat Ave. cor. Tindalo Street,
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ABOUT ECCP

The European Chamber of Commerce of the Philippines (ECCP) is a service-oriented organization whose main goal is to foster close economic ties and business relations between the Philippines and Europe. The ECCP does this by providing a wide range of consultancy services and by creating linkages between companies, organizations, and individuals with existing or potential business interests in Europe and the Philippines. It is also at the forefront of pro-business, pro-growth advocacy in the Philippines, representing European business interests for increased market access and trade facilitation, at the highest level of Philippine political discussions.

The ECCP sees itself as the stepping stone for Europeans into the Philippine market and for Filipinos into the European market.

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Message from the ECCP President

Sustainability drives economic, environmental, and social progress worldwide, including in Europe and the Philippines. Achieving our global and local sustainability commitments requires conscious collaboration across sectors. Europe's commitment to sustainability, exemplified by the European Green Deal, aligns with the Philippines' objectives, offering opportunities in green jobs, clean technology, sustainable living, and more.

Simultaneously, the Philippines has made significant strides in adopting and enhancing sustainability practices. Taking this further, creating a policy and regulatory environment that promotes sustainability is crucial, providing a framework to incentivize responsible practices, foster innovation, and ensure stakeholder accountability.

With great pleasure, the European Chamber of Commerce of the Philippines (ECCP) presents this year's Sustainability Whitebook—an assessment of the current state of sustainability in the Philippines. It explores key themes, including smart and safer mobility, clean and green energy, energy efficiency and conservation, waste management, sustainable agri-food, green and inclusive finance solutions, water resource management, green buildings, digitalization, and the role of startups in promoting sustainability. This Whitebook draws upon the collective wisdom of our Chamber's sector committees, member companies, and dedicated team members.

The ECCP extends its gratitude to all contributors for their insights and efforts. We recognize the pivotal role of the European-Philippine business community in achieving the Global Goals and remain committed to fostering a greener, more inclusive, prosperous, and sustainable future for all.

Paulo Duarte
ECCP President

THE PHILIPPINES' PURSUIT OF SUSTAINABLE DEVELOPMENT: A JOURNEY OF COMMITMENT AND RESILIENCE

National Economic and Development Authority

Progress towards achieving the Sustainable Development Goals (SDG) remains a significant challenge in the Philippines, as the COVID-19 pandemic has reversed most of the country's previous gains. With only seven years remaining, the Philippines is currently at a crucial point in its efforts to achieve the SDGs. This journey has been characterized by nothing less than a steadfast commitment and resilience from the government. Through the National Economic and Development Authority, the Philippines has been diligently working to ensure that as we strive for economic and social transformation, national development priorities align with the theme of "Leaving No One Behind" in the 2030 Agenda. The Philippine Development Plan (PDP) 2023-2028 is a testament to this commitment, acknowledging that the attainment of the SDGs is vital to the realization of AmBisyon Natin 2040, the nation's long-term vision of a strongly-rooted, comfortable, and secure life for all Filipinos.

The Country's Commitment

The country's approach to the SDGs is both strategic and holistic. By incorporating the SDGs into the PDPs, the government ensures that economic growth is not only rapid but also sustainable and inclusive.

With a robust data monitoring system for the SDGs, which includes tools like the SDG Watch and the SDG Pace of Progress of the Philippine Statistics Authority, the Philippines is able to identify precise targets set for 2030 and make timely strategic recalibrations. The UN ESCAP's 2021 commendation of the Philippines as a leader in SDG data availability in the Asia-Pacific region underscores the government's reliance on data-driven strategies. This data-centric approach ensures that policies are notonly well-intentioned but also ultimately effective and impactful.

The Philippines also places a high value on collaborative governance for the SDGs. The establishment of the Development Budget Coordination Committee - Subcommittee on the SDGs (DBCC SC-SDGs), along with its technical groups and the Stakeholders' Chamber on the SDGs, has fostered a multi-sectoral approach, involving academia, businesses, and various civil society groups. This acknowledges that the achievement of the SDGs requires a collective effort, leveraging the strengths and expertise of a diverse range of stakeholders.

Progress on SDG Implementation since 2015

Since 2015, the country has embarked on a transformative journey towards achieving the SDGs. Here are some of the country's key progress made by the country in implementing the SDGs over the past years.

1. **Eradicating Poverty and Hunger (SDGs 1 & 2).** The Philippines has made significant strides in reducing poverty levels. The government launched the Pantawid Pamilyang Pilipino Program (4Ps), a conditional cash transfer program aimed at the poorest households. This initiative has not only provided financial assistance but has also ensured children's access to education and health services. Moreover, the Department of Agriculture has been at the forefront of promoting sustainable farming practices, ensuring food security, and increasing agricultural productivity.

2. **Quality Education (SDG 4).** Education remains a top priority for the Philippines. The K-12 program, which added two years of senior high school, was fully implemented in 2016-2017, with the aim of equipping students with the skills necessary for the modern world. Additionally, the government has increased its budget allocation for the education sector, from Php 773.5B in 2022 to Php 857B in 2023, ensuring that more children have access to quality education

3. **Gender Equality (SDG 5)**. The Philippines has been recognized as one of the leading countries in gender equality in the Asia-Pacific region. The Magna Carta of Women, enacted in 2009, has been instrumental in promoting women's rights and empowering women. Furthermore, women have been increasingly represented in leadership roles in both the public and private sectors.

4. **Clean Water and Sanitation (SDG 6)**. Efforts to provide clean water and sanitation have been intensified, especially in remote areas. The government, in collaboration with government and non-government stakeholders, has released the Philippine Water Supply and Sanitation Master Plan (PWSSMP) in 2021. The PWSSMP's primary goal is to provide universal access to safe and sustainable water and sanitation to Filipinos by 2030. This involves not only ensuring safe water supply and sanitation services for all Filipinos but also making sure that these services can withstand disasters and protect the environment.

5. **Affordable and Clean Energy (SDG 7)**. The Philippines, being rich in renewable energy sources, has harnessed geothermal, wind, and solar energy. The Renewable Energy Act of 2008 paved the way for investments in clean energy projects, thereby reducing the country's dependence on fossil fuels.

6. **Climate Action (SDG 13)**. As a country vulnerable to natural disasters, the Philippines has taken a proactive approach to addressing climate change. Reforestation projects and marine conservation efforts have been intensified to protect the country's abundant biodiversity.

7. **Partnerships for the Goals (SDG 17)**. The Philippines has actively sought partnerships with other nations, international organizations, and the private sector to achieve the SDGs. The country has hosted various major international conferences and forums such as the 3rd ASEAN Forum on SDGs and 2nd ASEAN Ministerial Dialogues to discuss best practices and collaborative efforts towards sustainable development.

The Path Forward: Innovation and International Solidarity

While the Philippines has made commendable progress, challenges remain. Infrastructure development, while crucial for economic growth, needs to be balanced with environmental conservation. The country also faces issues related to urbanization, such as traffic congestion and waste management. Moreover, the recent global pandemic has posed new challenges, highlighting the importance of resilient health systems and sustainable economic recovery strategies.

Hence, in the post-pandemic world, innovation and forward thinking have become paramount. The Philippines recognizes the potential of technological solutions and proactive strategies in preparing for unforeseeable challenges.

On the global stage, the Philippines is not only a participant but also a leader. Through various platforms, the country shares its success stories, strategies, and lessons learned, fostering global cooperation towards the SDGs.

European Businesses in the Philippines as Partners for Sustainable Development

By aligning their Corporate Social Responsibility (CSR) initiatives with the SDGs, European businesses have become exemplars of sustainability on Economic, Social, and Governance (ESG) reporting. Whether it is community education programs, healthcare drives, or environmental conservation projects, their efforts resonate with the Philippines' sustainability goals.

The government also recognizes European businesses for their sustainable employment practices in the Philippines. By ensuring equal pay, adopting fair employment practices, and fostering inclusive work environments, these businesses directly contribute to reducing societal inequalities. Their commitment to green investments sets a benchmark for other businesses, both locally and internationally.

European businesses, with their rich history of innovation and commitment to sustainability, can find promising opportunities in the Philippines. Leveraging their technological strengths, European enterprises can bring sustainable solutions to the forefront of our domestic market, ranging from renewable energy systems to advanced waste reduction methods.

Enabling Mechanisms: Fostering Sustainable Investments

Recognizing the potential of foreign businesses to boost the country's economic development, the Philippine government has implemented policies and incentive schemes. The Board of Investments (BOI) offers a wide range of incentives for businesses that invest in sectors aligned with sustainability and the SDGs, through the promotion of Inclusive Business in the Strategic Investment Priority Plan.

The Philippine Economic Zone Authority (PEZA) has established special economic zones, thereby creating hubs of innovation and investment, and providing fiscal and non-fiscal incentives. The emphasis on green economic zones and PEZA's promotion of export enterprises' adoption of sustainability reporting are particularly noteworthy, reflecting the nation's commitment to environmental sustainability.

Legislative measures, such as the Renewable Energy Act of 2008 and the Green Jobs Act, have further strengthened the country's sustainable investment landscape. The Tourism Act of 2009, which provides incentives for sustainable tourism projects, showcases the Philippines' intention to capitalize on its natural beauty while maintaining sustainability. The Comprehensive Agrarian Reform Program (CARP) encourages sustainable agricultural practices and offers opportunities for European businesses to invest in sustainable agricultural ventures.

Future Horizons

To maintain the Philippines' position as an SDG champion in the ASEAN region, the country is currently taking concrete steps to accelerate SDG implementation.

- ***Strengthened Financial Resource Management.*** Republic Act No. 11467 allocates 20 percent of the excise tax from specific products such as alcohol, heated tobacco, and vapor products to support SDG efforts and strengthen SDG initiatives. Entrusted with identifying the targets, NEDA has led the development of the Program Convergence Budgeting (PCB) Framework and guidelines. These tools will assist in identifying the programs, activities, and projects that will be funded by the 20 percent allocation of excise taxes, as mandated by the law.

- ***Empowering Regional SDG Stakeholders.*** To ensure that regional ambitions align with national SDG targets, various national bodies, such as NEDA, the Philippine Statistics Authority, and the Philippine Statistical Research and Training Institute, are organizing workshops and training sessions throughout the country.

- ***Preparing the Regional SDG Catch-Up Plans.*** Harnessing the results of the UNESCAP's Every Policy is Connected (EPiC) tool for the pilot regions, along with the PSA's Regional Pace of Progress and NEDA's planning toolkit, a comprehensive assessment of challenges and gaps in geographic areas and demographic groups has been conducted. This assessment aims to facilitate the crafting of a robust catch-up plan to systematically address these disparities.

- ***Enhancing Stakeholder Engagement.*** The Stakeholders' Chamber on the SDGs, along with digital tools such as the Stakeholder Partnership Accelerator for Convergence and Engagement (SPACE) Web Application—planned for future development—aims to streamline policy advice, investment strategies, and SDG oversight. Assisted by the recently formed Working Groups of the Stakeholders' Chamber on the SDGs, NEDA plans to mobilize partner CSOs and the private sector, gathering their insights and strategies for achieving the SDGs. This encourages collaboration between the government and private sector to drive innovation by also involving the expertise, resources, and market knowledge of private sector entities. These initiatives are in line with the country's National Innovation Agenda which promotes leveraging technology for faster, more efficient, and more transparent interactions among stakeholders, facilitating public-private partnerships, and having expert working groups that can facilitate innovative solutions.

- ***Continued Global Dialogue.*** The Philippines remains committed to promoting and participating in global SDG dialogues, particularly in high-level forums and conferences. This commitment is evident as the nation joins the 2023 UN SDG Summit, aiming to highlight its comprehensive strategy for fostering sustainable and inclusive growth. This strategy is supported by a cohesive, nationwide blueprint for implementing the SDGs.

- ***SDG Targets Refinement.*** Following the endorsement of the PSA Board in February 2023, the previous set of 102 global indicators, along with 28 proxy and 25 supplemental indicators, has been revised to include 97 global, 34 proxy, and 26 supplemental indicators specifically designed for the Philippine context. In light of this, representatives from relevant government entities and SC-SDG members were brought together to establish an updated baseline, refine the 2030 targets, and assign the agencies responsible for achieving and monitoring these benchmarks.

The Philippines' pursuit of sustainable development is a testament to its commitment to global progress. With less than seven years left until 2030, the country is determined to ensure its actions align with the promise of leaving no one behind. Through resilience, innovation, and unity, the Philippines is well-positioned to expedite the realization of its SDG commitments.

Sustainability Whitebook: SDGs in the Philippine Context

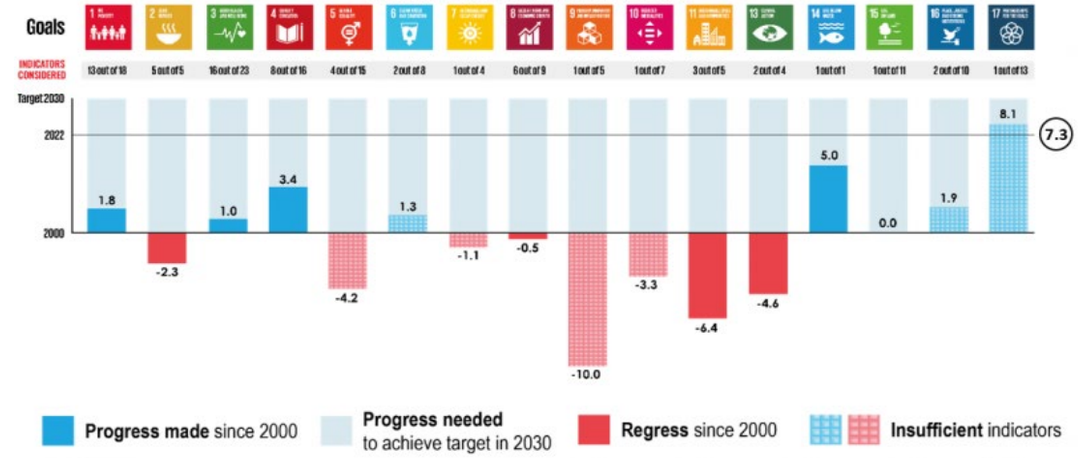
WHERE ARE WE NOW?

The United Nations Member States, including the Philippines, formally adopted the 2023 Agenda in September 2015. Also known as the Global Goals, the 17 Sustainable Development Goals (SDGs) and their accompanying targets, are a universal call to action aimed at ending poverty, combating inequalities, promoting social inclusion, fighting climate change, and stimulating environmentally conscious impact.[1]

The commitment strengthened the Philippines' efforts to align its national development priorities and policies with the Global Goals and work towards their achievement by 2030. In accordance, the Philippine Statistics Authority (PSA) Board issued PSA Resolution No. 04 Series of 2016, enjoining Government Agencies to Provide Data Support to the SDGs. In this Resolution, all responsible government agencies are urged to provide the required data assistance to monitor the country's performance in relation to the SDGs using the indicator framework defined by the National Economic and Development Authority (NEDA), PSA, and other government agencies. The Resolution also recognised PSA as the official repository of SDG indicators in the Philippines by the Resolution.[2]

In order to provide sound metrics and data to deliver the Global Goals, the PSA releases the baseline and latest SDG data through the SDG Watch. The latest report posted in January 2023, progress was observed in Goals 1, 3, 4 and 14 since 2000, although still short compared to the expected progress for 2022. Meanwhile, Goals 2, 8, 11 and 13 have regressed since 2000. It may be noted that among the goals, only Goal 17 surpassed the 2022 line. This pace of progress, however, was only based on one out of the 13 indicators under this goal.[3]

1 Philippine Statistics Authority. (n.d.). Sustainable Development Goals. Retrieved from https://psa.gov.ph/sdg
2 Ibid.
3 PSA. (29 June 2023). Progress on the Philippine Sustainable Development Goals based on the SDG Watch posted on 27 January 2023. Retrieved from https://psa.gov.ph/sdg/node/1684059922



Source: Philippine Statistics Authority

The results of the Anticipated Progress Index[4] indicated that 16.7 percent of the targets with measurable progress are on track, 42.9 percent requires accelerated efforts to achieve them, while the remaining 40.5 percent of the SDG targets require exponential acceleration of its pace in order to reverse the downtrend so as to achieve the goal in 2030.[5] While there have been commendable strides towards sustainability, there remains a lot of work to be done jointly by stakeholders.

In conjunction with the SDG-related initiatives of the government, the United Nations Development Programme (UNDP) Philippines has also stressed the critical role that the private sector plays in accomplishing these Goals' large-scale ambition. The Transformational Business Report published in 2017 showcased the preliminary results of an online portal survey on how businesses are aligning their core business processes, activities, and initiatives with the SDGs. The report highlighted 139 initiatives from 75 reporting companies that participated in the poll. Based on the submitted initiatives with disclosed investments information, a total of PHP 40.7 billion have already been invested in SDG-aligned core business practices and programs in the Philippines.[6]

According to the Sustainability Development Report 2023[7], the country ranked 98th out of 166 countries in terms of SDG performance, with an SDG index score[8] of 67.1 and a spillover score[9] of 97. Despite the policies and programs implemented in pursuit of the SDGs, the outbreak of the pandemic in 2020 and various external factors stalled the progress made on the Goals. As the world marks the halfway point of the 2023 Agenda, international commitments, such as those to achieve climate neutrality, must be strongly accompanied by innovative actions and investments, high-impact partnerships between stakeholders, as well as fiscal packages that provide a chance to build a green and inclusive recovery, to get the SDGs on track.

From a European perspective, the European Green Deal was introduced with the aim of transitioning

4 The Anticipated Progress Index is a measure that provides how much extra effort is needed to meet the target by 2030, assuming the pace of progress is sustained. It requires at least three data points since 2000 and the 2030 numerical target. It provides progress at target and indicator level.
5 Ibid.
6 United Nations Development Programme Philippines. (2017). Transformational Business. Retrieved from http://www.ph.undp.org/content/philippines/en/home/library/privatesectorsustainabledevt/transformationalbusiness.html
7 Sachs, J.D., Lafortune, G., Fuller, G., Drumm, E. (2023). Implementing the SDG Stimulus. Sustainable Development Report 2023. Paris: SDSN, Dublin: Dublin University Press, 2023. 10.25546/102924
8 The overall score measures the total progress towards achieving all 17 SDGs. The score can be interpreted as a percentage of SDG achievement. A score of 100 indicates that all SDGs have been achieved.
9 Each country's actions can have positive or negative effects on other countries' abilities to achieve the SDGs. The Spillover Index assesses such spillovers along three dimensions: environmental & social impacts embodied into trade, economy & finance, and security. A higher score means that a country causes more positive and fewer negative spillover effects.

the EU into a modern, efficient, and competitive economy while ensuring the following key objectives: achieving net-zero greenhouse gas emissions by 2050, decoupling economic growth from resource consumption, and ensuring inclusivity by leaving no individual or region behind.

Moreover, a significant portion of the €1.8 trillion investments allocated under the NextGeneration EU Recovery Plan, along with funding from the EU's seven-year budget, will be directed towards financing the European Green Deal. The European Commission has also put forth a series of proposals designed to align the EU's climate, energy, transportation, and taxation policies with the goal of reducing net greenhouse gas emissions by at least 55% by 2030, relative to 1990 levels.[10]

WHERE DO WE WANT TO BE?

The National Economic and Development Authority (NEDA), as the socio-economic planning agency of the Philippines, assesses the synergies of the SDG indicator framework with regard to monitoring the country's medium- and long-term development plans. In 2022, the Sub-Committee on the SDGs (SC-SDG)[11] focused on ensuring that the SDGs are integrated into the new Philippine Development Plan (PDP) for the period 2023-2028. The two meetings held in this regard, identified the direction on how to locate the SDGs in the PDP, as well as on how to harmonise the SDG indicators with the PDP chapters' indicators and strategies. As a result, 99 out of 155 indicators were adopted into the PDP.[12]

Following this, Executive Order (EO) No. 14[13] was issued in January 2023, approving and adopting the PDP 2023-2028. Anchored on the 8-point socioeconomic agenda of the current administration, the PDP 2023-2028 is the second medium-term plan geared towards economic and social transformation to reinvigorate job creation and accelerate poverty reduction through inclusive economic growth. Under the EO, all national government agencies, government-owned or -controlled corporations (GOCCs), government financial institutions (GFIs), other national government offices and instrumentalities, government corporate entities (GCEs), state universities and colleges (SUCs) and local government units (LGUs) are to adopt and disseminate the PDP.

The ECCP believes that effective collaboration is key to strengthening commitment to achieve the Global Goals. As such, the Chamber has been committed to providing a partnership platform for stakeholders to advance its sustainability-related advocacies, which will be featured in the succeeding pages. As a steadfast partner of the government, the Chamber was also selected by NEDA as among the 42 members of the Stakeholders' Chamber on the Sustainable Development Goals last 2022, and has been actively participating at multiple special meetings led by the Agency. The Stakeholders' Chamber is composed of various representatives from the Philippine government, academe, development organisations, and private sector, among others, to achieve the SDGs in the Philippines.

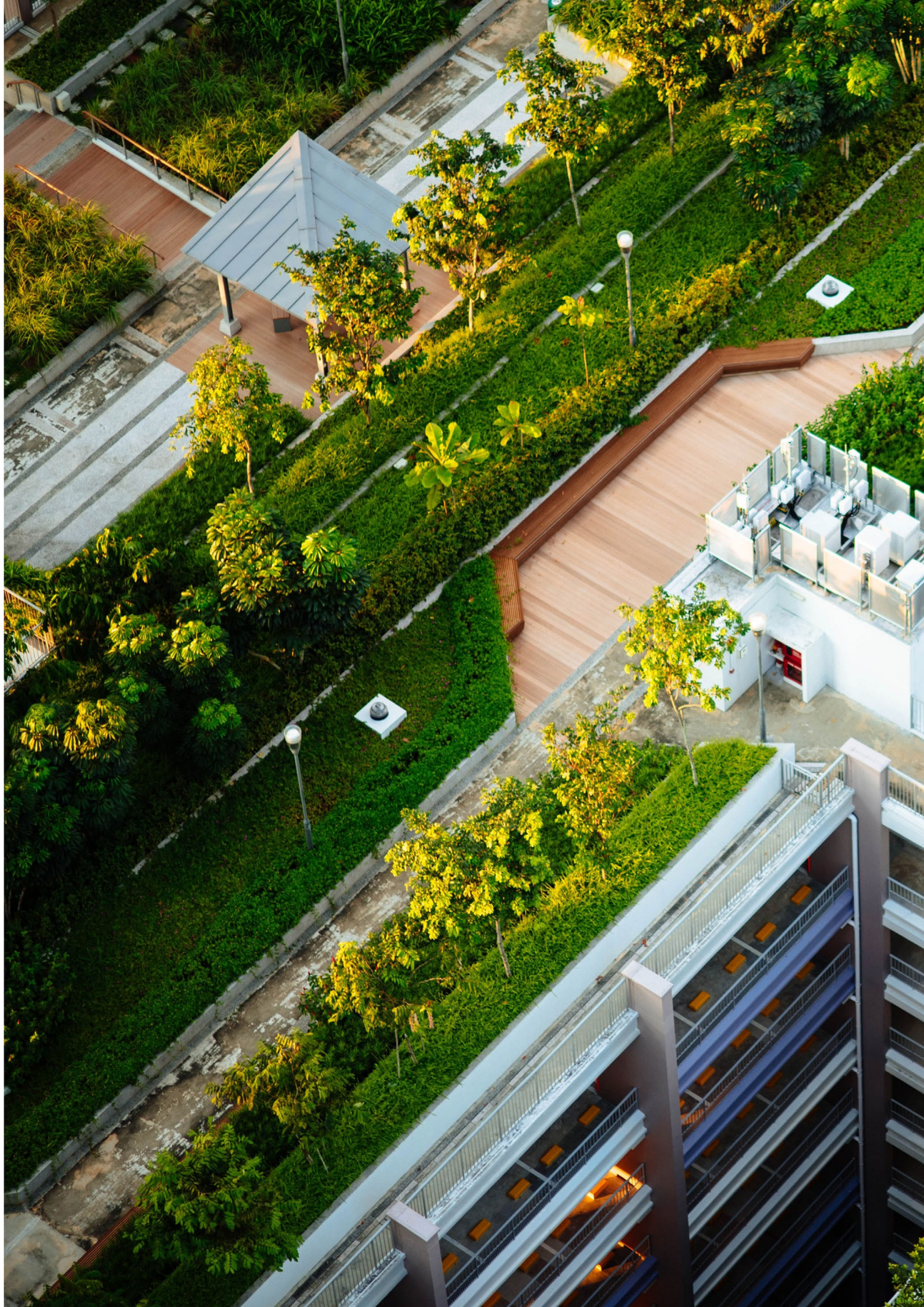
To this end, the ECCP remains committed to continue working with partners to push for policy reforms, raise public awareness, create positive change, and maximise our impact towards sustainable development.

10 European Commission. A European Green Deal. Retrieved from https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal_en

11 The Sub-Committee on the SDGs (SC-SDGs) is a platform for a whole-of-society engagement for the SDGs. Technical Working Groups (TWGs) consisting of agencies responsible for the SDGs on Economic, Social, Environmental and Governance were established. This structure is mirrored at the subnational levels. The SC-SDGs includes a Stakeholders' Chamber consisting of private sector and civil society for each of the four TWGs.

12 NEDA. (20 February 2023). The Sub-Committee on the Sustainable Development Goals: Integrating the SDGs in the Philippine Development Plan 2023-2028. Retrieved from https://sdg.neda.gov.ph/the-subcommittee-on-the-sustainable-development-goals-integrating-the-sdgs-into-the-philippine-development-plan-2023-2028/

13 The Official Gazette. (30 January 2023). Executive Order No. 14, s. 2023. Retrieved from https://www.officialgazette.gov.ph/2023/01/27/executive-order-no-14-s-2023/



CLEAN AND GREEN ENERGY

ENERGY EFFICIENCY AND CONSERVATION

OVERVIEW

In the pursuit of a sustainable future, the role of energy cannot be overstated. Energy serves as a fundamental element in powering industries, homes, and transportation systems. However, the way we produce and consume energy significantly impacts the environment. As the world grapples with the urgent need to address climate change and promote sustainability, it becomes imperative to understand the pivotal role that energy plays in these efforts. As such, countries, international organisations, and energy advocates, among others, have continued to work on improving the global energy environment.

Among the global efforts is the Sustainable Development Goals (SDGs) of the United Nations are based on a number of components and goals, one of which is to fully realise the potential of clean, sustainable, and inclusive energy. The SDG 7: Ensure access to cheap, dependable, sustainable, and modern energy for all—provided a tracker on the key metrics under the Energy Progress Report 2023:[1]

- 7.a.1 on International Financial Flows: International public financial flows in support of clean energy in developing countries were USD 10.8 billion in 2021, down 11% from 2020, 35% below the average of 2010–19, and only over 40% of the USD 26.4 billion peak in 2017. The majority of commitments are still concentrated in a small number of countries.

- 7.1.1 on Access to Electricity: The recent progress is not on track to reach global access to electricity. As the global access to electricity grew by an annual average of 0.7% between 2010 and 2021, a slowdown in annual growth of 0.6% was recorded from 2019 to 2021.

- 7.1.2 on Access to Clean Fuels and Technologies for Cooking: The number of people without access to clean cooking decreased from 2.9 billion in 2010 to 2.3 billion in 2021, however, the goal of achieving universal access by 2030 remains to be seen. In 2030, almost 1.9 billion people would still lack this ability. If current trends continue, Sub-Saharan Africa would be home to approximately six out of ten individuals who lack access to clean cooking in 2030.

- 7.2.1 on Renewable Energy: The share of renewable energy in total final energy consumption (TFEC) will remain low. Only somewhat higher than the 16% from a decade earlier, the share of renewable energy in TFEC in 2020 was at 19.1% (or 12.5 percent if traditional usage of

1 IEA, IRENA, UNSD, World Bank, WHO. (2023). Tracking SDG 7: The Energy Progress Report 2023. Retrieved from https://www.irena.org/Publications/2023/Jun/Tracking-SDG7-2023.

biomass is removed). A significant development was also noted wherein developing countries recorded an increased renewable capacity growth in 2021 by 9.8% year-on-year.

- 7.3.1 on Energy Efficiency: In terms of improving energy intensity, progress between 2010 and 2020 was below average at 1.8%, compared to the 2.6% target between 2010 and 2030. To recover from the said slowdown, improvement in energy intensity should exceed 3.4% globally from 2020 to 2030.

	INDICATOR	2010	LATEST YEAR
	7.1.1 Proportion of population with access to electricity	1.1 billion people without access to electricity	675 million people without access to electricity (2021)
	7.1.2 Proportion of population with primary reliance on clean fuels and technology for cooking	2.9 billion people without access to clean cooking	2.3 billion people without access to clean cooking (2021)
	7.2.1 Renewable energy share in total final energy consumption	16% share of total final energy consumption from renewables	19.1% share of total final energy consumption from renewables (2020)
	7.3.1 Energy intensity measured as a ratio of primary energy and GDP	5.53 MJ/USD primary energy intensity	4.63 MJ/USD primary energy intensity (2020)
	7.a.1 International financial flows to developing countries in support of clean energy research and development and renewable energy production, including in hybrid systems	11.9 USD billion international financial flows to developing countries in support of clean energy	10.8 USD billion international financial flows to developing countries in support of clean energy (2021)

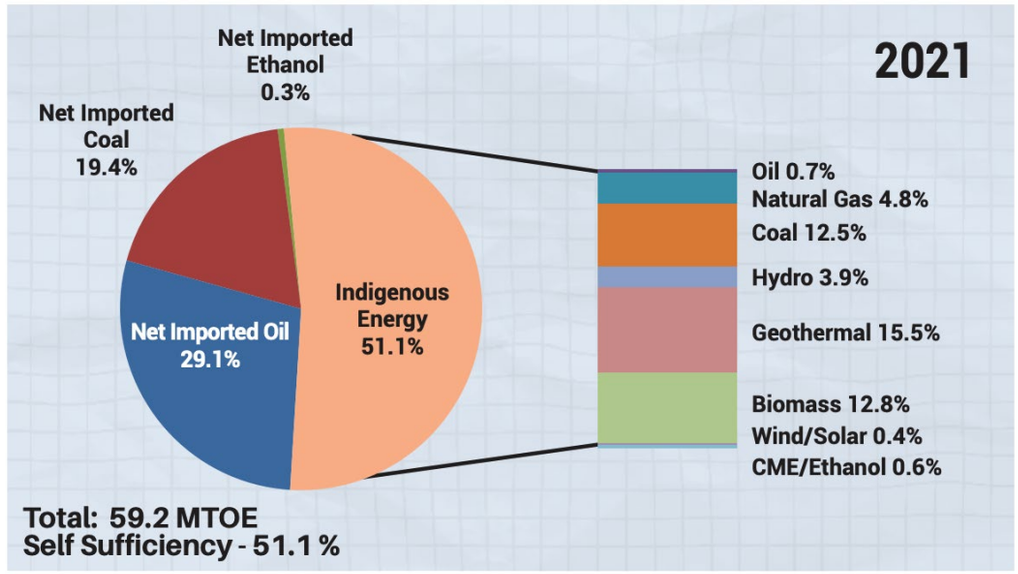
In the Philippine context, the country's progress was reported as follows:[2]

- Electricity access rate was at 97% of the population in 2020, with 3,460,150 people with no access to electricity;

2 *United Nations. (2022). The Energy Progress Report: Results Worldwide. Retrieved from https://trackingsdg7.esmap.org/country/philippines.*

- Renewable energy (RE) share of 26.7% in TFEC in 2020; and
- Clean cooking access rate was at 48% in 2020, with 57 million without access to clean cooking fuels and technologies.

Zooming in on the Philippine's renewable energy sector, 2021 Department of Energy (DOE) data reported that the energy sector's share in the country's gross domestic product increased from PHP 17.54 billion to PHP 18.54 billion in 2021. Additionally, latest data on total primary energy supply mix show that the country recorded a self sufficiency rate of 51.5%, slightly lower than the 2020 rate of 52.5%.[3]



Source: Department of Energy

WHERE ARE WE NOW

The Philippine government has set targets to increase the share of renewable energy in the power generation mix. The **Philippine Energy Plan** aims to achieve a 35% to 50% renewable energy share by 2030 and 2040, along with other initiatives such as biodiesel blending and increased natural gas consumption in the transport and industry sectors.[4]

The **National Renewable Energy Program (NREP) 2020-2040** further outlines the country's efforts to transition towards clean energy. It sets out interim targets for the delivery of renewable energy between 2011 and 2030, signalling a focused and sustained drive towards energy security and improved access to clean energy.[5]

3 *Department of Energy (DOE). (2021) Key Energy Statistics 2021. Retrieved from https://www.doe.gov.ph/sites/default/files/pdf/energy_statistics/doe-key-energy-statistics-2021-pocket-size.pdf*
4 *DOE. (n.d.). National Renewable Energy Program. Retrieved from https://www.doe.gov.ph/national-renewable-energy-program.*
5 *DOE. (2020). National Renewable Energy Program 2020-2040. Retrieved from https://www.doe.gov.ph/sites/default/files/pdf/renewable_energy/nrep_2020-2040_0.pdf.*

Additionally, through the **Department of Energy Circular No. 2022-11-0034**,[6] the Philippine government aims to accelerate the country's transition to renewable energy sources. The government has set ambitious targets for renewables to comprise 35% of power generation by 2030 and 50% by 2040. With the removal of the previous restriction on foreign ownership, foreign investors can now hold 100 percent equity in the exploration, development, and utilisation of solar, wind, hydro, and ocean or tidal energy resources.

The Department of Energy has likewise continued to release guidelines and policies in line with the **implementation of the Energy Efficiency and Conservation Act.**

Other notable developments in the Philippine energy sector are as follows:

- Upon the recommendation of the Philippine Bureau of Investments (BOI), consistent with the requirements of the Corporate Recovery and Tax Incentives for Enterprises (CREATE) Act[7], the **2022 Strategic Investment Priority Plan (SIPP)** was approved by President Duterte in May 2022 through **Memorandum Order No. 61, s. 2022**[8]. The newly formulated SIPP aims to identify industries that can further grow their business by availing investment incentives such as income tax holiday and duty-free importation of capital equipment.

- As the government continues its efforts to a clean energy transition, the Bureau of Internal Revenue (BIR) issued on 30 June 2022 the **Revenue Regulations No. 7-2022**[9] which provides the policies and guidelines for the availment of tax incentives provided under the Renewable Energy Act of 2008. Under the regulations, renewable energy developers can avail of fiscal incentives, including income tax holiday and zero percent value-added tax (VAT) rate. This is following the issuance of **DC No. 2021-05-0011** which provides the Guidelines for the Endorsement of Energy Efficiency Projects to the Board of Investments for Fiscal Incentives. [10]

- **Department Order (DO) No. 2022-02-0003**[11] creates the Philippines Steering Committee (PSC) and Technical Working Groups (TWG) for renewable energy and energy efficiency and conservation for the implementation of Clean Energy Finance and Investment Mobilisation (CEFIM) of the OECD.

- **DO No. 2022-03-0005**[12] which covers the process for evaluation and issuance of Energy Efficiency Cost Reductions (EECR) Certificates

- **DO No. 2022-04-0006**[13] provides guidelines on evaluation and approval of Government Energy Efficiency Projects (GEEPs), pursuant to Section 2.3 of the GEMP Guidelines, submitted to the DOE for its endorsement to the Inter-Agency Energy Efficiency and Conservation Committee (IAEECC).

- **DO No. 2023-01-0001**[14] which institutionalises the Energy Management Team (EMT) to Develop an Energy Management System (EnMS).

- **Department Circular (DC) No. 2022-03-0004**[15] which establishes the procedures and criteria for evaluation, approval, and endorsement of Energy Efficiency (EE) Strategic Investments covering New and Expansion of EE Projects to the BOI for the availment of Fiscal Incentives

- **DC No. 2022-03-0005**[16] provides guidelines for recognition of testing laboratories for the examination, testing and verification of energy performance of Energy-Consuming Products (ECPs) and transport vehicles, including the issuance of certificate of endorsement to the Board of Investments for fiscal incentives.

- **DC No. 2022-03-0006**[17] which adopts the training regulations certification process for energy auditors (EAs).

- **DC No. 2022-03-0007**[18] which adopts the training regulations certification process for energy conservation officers (ECOs).

- **DC No. 2022-03-0008**[19] which adopts the training regulations and prescribes certification processes for training institutions and energy managers (EMs).

- **DC No. 2022-04-0013**[20] which covers the assessment, registration, and certification of qualified Firm, Partnership, Corporation, and Sole Proprietorship (FPCS) which will conduct energy audits. An energy audit refers to the evaluation of energy consumption and review of current energy cost to determine appropriate intervention measures and efficiency projects in which energy can be judiciously and efficiently used to achieve savings.

- **DC No. 2022-11-0035**[21] which expands the coverage of the Philippine Energy Labeling Program (PELP) for the compliance importers, manufacturers, distributors, dealers, and retailers of energy consuming products (ECPs).

- The DOE released an advisory last November 2022 on the **Energy Audit Guidelines for Designated Establishments**.[22]

6 Department of Energy. (2022). Circular No. 2022-11-0034. Retrieved from https://www.doe.gov.ph/sites/default/files/pdf/issuances/dc2022-11-0034.pdf.
7 Effective April 2021, the CREATE Act reduced corporate income tax (CIT) from 30% to 25% for large corporations and to 20% for small and medium enterprises that have net taxable income not higher than PHP 5 million.
8 The Official Gazette. (May 2022). 2022 Strategic Investment Priority Plan. Retrieved from https://www.officialgazette.gov.ph/downloads/2022/05may/20220524-MO-61-RRD.pdf
9 Bureau of Internal Revenue. (June 2022). Revenue Regulations No. 7-2022. Retrieved from https://www.bir.gov.ph/images/bir_files/internal_communications_1/Digest%20RR%202022/RR%207-2022.pdf
10 Department of Energy. (May 2021). Department Circular No. DC2021-05-0011. Retrieved from https://www.doe.gov.ph/laws-and-issuances/department-circular-no-dc2021-05-0011.
11 DOE. (2022). Department Order No. 2022-02-0003. Retrieved from https://www.doe.gov.ph/sites/default/files/pdf/issuances/do2022-02-0003.PDF
12 DOE. (2022). Department Order No. 2022-03-0005. Retrieved from https://www.doe.gov.ph/sites/default/files/pdf/issuances/do2022-03-0005.PDF
13 DOE. (2022). Department Order No. 2022-04-0006. Retrieved from https://www.doe.gov.ph/sites/default/files/pdf/issuances/do2022-04-0006.PDF
14 DOE. (10 January 2023). Department Order No. 2023-01-0001. Retrieved from https://www.doe.gov.ph/sites/default/files/pdf/issuances/do2023-01-0001.PDF
15 DOE. (2022). Department Circular No. 2022-03-0004. Retrieved from https://www.doe.gov.ph/sites/default/files/pdf/issuances/dc2022-03-0004.PDF
16 DOE. (2022). Department Circular No. 2022-03-0005. Retrieved from https://www.doe.gov.ph/sites/default/files/pdf/issuances/dc2022-03-0005.PDF?withshield=1
17 DOE. (2022). Department Circular No. 2022-03-0006. Retrieved from https://www.doe.gov.ph/sites/default/files/pdf/issuances/dc2022-03-0006.pdf
18 DOE. (2022). Department Circular No. 2022-03-0007. Retrieved from https://www.doe.gov.ph/sites/default/files/pdf/issuances/dc2022-03-0007.pdf
19 DOE. (2022). Department Circular No. 2022-03-0008. Retrieved from https://www.doe.gov.ph/sites/default/files/pdf/issuances/dc2022-03-0008.pdf
20 DOE. (2022). Department Circular No. 2022-04-0013. Retrieved from https://www.doe.gov.ph/sites/default/files/pdf/issuances/dc2022-04-0013.pdf
21 DOE. (21 November 2022). Department Circular No. 2022-11-0035. Retrieved from https://www.doe.gov.ph/laws-and-issuances/department-circular-no-dc2022-11-0035
22 DOE. (24 November 2022). DOE Advisory: Energy Audit Guidelines for Designated Establishments. Retrieved from https://www.doe.gov.ph/announcements/advisory-energy-audit-guidelines-designated-establishments

ECCP ADVOCACIES

Formulation of a Sustainable Energy Mix Policy

One of the cornerstones of promoting sustainability is the transition from fossil fuels to renewable energy sources such as solar, wind, hydroelectric, and geothermal power. Renewable energy sources produce little to no greenhouse gas emissions, making them environmentally friendly alternatives. By investing in renewable energy technologies, dependence on finite resources are reduced, and the impacts brought about by climate change can also be mitigated.

Furthermore, expanding the share of renewable energy in the country's power mix is essential for advancing sustainability and self-sufficiency goals in addition to pricing considerations. Increased utilisation of RE can help the Philippines achieve its objectives of powering rural and off-grid homes and supplying more reliable and affordable electricity.

Additionally, developing a diverse energy mix ensures stability in the face of supply disruptions or geopolitical conflicts, as what has been seen in the invasion of Ukraine by Russia. Renewable sources are abundant and localised, reducing dependence on imported fossil fuels.

As such, the ECCP welcomes the key policy development in the energy sector on the relaxation of foreign participation rules in the RE industry. The ECCP likewise continues to recognise the numerous initiatives and regulations that the Philippine government has put in place to dramatically increase the use of renewable energy sources, natural gas, and other emerging clean energy technologies. The Chamber also recognises the Philippine government's efforts to advance the promotion of affordable and reliable energy, including the use of technological advancements in the field of renewable energy and the improvement of ease of doing business in the sector in order to draw more players to the nation.[23]

Further Encourage Increased Investments in the Renewable Energy Sector

To complement and maximise the benefits brought about by recent and ongoing initiatives of the Philippine government and energy stakeholders in the private sector, the ECCP strongly believes that initiatives should be put in place to further entice renewable energy investors to conduct business in the country. Furthermore, a geographical identification of renewable energy prospects is essential given the archipelagic structure of the nation in order to support energy players' informed decision-making. In light of this, we applaud the CREZ report's publishing in 2020,[24] which will be a useful instrument for the growth of RE and energy diversification.

Along with the previously mentioned initiatives, the ECCP firmly believes that strengthening local government units to increase their capacity to carry out regional and local projects, as well as providing funding mechanisms for clean energy activities, are among the key enablers of increased renewable energy and energy efficiency investments. The adoption of such policies will give governments and investors the assurance they need to pursue clean energy initiatives that will benefit the general population in terms of sustainability and job prospects.

Finally and in line with the Chamber's continued advocacy on the promotion of ease of doing business, we underscore the significant role of streamlining mechanisms in processes for clean and sustainable energy projects. As such, the ECCP strongly recommends revisiting the project application processes in the energy sector by assessing the priority requirements and procedures as well as the application deadlines.

23 President Marcos Jr., F. (25 July 2022). State of the Nation Address [Speech].

24 Department of Energy. (2020). Ready for Renewables - Grid Planning and Competitive Renewable Energy Zones (CREZ) in the Philippines. Retrieved from https://www.doe.gov.ph/renewable-energy/ready-renewables-grid-planning-and-competitive-renewable-energy-zones-crez.

The ECCP stresses the importance of adopting clear, integrated, reliable, transparent, and timely leasing and permitting processes and strongly supports the streamlining of regulatory permitting processes via the Energy Virtual One-Stop Shop to obtain service contracts, environmental certifications, and commercial licences.

Effective Implementation of the Energy Efficiency and Conservation Act

One sustainable solution towards securing a clean and sustainable energy future lies in promoting energy efficiency and conservation (EE&C). EE&C aligns with the country's sustainability goals by promoting environmental preservation through decreasing greenhouse gas emissions as well as reducing energy consumption. Moreover, it encourages resource conservation, as well as responsible use of finite energy resources. With this, the DOE stated that it will take a more aggressive push to implement the EE&C Act or Republic Act (RA) No. 11285 and its various components.[25]

This being said, the ECCP applauds the numerous initiatives and policies put in place, such as DOE Department Circulars and Department Orders, as well as IAEECC Resolutions, which engage various stakeholders to advance the Philippines' EE&C goals. Nonetheless, while there have been substantial improvements since the passage of the EE&C Act, the ECCP acknowledges that there is still potential to advance the country's energy efficiency sector. In this context, the ECCP is looking forward to maximising energy efficiency's potential to considerably support the country's aims for energy security and decarbonisation.

In order to achieve this, the ECCP emphasises that the DOE and IAEECC should endeavour to draft, consult with the public on, and issue the final policy issuances required to completely execute RA No. 11285. Relatedly, the industry looks forward to the implementation of effective DOE and multi-agency guidelines relating to Demand Side Management and the expansion of the Government Energy Management Program by providing clarity to government procurement of energy service company performance contracts, public-private partnership transactions, and joint-venture agreements via enabling policy issuances of the Department of Budget and Management, the Government Procurement Policy Board, the Public-Private Partnership Center, and the National Economic and Development Authority.

To this end, we underscore that developing the country's EE&C landscape will help spur increased socio-economic benefits through promoting innovation, creating jobs, and enhancing the country's competitiveness, among others.

25 Atty. Fuentebella, F.W. (2022). Emerging Energy: Energy-Intensive Sectors below. Retrieved from https://www.cnnphilippines.com/lifestyle/2022/12/18/doe-vows-aggressive-push-on-energy-efficiency-law.html.

DIGITALISATION FOR SUSTAINABILITY

OVERVIEW

Digitalisation is at the forefront of transformative change, altering the way we live, work, and interact with one another and with technology. For decades, this phenomenon has been shaping the modern world and powering the future with breakthroughs in machine learning, big data, Internet of Things, and artificial intelligence, among others. With the rapidly evolving technological landscape, countries are learning to quickly adapt to these advancements to stay competitive in this new environment, while also creating an inclusive and human-centred future for all.

At the onset of the global health crisis when operations abruptly shifted, we have witnessed the digital economy thrive as economic activities expanded online, notably in the areas of information technology and business process management, ecommerce, as well as digital finance. This also pushed the government and other stakeholders to utilise digital technologies to contain the outbreak and to effectively bring its services to the people. Undeniably, the pandemic accentuated the crucial role of digitalisation in economic growth and resiliency; and along with the vast opportunities that it offers, it also brings into focus its advantages and impacts to an inclusive and green transition.

According to the World Economic Forum, technological solutions have the potential to reduce global carbon emissions by more than a third of the 50 percent figure required by 2030 through solutions in energy, manufacturing, agriculture and land use, buildings, services, transportation and traffic management.[1] Its capability to accelerate the decarbonization across different industries can facilitate in greening our economy.

The United Nations Development Programme (UNDP), in its efforts to support countries on their journey towards the 2030 Agenda for Sustainable Development and the Paris Agreement, launched the new Digital Strategy 2022 - 2025[2] which puts forth a vision whereby digital is an empowering force for people and the planet. To achieve this vision, the objectives outlined are namely, amplify development outcomes by embedding digital across all UNDP programming; support societies in their efforts to create more inclusive and resilient digital ecosystems; and transform UNDP into a digitally native organisation.[3]

Definitely, the level of digital competitiveness varies from country to country. In the latest IMD World Digital Competitiveness Ranking 2022, the report measures the capacity and readiness of 63 economies to adopt and explore digital technologies as a key driver for economic transformation in

1 World Economic Forum. (15 January 2019). Digital technology can cut global emissions by 15%. Retrieved from https://www.weforum.org/agenda/2019/01/why-digitalization-is-the-key-to-exponential-climate-action/

2 UNDP launched the first Digital Strategy in mid-2019 to harness digital transformation within the organisation. The strategy represented a systematic and corporate-driven transformation process to reimagine the way UNDP serves its partners and operates its systems and processes.

3 UNDP. (2022). Digital Strategy 2022 - 2025. Retrieved from https://digitalstrategy.undp.org/documents/Digital-Strategy-2022-2025-ABRIDGED-VERSION-PRINT_ENG_Interactive.pdf

business, government and wider society. Three factors are being used to determine an economy's overall ranking: knowledge, technology, and future readiness. Among the Association of Southeast Asian Nations (ASEAN) countries, Singapore ranked 4th globally. Zooming into the Philippines' performance, the country improved two spots in ranking compared to the previous year; however, it trailed behind its ASEAN neighbours.

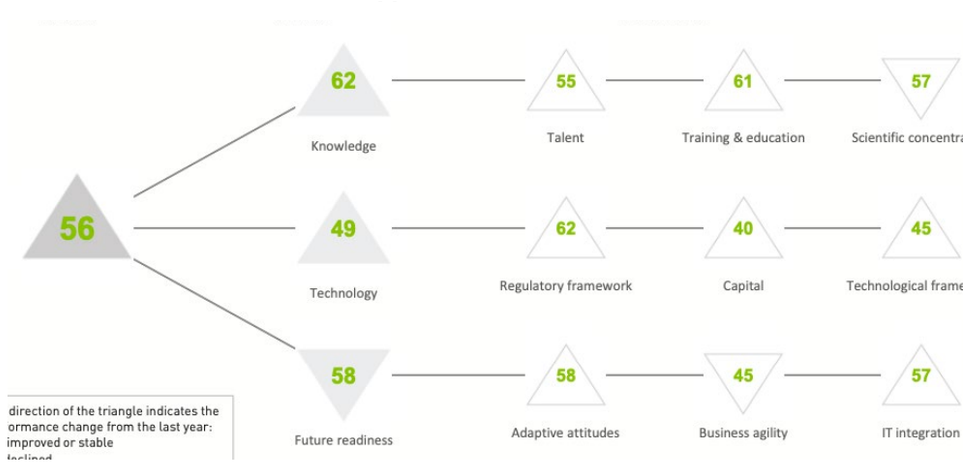
Table 1. IMD World Digital Competitiveness Ranking, 2022[4]

ASEAN Country	Global Ranking 2021	Global Ranking 2022
Indonesia	53	51
Malaysia	27	31
Philippines	**58**	**56**
Singapore	5	4
Thailand	38	40

Source: IMD World Competitiveness Center

Overall, the Philippines moved up to 62nd this year from 63rd the previous year in terms of the 'knowledge' indicator. Additionally, the country has made remarkable strides in the technology domain, elevating its rank to 49th from 54th in the year 2021. Furthermore, it is worth noting that the ranking related to future readiness has experienced a slight setback, slipping from 57th to 58th place. This measurement assesses the country's level of readiness to fully harness the potential of digital transformation.

2022 Philippines' Overall Performance[5]



Source: IMD World Competitiveness Center

In relation to this, the Philippines has identified digital transformation as a national priority under the current administration— highlighting its commitment to continue the country's digital transformation program and to bridge the digital divide by making internet connection affordable and accessible to all.

4 IMD World Competitiveness Center. (2022). World Digital Competitiveness Ranking 2022. Retrieved from https://www.imd.org/centers/wcc/world-competitiveness-center/rankings/world-digital-competitiveness-ranking/
5 Ibid.

Tasked as the primary agency to promote the use of information and communications technology (ICT) and lead the government digital transformation for an inclusive and sustainable future, the Department of Information and Communications Technology (DICT) is working on bringing the internet to and improving digital infrastructure in geographically isolated and disadvantaged areas in the country. As it was estimated that about 30 percent of the Filipino population has no access to internet connectivity as of October 2022[6], the government is also innovating programs and policies to offer digital services in various areas such as in banking, healthcare, and government administration. Although there are numerous advantages to digitalisation, it is essential to address any possible tailwinds that correlates to it, namely, concerns on data privacy, cybersecurity and digital carbon footprint.

Digitalisation also plays a pivotal role in fostering responsible business practices by enhancing transparency, accountability, and sustainability. Through the use of digital tools and platforms, companies can efficiently track and report on their environmental, social, and governance (ESG) performance, enabling stakeholders to access real-time data and make informed decisions. Furthermore, digitalisation facilitates supply chain traceability, making it easier to identify and rectify ethical and environmental concerns. It also allows for stakeholder engagement and feedback, promoting a culture of responsiveness and continuous improvement. In essence, digitalisation empowers businesses to integrate responsible practices seamlessly into their operations, driving long-term profitability while contributing to a more sustainable and ethical global business landscape.

Looking ahead, a whole-of-nation approach is crucial for digitalisation to reach its full potential in the advancement of sustainable development globally.

WHERE ARE WE NOW?

- Spearheaded by the Department of Information and Communications Technology (DICT), the **eGov PH Super App**[7] was launched on 02 June 2023 with the aim to simplify transactions between the government and citizens. With a vision to build a connected nation, the platform integrates the multi-sectoral government through a one-stop online system that will minimise economic cost for the citizens.

- Two new features of the aforementioned super app, the **Electronic Local Government Unit (eLGU) System and the People's Feedback Mechanism (eReport)**, were launched last 17 July 2023 to support the government's goal to provide a one-stop-shop for its services. The eLGU covers local government services such as business permit licensing, notice of violations, notification system, community tax, health certificates, local civil registry, business tax and real property tax. Meanwhile, the eReport is interoperable and linked with the Philippine National Police's (PNP) iReport, which is a Crime Response Management System, and the Bureau of Fire Protection's (BFP) Fire Response Management System.[8]

- The **Philippine Development Plan (PDP) 2023 - 2028**[9] laid down six cross-cutting strategies that will serve as catalysts for economic, social, institutional, and environmental

6 Philippine News Agency. (12 October 2022). DICT links remote islands via 'BroadBand ng Masa'. Retrieved from https://www.pna.gov.ph/articles/1185972
7 https://e.gov.ph/#about
8 Philippine News Agency. (18 July 2023). LGUs moving towards automation via eLGU, eReport mobile app. Retrieved from https://www.pna.gov.ph/articles/1205835
9 The PDP 2023-2028 is a plan for deep economic and social transformation to reinvigorate job creation and accelerate poverty reduction by steering the economy back on a high-growth path. This growth must be inclusive, building an environment that provides equal opportunities to all Filipinos, and equipping them with skills to participate fully in an innovative and globally competitive economy.

transformation in the country, one of which is digitalisation. The digital transformation of the government will result in more efficient and faster service delivery, more transparency, and fewer opportunities for corruption at various levels.[10]

- The **BroadBand ng Masa Project (BBMP)** is a connectivity expansion initiative led by the DICT. As of February 2023, the project has established a total of 4,385 operational live sites in 73 provinces and Metro Manila, across 601 cities and municipalities all around the country. The DICT aims to connect not only major islands, but geographically isolated and disadvantaged areas (GIDAs) such as the provinces of Basilan, Sulu, Tawi-Tawi (BaSuLTa), and the Pag-asa Island of the Kalayaan Group of Islands in the province of Palawan.[11]

- In relation to the foregoing, **SpaceX's Low Earth Orbit (LEO) satellite internet service Starlink** entered the Philippines on 22 February 2023. According to the DICT, this new development will complement the country's existing broadband capacities, enabling faster broadband speed and better connectivity, particularly in far-flung areas.[12]

- The DICT's **Luzon Bypass Infrastructure Project (LBIP)** is a 240-kilometre fiber line that will connect government-owned cable landing stations (CLS) in Baler, Aurora, and in Poro Point, La Union — with repeater stations at 50-km intervals. The LBIP will increase total government capacity from 40,000 to 2,000,000 Mbps, and the first phase is expected to be completed within the first half of 2023.[13]

On legislation:

- The **E-Governance Act or House Bill (HB) No. 7327**[14] seeks to adopt a policy to create, foster and sustain a digitally empowered and integrated government that provides secure, responsible and transparent citizen-centred services and harnesses the potential of open data for promoting economic growth and a globally competitive Filipino nation. Approved by the House last 06 March 2023, the bill was transmitted to the Senate on 07 March.

- The proposed **Promotion of Digital Payments** mandates the use of "safe and efficient" digital or electronic modes of payments by all national government agencies, government-owned and controlled corporations, and local government units. While several bills have been filed at both the Senate and House, all are currently pending in the Committees.[15]

- The **Internet Transactions Act**[16] aims to offer a legal framework for the creation of secure and reliable platforms where products and services can be transacted online with adequate transparency and maximum efficiency. The measure also proposes the adoption of an e-commerce code of conduct and establishes an e-commerce bureau inside the Department of Trade and Industry. HB No. 4[17] on the said measure was approved on 12 December 2022 and transmitted to the Senate on 14 December. Meanwhile, Senate Bill No. 1846[18] is currently pending on second reading.

- With the rapid advancement of Artificial Intelligence (AI), several bills have been filed at the lower house on the **Development and Regulation of AI**[19] in the country. The proposed legislation aims to ensure that the deployment of AI technologies are aligned with the principles of responsible AI development.

- The **Open Access in Data Transmission Act** or **House Bill No. 6**[20] seeks to lower barriers and cost to entry for data service providers and promotes sharing of infrastructure and efficient use of resources. The proposed legislation is critical to establishing a forward-looking and future-ready digital policy framework for the Philippines. Approved by the House last 12 December 2022, the bill was transmitted to the Senate on 14 December.

- The proposed **Satellite-Based Technologies Promotion Act**[21] eases regulatory requirements for the use of satellite-based internet technologies to connect unserved and underserved communities. The bill promotes the expansion of satellite-based networks, particularly in underserved and unserved areas, by allowing internet service and value-added services providers to own and operate their own network using satellite technology without the need for a franchise and a provisional authority of Certificate of Public Convenience and Necessity (CPCN) from the National Telecommunications Commission (NTC). The bills which have been filed/refiled both in the upper and lower houses are all pending in the Committee.

- The **Better Internet Act**[22] requires internet service providers (ISP) to increase service coverage and deliver a minimum standard for internet connection speed within three (3) years from the effective date of the Act and according to the schedule and strategy to be set forth by the DICT in the National ICT Household Plan. While several bills have been filed/ refiled both in the upper house, all are currently pending in the Committee.

- The **Critical Information Infrastructure Protection Act**[23] aims to establish a framework for ensuring the security and reliability of the country's digital ecosystem, which is critical to achieving the new administration's goal of safe, seamless, and reliable digitalisation and connectivity. While several bills have been filed/refiled both in the upper house, all are currently pending in the Committee.

10 National Economic and Development Authority. Philippine Development Plan 2023 - 2028. Retrieved from https://pdp.neda.gov.ph/wp-content/uploads/2023/01/PDP-2023-2028.pdf

11 Presidential Communications Office. (21 February 2023). PBBM admin's BroadBand ng Masa program to boost Wi-Fi connectivity in PH with 1st subsea cable system project. Retrieved from https://pco.gov.ph/news_releases/pbbm-admins-broadband-ng-masa-program-to-boost-wi-fi-connectivity-in-ph-with-1st-subsea-cable-system-project/

12 Rosales, E. (25 February 2023). Government eyes Starlink for free public WiFi program. Retrieved from https://www.philstar.com/business/2023/02/25/2247392/government-eyes-starlink-free-public-wifi-program

13 Philippine News Agency. (29 December 2022). DICT targets to install free Wi-Fi in over 9K locations. Retrieved from https://www.pna.gov.ph/articles/1191678

14 https://hrep-website.s3.ap-southeast-1.amazonaws.com/legisdocs/third_19/HBT7327.pdf

15 As of 30 July 2023, there have been bills filed at the Senate and House on the internet transactions act – Senate Bill No. 1846; and House Bill Nos. 275, 358, 2946, 3737, 4344, 5073, 7582, and 8262.

16 As of 30 July 2023, there have been bills filed at the Senate and House on the promotion of digital payments – Senate Bill Nos. 37, 704, 762, 803, 811, 1128, and 1541; and House Bill Nos. 275, 358, 2946, 3737, 4344, 5073, 7582, and 8262.

17 House of Representatives. (December 2022). House Bill No. 4. Retrieved from https://hrep-website.s3.ap-southeast-1.amazonaws.com/legisdocs/third_19/HBT0004.pdf

18 Senate of the Philippines. (February 2023). Senate Bill No. 1846. Retrieved from https://legacy.senate.gov.ph/lisdata/4067737070!.pdf

19 As of 30 July 2023, there have been bills filed at the House on the development and regulation of artificial intelligence – House Bill Nos. 7396, 7913, and 7983. All bills are currently pending in the Committee.

20 House of Representatives. (12 December 2022). House Bill No. 06. Retrieved from https://hrep-website.s3.ap-southeast-1.amazonaws.com/legisdocs/third_19/HBT0006.pdf

21 As of 30 July 2023, there have been bills filed at the Senate and House on the Satellite-Based Technologies Promotion Act – Senate Bill Nos. 814 and 1380; and House Bill Nos. 8322, 5471, 4176, and 640.

22 As of 30 July 2023, there have been bills filed at the Senate on the Better Internet Act – Senate Bill Nos. 282, 329, 386, 701, 1381

23 As of 30 July 2023, there have been bills filed at the Senate on the Critical Information Infrastructure Protection Act – Senate Bill Nos. 863, 1382, 1701, 1923, and 2066.

ECCP ADVOCACY

Adopt the open access in data transmission approach

The ECCP believes that adopting the open access in data transmission is vital in increasing fixed and mobile broadband penetration for better and inclusive internet access and service. The bill will allow all broadband industry participants, including internet service providers (ISP) and value-added service (VAS) providers to connect to the government's National Broadband Plan infrastructure.

As of June 2023, data from the Ookla Speedtest Global Index report showed that the country's mobile speed averaged at 26.98 Mbps, ranking 83 out of 140 countries. In terms of fixed broadband, the country ranked 47 out of 180 countries with an average download speed of 92.84 Mbps.[24] The improvement in the country's internet speed is attributed to the efforts of the current administration to fast-track building digital infrastructure. With this and in line with the goal to make internet connection affordable and accessible to all, the ECCP calls on the Congress to urgently pass the proposed legislation on open access in data transmission as this will encourage competition and market entry of service providers in the data transmission industry.

Update laws and regulatory framework to promote and incentivize investments in innovation and connectivity

The ECCP acknowledges the enactment of the Corporate Recovery and Tax Incentives for Enterprises (CREATE) Act which provides incentives that are performance-based, strategically targeted, time-bound, and fully transparent. It encourages businesses to invest in industries and sectors aligned with the Philippine development agenda; create higher-value jobs; incentivize upskilling and employee training, and promote investments in less-developed areas, and areas recovering from calamities or armed conflict.[25]

It is worth noting that under the law, Tier 3 investments include those adopting advanced digital production technologies of the fourth industrial revolution; producing equipment, parts, and services that embed new technologies; and engaging in research and development (R&D) activities and commercialization of R&D leading to accelerate innovation and increase the added value on products and services.[26]

To this end, the ECCP strongly supports the government in its efforts to fully embrace digitalisation. As part of the Philippines' commitment to achieving the Sustainable Development Goals, the Chamber believes that enhanced cooperation among all stakeholders, as well as the promotion of green and digital technologies across the board, are vital in the agenda towards an economy that is inclusive and sustainable.

Maintain an enabling environment for cross-border data flow

International free flow of data or the transfer of data across borders expedites digital transformation and empowers organisations worldwide to expand and compete effectively. This seamless data exchange in real-time facilitates the efficient delivery of goods and services, ushering in new economic and trade prospects.

The current policy landscape that fosters the free movement of data within the country, across regions, and globally has proven immensely beneficial. It has been a driving force behind the explosive growth of the IT-BPM industry, which generated an impressive USD 32.5 billion in revenue and provided gainful employment to 1.57 million full-time employees in 2022.[27] However, emerging global trends indicate a rising tendency toward more stringent data localization measures. It is imperative to recognize that any hindrances or impediments to information flow, such as data localization measures, can greatly diminish the benefits we gain from our active involvement in the globalised environment.

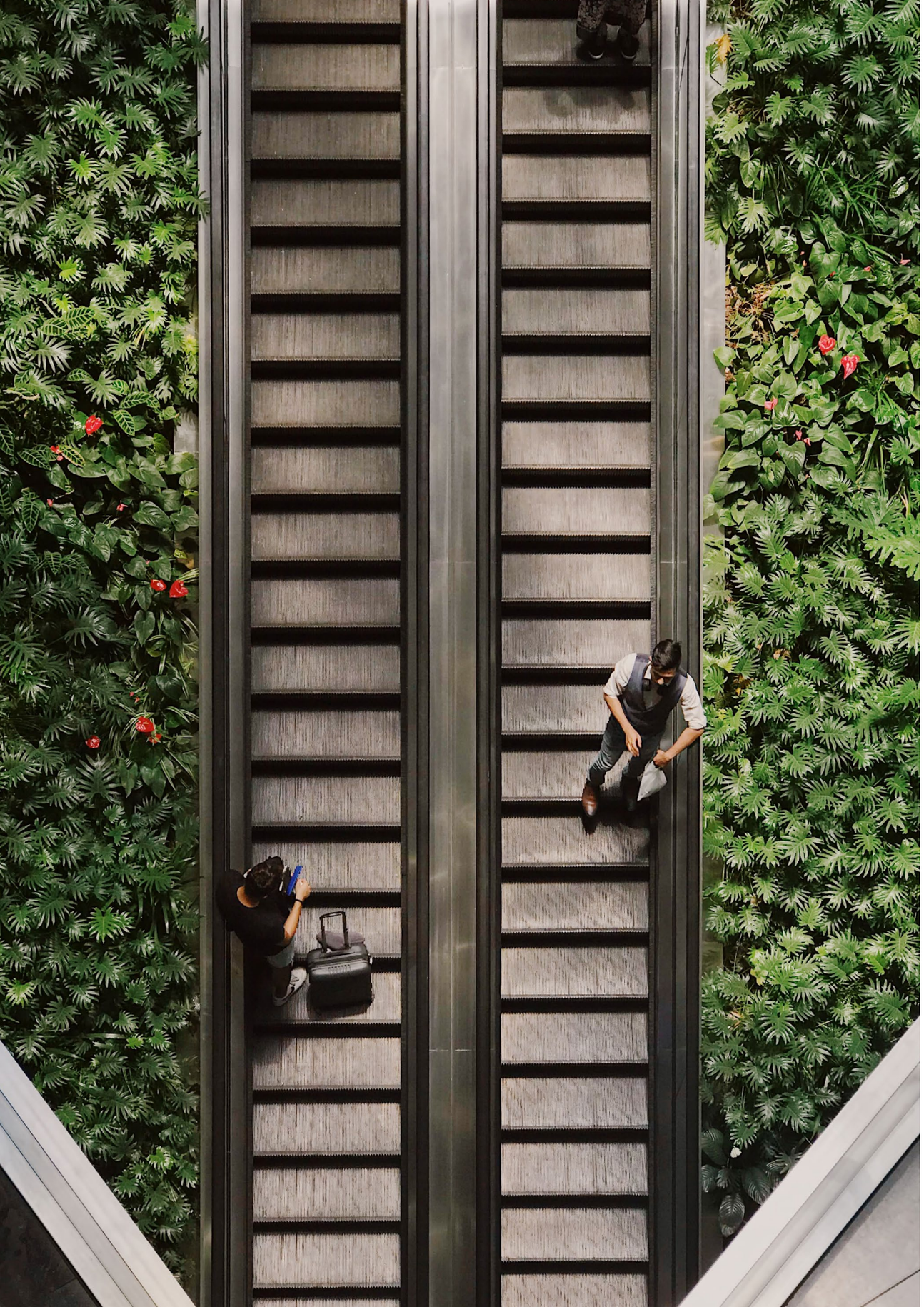
As the Philippines advances its digital economy and aspires to become a regional digital hub, the ECCP underscores the importance of an enabling environment for cross-border data flow to spur economic development, enhance public services, increase digital trade, boost the competitiveness of data-driven industries in the Philippines.

24 Speedtest. (2023). Speedtest Global Index: Global Speeds June 2023. Retrieved from https://www.speedtest.net/global-index

25 Department of Finance. (n.d.). Package 2: Corporate Recovery and Tax Incentives for Enterprises (CREATE) Act. Retrieved from https://taxreform.dof.gov.ph/tax-reform-packages/p2-corporate-recovery-and-tax-incentives-for-enterprises-act/

26 Philippine News Agency. (04 March 2022). PH gives highest perks for new tech investments. Retrieved from https://www.pna.gov.ph/articles/1169044

27 The Philippine Star. (27 August 2023). Business, IT groups nix plans for data localization. Retrieved from https://www.philstar.com/business/2023/08/27/2291580/business-it-groups-nix-plans-data-localization



GREEN AND INCLUSIVE FINANCE SOLUTIONS

OVERVIEW

In an era defined by global challenges, the pursuit of sustainable and inclusive development has taken centrestage. Sustainable financing has become a global imperative as countries strive to address climate change and promote environmental sustainability.

ASEAN and the Philippines have made efforts in promoting and implementing green financing initiatives to support sustainable development and climate change mitigation.[1] One notable initiative is the ASEAN Catalytic Green Finance Facility (ACGF), which was launched in April 2019. The ACGF aims to accelerate green infrastructure investments in Southeast Asia by providing ASEAN member governments access to technical assistance and over USD 1 billion in loans from co-financing partners.[2]

In terms of data, as of September 2022, the total ASEAN-labelled Green, Social, and Sustainability (GSS) Bonds issued amounted to USD 26.15 billion, with Philippine companies issuing USD 6.32 billion or 24% of the total.[3] This demonstrates the Philippines' contribution and commitment to sustainable finance within the ASEAN region. These green financing efforts align with Southeast Asia's increasing focus on promoting environmental sustainability and addressing climate change challenges. They also contribute to the region's infrastructure development programs that prioritise environmental sustainability and climate change goals.[4]

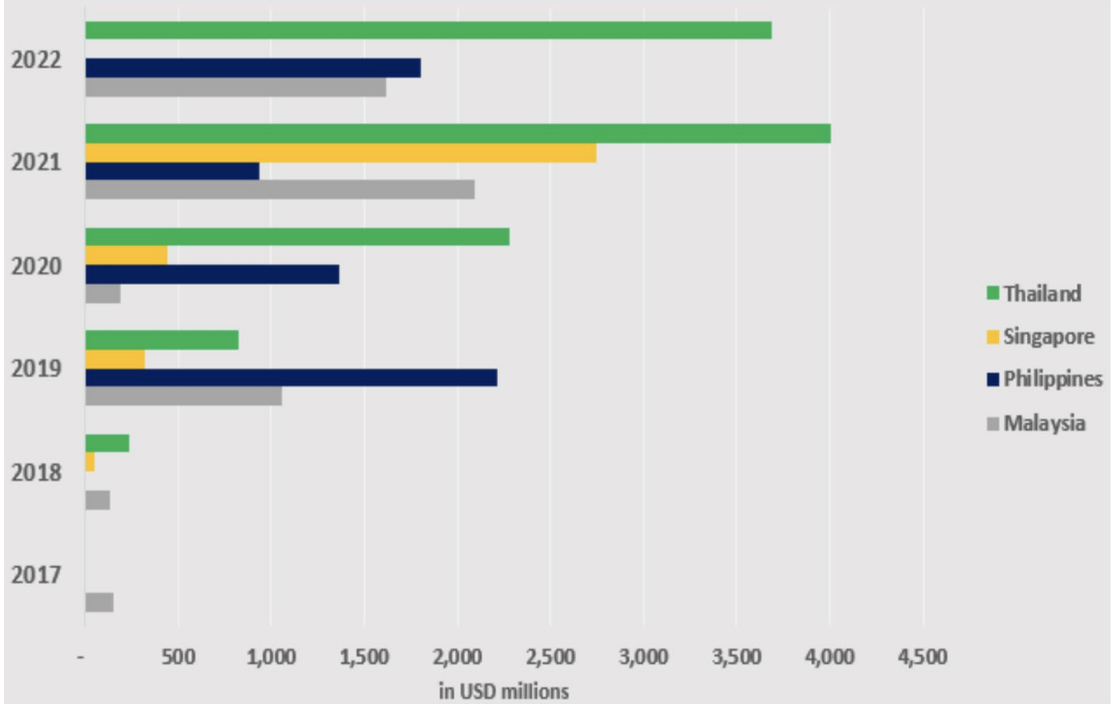
1 Association of Southeast Asian Nations Catalytics Green Finance Facility. (February 2023). ASEAN Catalytic Green Finance Facility 2022: Building Southeast Asia's Green Project Pipelines. Retrieved from https://www.adb.org/sites/default/files/institutional-document/860436/asean-catalytic-green-finance-facility-2022.pdf.

2 Asian Development Bank (ADB). (n.d.). ASEAN Catalytic Green Finance Strategy. Retrieved from https://www.adb.org/what-we-do/funds/asean-catalytic-green-finance-facility/overview.

3 Securities and Exchange Commission (SEC). (September 2022). Sustainable Finance Market Update. Retrieved from https://www.sec.gov.ph/wp-content/uploads/2022/10/2022CM_Sustainable-Finance-Market-Update_September2022_v2.pdf.

4 ADB. (March 2023). Greening Southeast Asia's Infrastructure Timeline. Retrieved from https://www.adb.org/news/features/greening-southeast-asia-infrastructure-pipeline.

ASEAN–LABELLED GSS BOND ISSUANCES BY COUNTRY



Source: Securities and Exchange Commission

The Philippines is particularly vulnerable to climate change risks due to its geographical location in the Pacific Ocean's typhoon belt. With an average of 20 typhoons entering the country annually between July and October, the Philippines experiences devastating flooding and landslides. To mitigate the future impact of climate change, the government has been expanding initiatives to promote environmental sustainability.

This Whitebook underscores the essential role of collaboration and partnership in driving progress. Governments, businesses, civil society, and individuals all play pivotal roles in advancing green and inclusive finance. By showcasing innovative partnerships and cross-sectoral initiatives, we aim to inspire collective action and foster a sense of shared responsibility.

WHERE ARE WE NOW?

In the Philippines, the central bank, Bangko Sentral ng Pilipinas (BSP), is taking proactive measures to encourage sustainable and green project financing in the country. Through its **11-point Sustainable Central Banking (SCB) strategy,**[5] the BSP aims to integrate sustainability principles into its key operations and support the transition to a low-carbon economy.

One of the key incentives proposed by the BSP is providing banks with an additional 15 percent single borrower limit on loans, credit accommodation, and guarantees for financing sustainable projects. This incentive aims to support transition activities towards decarbonization until 31 December 2030. Additionally, the BSP plans to implement a zero percent requirement rate for sustainable bonds, further incentivizing banks to support sustainable initiatives.[6]

Additionally, to attract more local banks to support sustainable projects, the BSP has reduced the reserve requirement rate to zero percent for existing and new issuances of green, social, sustainability, and other sustainable bonds. This reduction will be in effect until 2025, providing a favourable environment for banks to invest in sustainable projects.[7]

Similarly, the **Securities and Exchange Commission released Memorandum Circular No. 3**, series of 2023 in April, which provides the guidelines on the issuance of sustainability-linked bonds under the ASEAN Sustainability-Linked Bond Standards in the Philippines.[8]

Another significant development in the Philippines is the opening of the renewable energy sector to foreign ownership. Through the **Department of Energy Circular No. 2022-11-0034**,[9] the Philippine government aims to accelerate the country's transition to renewable energy sources. The government has set ambitious targets for renewables to comprise 35 percent of power generation by 2030 and 50 percent by 2040. With the removal of the previous restriction on foreign ownership, foreign investors can now hold 100 percent equity in the exploration, development, and utilisation of solar, wind, hydro, and ocean or tidal energy resources.

In addition to the provision of incentives to banks, the BSP has taken further steps to promote sustainable finance through its issuance of **guidelines for banks to incorporate environmental and social risk management into their lending practices.** The BSP also requires banks to disclose their environmental and social risk exposure in their annual reports. These measures promote transparency and accountability in the banking sector's environmental and social performance.

Furthermore, the BSP is actively participating in international initiatives to promote sustainable finance. It is a **member of the Network for Greening the Financial System (NGFS),** a group of central banks and supervisors committed to enhancing the financial sector's role in achieving sustainable development. Through its membership in NGFS, the BSP collaborates with global partners to develop common frameworks and share best practices for sustainable finance.

5 Bangko Sentral ng Pilipinas. (2023). Sustainable Central Banking Strategy. Retrieved from https://www.bsp.gov.ph/StrategicPrograms/SCBRoadmap.pdf.
6 ASEAN Briefing. (15 September 2023). Philippines Central Bank to Introduce Incentives for Green Financing. Retrieved from https://www.aseanbriefing.com/news/philippines-central-bank-to-introduce-incentives-for-green-financing/#:~:text=The%20BSP%20intends%20to%20provide,requirement%20rate%20for%20sustainable%20bonds.
7 Business World. (12 June 2023). BSP eyes SBL increase for green projects. Retrieved from https://www.bworldonline.com/banking-finance/2023/06/12/527946/bsp-eyes-sbl-increase-for-green-projects/.
8 SEC. (05 April 2023). SEC MC No. 03, series of 2023. Retrieved from https://www.sec.gov.ph/mc-2023/sec-mc-no-03-series-of-2023/#gsc.tab=0.
9 Department of Energy. (2022). Circular No. 2022-11-0034. Retrieved from https://www.doe.gov.ph/sites/default/files/pdf/issuances/dc2022-11-0034.pdf.

ECCP ADVOCACIES

Sustainable financing contributes to the development of green industries and the creation of green jobs. It promotes innovation and technological advancements in renewable energy, energy efficiency, and other sustainable sectors. Moreover, sustainable financing aligns with the Philippines' broader development goals, including poverty reduction, inclusive growth, and environmental protection. As such, the ECCP brings forward the following advocacies on green and sustainable finance.

Enable increased support for market development for green and inclusive finance solutions

The ECCP welcomes the government's efforts to promote and encourage sustainability financing through measures such as provision of incentives and other initiatives that enable market players to further their sustainability efforts. As we recognise these crucial steps towards promoting sustainable finance, several challenges and opportunities exist in the Philippines' transition to a sustainable economy.

One major challenge is the limited awareness and understanding of sustainable finance among market participants. The BSP, along with other stakeholders, should engage in capacity-building activities and raise awareness about the benefits and opportunities of sustainable financing.

As such, we fully support efforts that raise awareness and promote education on green and inclusive finance solutions, sharing best practices and building knowledge capacity on these issues. Governments and civil society can encourage education and training activities to enhance stakeholder understanding and interest in green and inclusive finance solutions, fostering a growing and diverse market for these products and services.

We also highly recommend the utilisation of public and private sector resources and support to catalyse investment and innovation in green and inclusive finance solutions. Governments, international organisations, development organisations, and industry players can leverage their resources and support to provide best practices and references on green and sustainable financing solutions.

Align national sustainable finance roadmaps with sector policies

Aligning national sustainable finance roadmaps with sector policies is essential to ensure coherence and maximise the impact of sustainable finance initiatives. We therefore recommend that an integrated approach is developed to bring together relevant players across sectors, thereby allowing collaboration between sustainable finance stakeholders.

Moreover, we highly suggest that priority sectors are identified, considering factors such as sustainability impact as well as potential for financing. In relation to this, we believe that it is also worth looking into embedding sustainability considerations into the development and implementation of new or amended sector policies.

Finally, the ECCP supports the efforts that are being undertaken to further enhance monitoring and reporting mechanisms to track the progress made in aligning sustainable finance roadmaps with sector policies.

We strongly believe that implementing such initiatives can help effectively align national sustainable finance roadmaps with sector policies, ensuring a coordinated approach to achieve sustainable development goals and maximise the positive impact on key sectors of the economy.

Implement measures that ensure efficiency and security in financial transactions

As we recognise the BSP's efforts on anti-money laundering and prudential oversight, we believe that reducing bank secrecy will further support good governance and increase the security and credibility of financial transactions. Ultimately, this can lead to even more economic, social, and environmental benefits.

As one of its long-standing advocacies, the ECCP recognizes bills seeking to amend the Republic Act No. 1405 or the Bank Secrecy Law. We likewise acknowledge the support of the Department of Finance[10] and the Bangko Sentral ng Pilipinas[11] to this proposed course of action to strengthen the country's financial system.

Moreover and to strengthen the country's adaptability to technological developments and to boost security in financial transactions, we likewise recommend and support the continued efforts to incorporate digitalisation and technology in the financial sector.

Involvement and coordination of relevant actors to further the development of green finance

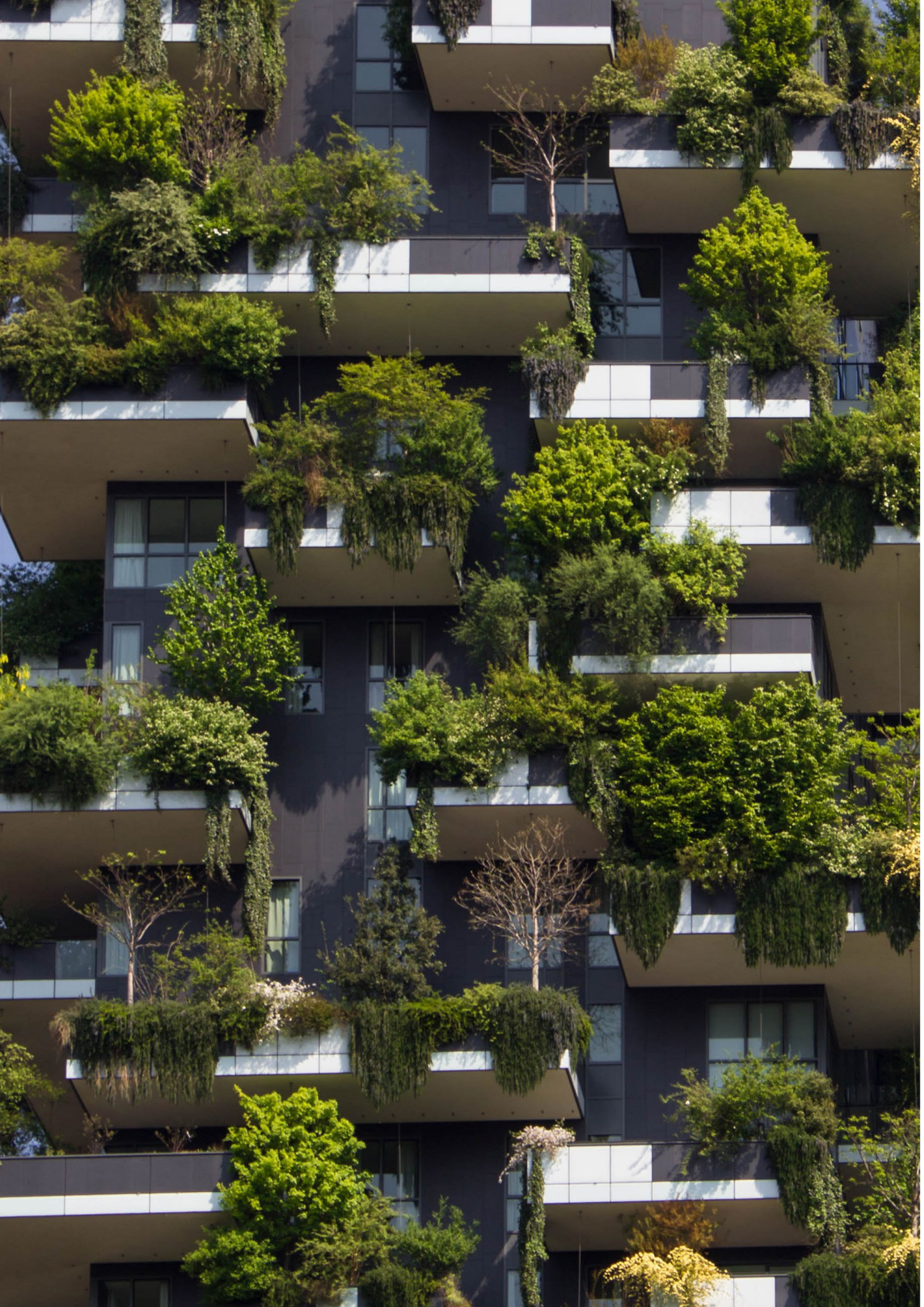
The ECCP firmly believes that discussions between and among all stakeholders will remain critical to the global and national effort to achieve sustainable development in order to more accurately identify sector requirements and possibilities and adopt global best practices. Fostering partnerships between financial institutions, governments, and development organisations, among others, is crucial to align development objectives and reduce market frictions.

In this respect, the Chamber recommends stronger collaboration on policy design, data sharing, and knowledge sharing can contribute to more effective and efficient market development in green and inclusive finance.

Relatedly, we advocate for further improvements in transparency and data availability related to green and inclusive finance to support informed decision-making by investors, financial institutions, and the public. This can include strengthened regulatory frameworks on disclosures and reporting requirements that can enhance market transparency, facilitate the ranking of green and inclusive finance solutions, and promote adoption of best practices.

10 Department of Finance. (03 June 2020). DOF ready to work with Congress on AMLA, Bank Secrecy Law amendments. Retrieved from https://www.dof.gov.ph/dof-ready-to-work-with-congress-on-amla-bank-secrecy-law-amendments/

11 Banko Sentral ng Pilipinas. (09 March 2021). Philippine Banking System: Transforming for Economic Recovery. Retrieved from https://www.bsp.gov.ph/SitePages/MediaAndResearch/SpeechesDisp.aspx?ItemId=783



GREEN BUILDING

OVERVIEW

Climate change remains to be among the most pressing concerns that the Philippines and the rest of the world is confronted with. It requires a whole-of-society approach to reverse the effects of climate change. Individuals have endeavored to reduce their carbon footprint in everyday ways. The private sector has a significant role to play —- they must implement long-term sustainability policies and practices, especially in today's environment.

Zooming in on the case of the real estate sector, the sector accounts for about 39% of carbon emissions. Building operations and the construction sector utilise 36% of all energy produced and account for 39% of worldwide carbon emissions, making it among the major contributors to climate change, according to the World Green Building Council. On the other hand, the energy necessary to heat, cool, and power the world's residential and non-residential buildings accounts for 28% of direct and indirect emissions. The remaining 11% of emissions associated with industry are accounted for by materials and building construction activities.[1] [2] With the frequency and severity of extreme weather events such as typhoons and earthquakes increasing as a result of climate change, the physical threat to real estate assets is tangible and rapidly growing. These asset classes, as well as individuals who rely on them, face significant transition risks. Examples include decreased market attractiveness, more regulation, and public pressure.

As such, the imperative for green buildings has never been more pronounced than in the face of the escalating climate crisis. Climate change, with its far-reaching impacts, has underscored the critical role of sustainable construction practices. Green buildings are a direct response to the urgent need to reduce carbon emissions, mitigate energy consumption, and enhance overall environmental performance. By incorporating innovative technologies, energy-efficient designs, and eco-friendly materials, green buildings not only lower their carbon footprint but also offer a more resilient infrastructure to withstand the growing threats posed by extreme weather events associated with climate change. They represent a proactive and essential step toward mitigating the adverse effects of climate change and aligning our built environment with a more sustainable and resilient future.

Over the years, green building practices have emerged as a pivotal solution in addressing environmental challenges and championing sustainable development. In the midst of rapid urbanization, resource depletion, and the looming threat of climate change, the Philippines, a rapidly developing nation, embraced the principles of 'green building' to mitigate these pressing issues. Corporations are urged to adopt more environmentally friendly business practices and accept responsibility for their role in climate change. Recognizing the profound impact of green building

1 Carlin, D. (5 April 2022). 40% Of Emissions Come From Real Estate; Here's How The Sector Can Decarbonize. Forbes. Retrieved from: https://www.forbes.com/sites/davidcarlin/2022/04/05/40-of-emissions-come-from-real-estate-heres-how-the-sector-can-decarbonize/

2 World Green Building Council. (2020). Advancing Net Zero Status Report 2020. Retrieved from https://worldgbc.org/wp-content/uploads/2022/04/ANZ-Status-Report-2020_PUBLICATION.pdf

practices on long-term development, the Philippine government has also sought to take proactive steps to promote eco-friendly construction. Various governmental bodies have formulated legislation and initiatives aimed at incentivizing and supporting environmentally responsible development endeavors. These measures include offering tax incentives to developers and building owners who pursue green certifications, thereby catalyzing a paradigm shift within the construction industry towards greater sustainability.

It has been shown that adopting practices that promote smaller carbon footprints and better ecosystems draws more investors and customers beyond the real estate industry. Buildings that do not adhere to regulations or implement green practices have lost favour with consumers, according to a study by Ferentinos et al. and The Bank of England. Recently, properties with high levels of carbon emissions have seen a significant decline in value due to the enforcement of climate change regulations and green initiatives. Sustainable buildings, whether they be modest homes or sprawling commercial complexes, are highly prized by real estate buyers. These concerns have led environmentally-conscious individuals to exhibit a substantial shift in client and consumer behavior. As previously mentioned, there is a pressing concern regarding the increasing prices of properties with elevated emissions and waning consumer appeal. Consequently, it is imperative for the private sector, particularly real estate property owners, to transition towards sustainable practices.[3]

The adoption of green building concepts has demonstrated numerous benefits in recent years, with a lower environmental impact being one of the most significant advantages. Green buildings are designed to reduce greenhouse gas emissions, minimize energy consumption, and promote responsible water resource management through the use of sustainable construction practices and materials. By incorporating renewable energy sources like solar panels and wind turbines, buildings can enhance their energy efficiency, resulting in a smaller carbon footprint. Furthermore, methods for collecting rainfall and recycling wastewater encourage water conservation, particularly for a nation like the Philippines that is vulnerable to water scarcity and natural calamities. By using energy-efficient appliances and lighting, as well as better insulation and ventilation, green buildings are likewise developed to maximise energy efficiency. Residents can enjoy cheaper utility costs and long-term cost benefits by reducing their energy consumption. In the Philippine setting, where energy costs can be unpredictable and energy security is a developing concern, this attribute holds significant value. Finally, the incorporation of sustainable materials in green building construction not only reduces environmental impact but also contributes to the overall goal of creating eco-friendly, energy-efficient structures that are essential for a more sustainable and resilient future.

3 Ferentinos, K., Gibberd, A., & Guin, B. (April 2021). Climate policy and transition risk in the housing market. Staff Working Paper No. 918. Retrieved from: https://www.bankofengland.co.uk/-/media/boe/files/working-paper/2021/climate-policy-and-transition-risk-in-the-housing-market.pdf?la=en&hash=B28CB81193F8B872457B5FCC84D4D2F10A799C12

WHERE ARE WE NOW?

Green building practices have garnered widespread attention as a potential solution to environmental issues and the promotion of sustainable development. As a rapidly developing country confronted with a unique set of environmental concerns, the Philippines has embraced the concept of 'green building' to offset the impact of rapid urbanisation, resource depletion, and climate change. The Philippine government has recognised the value of green building practises in attaining long-term development.

Several government organisations have created laws and programmes to encourage eco-friendly development, such as tax breaks for developers and building owners that pursue green certifications. The government hopes to foster good change in the construction industry and encourage a more sustainable approach to urban development by promoting green building initiatives.

In response to the call to action of green building as one of the answers to climate change, numerous associations have been founded internationally. The **World Green Building Council (WorldGBC)** is a larger international effort to promote greener real estate. The Philippines recognised an opportunity to localise this movement and establish its own organisation cluster. Although fighting climate change requires a global effort, creating a local unit would make management simpler and speed up reaction times.

The **Philippine Green Building Council (PHILGBC)** was founded in March 2007 in response to the need for localised unified support for comprehensive and market-based green building practices. It has subsequently become a means for encouraging the sharing of the industry's and its professionals' best practices for green building in order to create more sustainable circumstances. PHILGBC is also a member of the WorldGBC and works with other worldwide associations to promote greener real estate alternatives.

As previously stated, there are global standards and grading tools designed to quantify green building initiatives, such as the EU's Carbon Risk Real Estate Monitor (CREEM) accreditation and the United States' Leadership in Energy and Environmental Design (LEED) sustainability standard. For the Philippine context, the PHILGBC is still working on establishing and improving the Philippines' local green building grading mechanism, **Building for Ecologically Responsive Design Excellence (BERDE)**, which is nationally recognised by the government via the Department of Energy (DOE). The PHILGBC's initiative examines how effectively a building meets or exceeds existing national and local environmental standards, as well as environmental laws and regulations. BERDE has contributed to establishing a clearer basis and foundation for green building measures in the Philippines, both at the national and local levels—it is still being included into national and local government policy-making and project/program proposals to promote sustainable development and greener solutions. Multiple areas in the Philippines have begun to construct green building operations, with BERDE serving as the foundation for gauging their sustainability efforts. Furthermore, the PHILGBC offers a programme and qualifying exam for BERDE training and certification to become a Certified BERDEProfessional (CBP).[4] The PHILGBC published the most recent version of BERDE in June 2021, with revisions made to optimise consumption by users and incorporate the contents of the DOE's 2020 Edition of Guidelines for Energy Conserving Design of Buildings and Utility Systems.[5]

In addition to the PHILGBC, there are also private sector initiatives like **The Philippine Green Building Initiative (PGBI)** that aim to collaborate in the development of a greener built environment. Three major organisations—the United Architects of the Philippines (UAP), the Philippine Society of

4 Philippine Green Building Council (PHILGBC). (21 June 2019). BERDE Education | Be a Certified Green Building Professional. Retrieved from: http://philgbc.org/becoming-greenbuilding-professionals/
5 PHILGBC. (28 June 2021). PHILGBC Releases BERDE version 4.0.0. Retrieved from: https://philgbc.org/philgbc-releases-berde-version-4-0-0/

Ventilating, Air-Conditioning, and Refrigerating Engineers (PSVARE), and the American Society of Heating, Refrigerating, and Air-Conditioning Engineers Philippines Chapter—joined forces to form the PGBI in an effort to lead the movement and advance the country's need for green construction. In 2010, they grew their network and the organisations that were a part of it so they could gather more expert information to share with the public. Their goal is to create uniform standards and promote best practices for designing and building structures, as well as for determining how environmentally friendly these structures are, according to the expertise of the specialists on their staff. **Geared for Resiliency and Energy Efficiency for the Environment**, or **GREEEN**, is PGBI's own green building grading system that was developed in response to the Philippines' unique environment in comparison to other nations.[6]

In June 2015, the Department of Public Works and Highways (DPWH) passed the **Philippine Green Building Code (Presidential Decree No. 1906 or The GB Code)**, an ordinance that aims to improve building performance efficiency by putting into practise techniques that improve resource management effectiveness and site sustainability. In addition to improving efficiency and sustainability, this order aims to lessen the harmful effects that the real estate industry has on the environment and human health. The official definition of a "green building," as stated by the GB Code, is as follows:

> *"Green building is the practice of adopting measures that promote resource management efficiency and site sustainability while minimizing the negative impact of buildings on human health and the environment. This practice complements the conventional building design concerns of economy, durability, serviceability and comfort."*

Energy efficiency, water efficiency, material sustainability, solid waste management, site sustainability, and indoor environmental quality are six performance standards that must be met. This is what is taken into consideration when developing new structures in the Philippine context. The National Building Code Development Office (NBCDO), on behalf of the Secretary of DPWH, has the authority to revise the GB Code as needed. The DOE has developed guidelines that call for older buildings and new ones to integrate renewable energy technologies in order to save energy and utilise it more effectively. These standards were later incorporated into the GB Code.[7]

With these measures in place, there is a lot of public pressure on Philippine firms to adopt these eco-friendly and sustainable practices and integrate them into the corporate culture. For the purpose of reducing the nation's overall carbon footprint, major Philippine corporations have taken the lead in implementing these sustainable practices. The PHILGBC launched the **Advancing Net Zero Philippines (ANZ/PH) Program** to move towards the net zero goal in order to further these corporate efforts. The **Advancing Net Zero Energy Rating Scheme**, which is part of this strategy, is also used to quantify a building's effort to achieve net zero emissions. It also serves as a model for others to enhance their green building practises and encourages others to strive for Net Zero certification.[8]

Following the GB Code, the PHILGBC has urged the real estate industry to continue focusing the adoption of green practices into its standards. This commitment extends to the dissemination of their expertise and best practices to local government units (LGUs), in addition to enhancing awareness and advocacy for eco-conscious initiatives through conferences and engagements with industry professionals. Over the years, numerous cities have embraced environmentally sustainable real estate practices and projects, aligning them with the principles outlined in the GB Code. This commendable progress has been made possible through the collaborative efforts of LGUs, the PHILGBC, and various private sector stakeholders. The synergy between these entities serves as a model for fostering sustainable development within the real estate sector.

Undeniably, green buildings play an important and urgent role in mitigating climate change, lowering resource consumption, and increasing community resilience to natural catastrophes by prioritising environmental responsibility, energy efficiency, and occupant well-being. As the country continues to urbanise and grow, the incorporation of green building concepts is critical to ensuring the Philippines and its people a greener, healthier, and more sustainable future.

6 PGBI. (n.d). GREEEN. Retrieved from: https://www.greenbuilding.ph/greeen
7 Crismundo, K. (20 February 2021). DOE requires use of solar, RE technologies in buildings. Philippine News Agency. Retrieved from: https://www.pna.gov.ph/articles/1131318
8 PHILGBC. (18 May 2021). PHILGBC launches Advancing Net Zero Energy tool to curb building emission. Retrieved from: https://philgbc.org/philgbc-launches-advancing-net-zero-energy-tool-to-curb-building-emissions/

SMART AND SAFER MOBILITY

OVERVIEW

With rising global urbanisation, there has been a greater need for efficient, safe, and sustainable mobility solutions. The notion of smart and safer mobility has ushered in a new era of transportation, integrating cutting-edge technology, innovative policies, and sustainable practices to transform the movement of people, goods, and services. Adopting this approach can result in substantial benefits, including reduced traffic congestion, minimised road accidents, improved air quality, and increased economic growth.

In the Philippine context, various challenges persist such as emissions of both air pollutants and greenhouse gases (GHGs), accidents resulting in injuries and fatalities, detriment to society as a result of highways taking up public space, and traffic congestion. These lingering issues are also manifested in the performance of the Philippines by SDG targets on mobility indicators vis-à-vis its ASEAN neighbors (see Table 1).

Table 1. SDG Trends: Performance by targets on mobility indicator of the Association of Southeast Asian Nations (ASEAN) member-states[1]

Country	SDG targets on mobility indicator[2 3]					
	3.6 - Traffic deaths (per 100,000 population)		9.1 - Logistics Performance Index: Quality of trade and transport-related infrastructure (worst 1-5 best)		11.2 - Satisfaction with public transport (%)	
	Rating	Trend	Rating	Trend	Rating	Trend
Brunei Darussalam	🟢	↑	🟠	⚪	⚪	⚪
Cambodia	🔴	↓	🟠	↓	🟢	🟢
Indonesia	🟡	↗	🟡	→	🟢	↑
Lao PDR	🔴	↓	🟠	↑	🟢	⚪

1 Based on current performance on a given indicator, the SDG Trends indicate whether a country is on track to meet a certain goal by 2030.

2 Rating illustrates how far a country is from achieving a particular SDG goal. Thresholds have been set using statistical methodologies and multiple rounds of expert consultations since 2016.

3 Trend means linear annual growth rates (annual percentage improvements) needed to achieve the target by 2030 (from 2015–2030), which are then compared to the average annual growth rate over the most recent period (usually 2015–2019).

Malaysia	●	→	●	→	●	↓
Myanmar	●	↓	●	↓	●	↓
Philippines	●	→	●	↑	●	↓
Singapore	●	↑	●	↑	●	↑
Thailand	●	→	●	→	●	→
Vietnam	●	↓	●	→	●	↑

Source: Sustainable Development Report 2023[4]

Legend	Rating	Legend	Trend[5]
●	*SDG achieved*	↑	*On track/Maintaining SDG achievement*
●	*Challenges remain*	↗	*Moderately Improving*
●	*Significant challenges*	→	*Stagnating*
●	*Major challenges*	↓	*Decreasing*
●	*Information unavailable*	●	*Information unavailable*

The road ahead remains an uphill fight due to a slew of mobility challenges in the Philippines. According to the TomTom Traffic Index 2022, which measured traffic congestion levels in 389 cities, Metro Manila is the 9th most congested city in the world, up from the 18th spot in 2021. On average, it took 27 minutes for Filipinos to travel ten kilometers in Metro Manila.[6] With schools and businesses opening up for on-site operations, Filipinos lose 98 hours to traffic annually, with a 43% congestion level. The Japan International Cooperation Agency previously reported that traffic costs the Philippines PHP 3.5 billion in "lost opportunities" daily. If not effectively addressed, the amount is expected to triple in number by the year 2030.[7]

Certainly, congestion is one of the most apparent issues for urban planners and dwellers. To further improve traffic management, smart mobility serves as a response to the economic digital revolution, notably in the transportation sector. This involves, among others, the integration of automotive navigation systems, intelligent traffic control systems, mobility surveillance systems, autonomous driving technologies, and fleet and driver management systems. In the country, the Metropolitan Manila Development Authority (MMDA) implemented the Intelligent Transport System (ITS) project, which seeks to enhance overall traffic management, thereby increasing travel speed and decreasing travel time, and consequently minimising greenhouse gas emissions from vehicles for a better urban environment.[8] Adopted in 2019, MMDA's ITS project includes the installation of additional LED traffic signal control systems, vehicle detection systems, variable message signs, speed violation detection systems, traffic signal enforcement systems, and additional closed-circuit televisions (CCTVs) for better traffic management.[9]

Relatedly, congestion has environmental effects as transportation accounts for 35.64% of total greenhouse gas emissions in the country and is the third-highest contributor by industry (see Table 2). Furthermore, pre-pandemic data show that Metro Manila has greater levels of air pollution than the country's average, both of which exceed World Health Organization (WHO) guidelines.[10] In a recent report, no country outside of North America and Europe has made it to the top 15 economies in terms of low-emission zone programs. Low emission zones refer to "areas where the most polluting vehicles are regulated."[11]

Table 2. Greenhouse gas emissions by sector in the Philippines in 2018 (in million metric tons of carbon dioxide equivalent)

Sector	$MtCO_2e$
Electricity/Heat	70.44
Agriculture	61.37
Transportation	35.64
Industrial Processes	18.68
Manufacturing/Construction	15.39
Waste	13.77
Building	10.03
Other Fuel Combustion	6.48
Bunker Fuels	5.13
Land-Use Change and Forestry	2.48
Fugitive Emissions	0.55

Source: Climate Watch of the World Resources Institute[12]

Transitioning to cleaner and more sustainable transportation options is essential to address environmental concerns and combat climate change. Smart mobility initiatives encourage the the adoption of electric vehicles, the development of charging infrastructure, and the promotion of shared mobility services to reduce emissions and improve air quality in urban centers. Without a transition to mass transportation and a cleaner source of transportation energy, the sector is anticipated to account for up to 90% of global energy consumption in 2030.[13] Nonetheless, the concept of smart and safer mobility extends beyond individual vehicles and public transportation to

4 *Sachs, J., Kroll, C., Lafortune, G., Fuller, G., Drumm, E. (2023). Implementing the SDG Stimulus. Sustainable Development Report 2023: Sustainable Development Report 2023. Cambridge: Cambridge University Press. DOI:10.25546/102924*

5 **Decreasing** *score means country moves in the wrong direction.* **Stagnating** *signals that the country's score in an indicator is stagnating or increasing at a rate below 50% of the growth rate needed to achieve the SDG by 2030.* **Moderately improving** *suggests that the score increases at a rate above 50% of the required growth rate but below the rate needed to achieve the SDG by 2030.* **On track or Maintaining SDG achiev***ement trend means the score increases at the rate needed to achieve the SDG by 2030 or performance has already exceeded SDG achievement threshold.*

6 *TomTom. (2023). TomTom Traffic Index 2022. Retrieved from https://www.tomtom.com/traffic-index/ranking/*

7 *Villanueva, R. E. (15 September 2022). Manila World's Eighth Most Traffic-Congested City. Retrieved from https://www.onenews.ph/articles/manila-world-s-eighth-most-traffic-congested-city*

8 *Metropolitan Manila Development Authority. (03 August 2021). MMDA Installs Traffic Signal at EDSA- A. De Jesus U-Turn Slot in Caloocan. Retrieved from https://mmda.gov.ph/77-news/news-2021/4761-aug-3-2021-mmda-installs-traffic-signal-at-edsa-a-de-jesus-u-turn-slot-in-caloocan.html*

9 *Galvez, D. (14 June 2019). MMDA to fully implement intelligent transport systems in next 3 years. Retrieved from https://newsinfo.inquirer.net/1130355/mmda-to-fully-implement-intelligent-transport-systems-in-next-3-years*

10 *Swiss-based air quality technology company IQAir noted that the average concentrations of fine particulate matter in Metro Manila read at 18.2 µg/m3 while the country's air quality levels read at 17.6 µg/m3 in 2019. Both readings exceed the World Health Organization's recommended safety guideline limit of 10.2 µg/m3.*

11 *Luna, F. (08 September 2022). Manila is the world's 8th city with longest hours spent in traffic — study. Retrieved from https://www.philstar.com/business/2022/09/08/2208311/manila-worlds-8th-city-longest-hours-spent-traffic-study*

12 *Climate Watch of the World Resources Institute. (2022). Washington, DC: World Resources Institute. Retrieved from https://www.climatewatchdata.org/data-explorer/historical-emissions*

13 *Asian Development Bank. (2020). Green Infrastructure Investment Opportunities - Philippines. Retrieved from https://www.adb.org/sites/default/files/publication/653566/green-infrastructure-investment-philippines-2020.pdf*

encompass pedestrian safety and infrastructure resilience. In relation to the foregoing, the COVID-19 pandemic has correspondingly expedited the demand for smart mobility to further enhance health standards, promote safety, and improve reliability and efficiency. It also compelled the Philippine government to implement several green measures in order to make the transportation industry more efficient and ecologically friendly. As the global health crisis further popularized the use of micro-mobility, policymakers were urged to cater to the needs of users of bicycles, e-bikes, and e-scooters by developing green infrastructure. These include promoting alternative modes of transportation, allocating lanes for PUVs, cyclists, and light mobility vehicles, and subsidizing operations through service contracts.

With these recent developments, the government is investing more in sustainable mobility than it has ever done in recent history. Aside from budget insertions in the Bayanihan Recover as One Act in 2020, sustainable mobility has made its way into the Philippine government's annual fiscal budget, with discussions on the inclusion of funding for initiatives such as bike lane infrastructure, bike-sharing, and public utility vehicle (PUV) modernization.[14] Indeed, an efficient transportation system is critical to providing prosperity as much as sustainable urban mobility is required to meet the citizens' social, environmental, and economic needs, particularly in congested areas.

Currently, the United Nations Development Programme (UNDP) is also collaborating with the Philippine Department of Transportation (DOTr) on the Promotion of Low Carbon Urban Transport Systems in the Philippines (LCT) Project. The LCT project joins forces with national and local government, private sector, and civil society stakeholders to foster an enabling environment for low-carbon modes of transportation in the Philippines through policy development, institutional capacity building, and facilitating private sector participation. To ensure sustainability in its attempts to improve public transportation and move toward active mobility, the Project employs both green and behavioural perspectives.[15] With the purpose of enhancing environmental monitoring, the Philippine Action Plan for Sustainable Consumption and Production (PAP4SCP) was likewise devised by the National Economic and Development Authority (NEDA) with assistance from the Asian Development Bank (ADB). The overarching purpose of the goal of the PAP4SCP is to encourage more Filipinos to generate green services in order to live more sustainable and climate-smart lifestyles. With infrastructure being one of the PAP4SCP's four action nodes, the strategy proposes to push green infrastructure development with a view to ease prompt environmental monitoring, scale-up sustainable urban mobility solutions, and encourage resource-efficient and climate-smart activities.[16]

In 2020, the Department of Health (DOH), DOTr, Department of the Interior and Local Government (DILG), and Department of Public Works and Highways (DPWH) issued Joint Administrative Order (JAO) 2020-0001, titled "Guidelines on the Proper Use and Promotion of Active Transportation During and After the COVID-19 Pandemic." The JAO's objective is to establish guidance for the promotion and safe use of active transportation, including walking, cycling, or other forms of light mobility. The Department of Public Works (DPWH) also issued Department Order (DO) No. 88 series of 2020, which intends to ensure standard regulations on bicycle facilities. All DPWH projects comprising new road and bridge construction or future developments to alleviate traffic congestion are mandated by the DO.[17] Further to this, the DOTr has committed to promoting road safety and sustainable transportation through existing and future projects such as the Public Utility Vehicle Modernization Program (PUVMP), EDSA Greenways, EDSA Busway, and the Active Transport Program. There are 564 kilometers (km) of bike lanes around the country that are used for active transport, including 313.12 km in Metro Manila, 129.66 km in Metro Cebu, and 54.74 km in Metro Davao. A PHP 2-billion fund has been allocated to designate a further 470 miles of bike lanes and supporting infrastructure throughout the Philippines.[18]

At the same time, safety remains a paramount concern in the Philippines, where road accidents and fatalities have been a longstanding issue. Major highways in the country continue to be accident hotspots, putting the lives of motorists, commuters, and pedestrians at risk. Despite enacting numerous national legislation aligned with WHO best practices, the Philippines was classified as having the fourth highest road death rate in Southeast Asia by the same health authority (see Table 3).

Table 3. Estimated total number of road traffic deaths in member-states of the Association of Southeast Asian Nations for the year 2019

Country	Fatalities
Indonesia	30,668
Vietnam	29,475
Thailand	22,428
Philippines	13,017
Myanmar	11,004
Malaysia	7,181
Cambodia	3,223
Lao PDR	1,281
Singapore	121
Brunei Darussalam	32

Source: World Health Organization[19]

According to the Philippine Statistics Authority (PSA), transport accidents are the 12th main cause of death in the Philippines in 2022, with 11,487 recorded deaths. This figure is 3.4% higher than the fatalities recorded in 2021.[20] As reported by the Highway Patrol Group (HPG), mechanical defects of vehicles are among the common causes of road mishaps.[21] In 2019, the Land Transportation Office (LTO) also reported that motorcycle crashes are the ninth leading cause of death among Filipinos.[22] From January to April of 2023 alone, HPG has already recorded a total of 4,029 incidents. Meanwhile, 8,342 crashes involving two-wheel vehicles were reported in 2022.[23] Overall, road traffic injuries cost about 2.6% of the country's Gross Domestic Product (GDP). Road crashes cost the Philippines at

14 Nacino, M. (2021). Making Sustainable Mobility Sustainable. Retrieved from https://www.ph.undp.org/content/philippines/en/home/blog/making-sustainable-mobility-sustainable.html
15 Ibid.
16 Asian Development Bank. (2020). Green Infrastructure Investment Opportunities - Philippines. Retrieved from https://www.adb.org/sites/default/files/publication/653566/green-infrastructure-investment-philippines-2020.pdf
17 Department of Transportation. Philippine Road Safety Action Plan (PRSAP) 2023 - 2028. Copy requested and retrieved from the World Health Organisation.
18 Tabile, J. I. (31 May 2023). DoTr launches road safety action plan to reduce traffic accidents. Retrieved from https://www.bworldonline.com/the-nation/2023/05/31/526182/dotr-launches-road-safety-action-plan-to-reduce-traffic-accidents/
19 World Health Organization. (09 February 2021). The Global Health Observatory: Road traffic deaths. Retrieved from https://www.who.int/data/gho/data/indicators/indicator-details/GHO/estimated-number-of-road-traffic-deaths
20 Philippine Statistics Authority. (2023). 2022 Causes of Deaths in the Philippines (Preliminary as of 31 March 2023). Retrieved from https://psa.gov.ph/content/2022-causes-deaths-philippines-preliminary-31-march-2023-0
21 Tupas, E. (01 January 2023). HPG: October, November deadliest months for road mishaps. Retrieved from https://www.philstar.com/nation/2023/01/01/2234533/hpg-october-november-deadliest-months-road-mishaps
22 Diaz, J. (06 October (2019). Motorcycle crashes No. 9 killer in Philippines. Retrieved from https://www.philstar.com/nation/2019/10/06/1957784/motorcycle-crashes-no-9-killer-philippines
23 Cariaso, B. (08 May 2022). HPG records 4,000 motorcycle crashes since January. Retrieved from https://www.philstar.com/headlines/2023/05/08/2264565/hpg-records-4000-motorcycle-crashes-january

least USD 1.86 billion annually covering USD 100.3 million used for medical treatment, which could have been utilised for infrastructure projects and road safety programs.[24]

Undeniably, road accidents in the country have major implications for the health sector, impacting individuals' well-being and placing extra strains on healthcare resources and services. According to a study on the socioeconomic burden of road traffic injuries in the Philippines, the estimated cost of death and injuries in 2014 due to road accidents was PHP 1.213 billion on medical costs alone, not including the costs for lost productivity due to illnesses and injuries amounting to PHP 26.519 billion. While data about the length of hospitalization and the healthcare costs of road traffic injuries in the country are limited, it is certain that prolonged length of stay in hospitals consumes material and manpower resources.[25] Implementing efforts to improve road safety and minimise the frequency of accidents is critical for mitigating these repercussions.

In order to make Metro Manila's roads safer and minimize the number of accidents, the MMDA is set to launch the Motorcycle Riding Academy within the third quarter of 2023, a motorcycle education program with the goal of educating motorcycle drivers on safe driving. The MMDA will convene a technical working group to develop a Motorcycle Safety Training Course module, which will include Motorcycle Riding Courtesy, Motorcycle Orientation, Road Traffic Rules and Regulations, and Motorcycle Safety Laws.[26] Additionally, the DOTr and the WHO, together with road safety partners, launched in May 2023 the Philippine Road Safety Action Plan (PRSAP) 2023-2028, which serves as the blueprint for the country's road safety initiatives and seeks to reduce the number of road traffic deaths by 35% in 2028. The Plan is built on five pillars with identified strategies for building a safer road environment: road safety management, safer road, safer vehicles, safer road users, and post-crash response.[27]

In accordance with PRSAP's third pillar of creating safer vehicles, exploring a move in the Philippines to mandate anti-lock braking system (ABS) on two-wheeler vehicles may progress vehicle and road safety. As human errors cause around 90% of all road accidents, effective solutions to avoid accidents or reduce their impact should target this risk factor.[28] Vehicle manufacturers from other countries have started to equip their products with electronic aids, the most popular of which is ABS. ABS is a type of electronic assistance that modulates braking and prevents wheel lock automatically. Regardless of the rider's brake input or the road condition, the mechanism allows the vehicle to stop within the shortest possible distance.[29] More recently, the Thai Department of Land Transport announced in the government gazette that ABS will become a mandatory part of all new two-wheeler vehicle models from 2024.

Aside from ABS, electronic stability control (ESC) assists in significantly reducing the number of road deaths and serious injuries. As a result, a significant number of countries, including Australia and those in Europe, have passed legislation making these features mandatory for four-wheeled and, in certain cases, powered two-wheeled vehicles.[30] In 2018, Malaysia became the first Southeast Asian country to require ESC on all new automobiles. Consistent with this, the United Nations includes both ESC for cars and ABS for motorcycles in its eight priority vehicle safety standards, which serve as an indication to assess the quality of road safety laws globally.

Priority UN vehicle safety standards and associated existing technologies	
UN regulations	**Associated technologies**
UN regulations 14, 16, and 129: seatbelt, seatbelt anchorages, and child restraints	Occupant restraints
UN regulation 78: motorcycle anti-lock brakes; helps maintain control during emergency braking	Motorcycle anti-lock brakes
UN regulations 94 and 95: frontal impact protection and side impact protection; crashworthiness in crash tests at specific speeds	Occupant restraints, airbags (frontal and side), side structure and padding, and side door beams
UN regulation 127: pedestrian front protection; vehicle frontend modifications to reduce severity of pedestrian injuries	Vehicle front-end design
UN regulation 140: electronic stability control; prevents skidding and loss of control, requires anti-lock brakes	Electronic stability control

Source: United Nations Economic Commission for Europe[31]

The European business community recognises and applauds the concerted efforts of several automobile manufacturers to include such features in their model lineups. It is in this light that we urge the government to take another step forward by mandating vehicle safety features such as ESC for passenger cars of vehicle category M1 and ABS for powered two-wheelers over 125 cubic centimetres sold and used in the country in order to promote road safety and facilitate innovation in transportation and mobility solutions. In essence, the Committee urges the government to democratize and sensibilize ABS and ESC in order to make these electronic aids more accessible to other automotive market segments, which will significantly reduce fatalities and injuries. This is also in line with the strategies outlined in PRSAP that focus on improving vehicle registration and inspection procedures, as well as adhering to harmonised vehicle standards and regulations. It also entails implementing policies for the safe use of electric vehicles, as mandated by the Electric Vehicle Industry Development Act (EVIDA).[32]

With the implementation of green transport routes following the issuance of Implementing Rules and Regulations (IRR) of the EVIDA and the PUVMP, EVs can be covered by the speed limit regulations on Philippine roads. These EVs use a Regenerative Braking System for their brakes; their motor also supports the brake system by slowing the EV and converting the energy to electricity. Maintenance costs of brake components are economical compared to ICE vehicles since there is less stress on these components. If the vehicle employs an air brake system, the power supply for the compressor

24 Moh, J.L., Herbosa, T. J., & Lu, S.F.D. (2022). Analysis of Transport and Vehicular Road Crash Cases in Metro Manila from 2016 to 2020. Retrieved from https://actamedicaphilippina.upm.edu.ph/index.php/acta/article/view/6262/4129

25 Moh, J.L., Herbosa, T. J., & Lu, S.F.D. (2021). Determinants of Prolonged Length of Stay among Patients with Road Traffic Injury at the Philippine General Hospital: A Retrospective Cohort Study. Retrieved from https://actamedicaphilippina.upm.edu.ph/index.php/acta/article/view/3241/2713

26 Zaldarriaga, J. (31 January 2023). MMDA's Artes on the right track in pushing road safety. Retrieved from https://www.pna.gov.ph/opinion/pieces/623-mmdas-artes-on-the-right-track-in-pushing-road-safety

27 World Health Organization. (31 May 2023). Department of Transportation, World Health Organization launch Philippine Road Safety Action Plan 2023-2028. Retrieved from https://www.who.int/philippines/news/detail/31-05-2023-department-of-transportation—world-health-organization-launch-philippine-road-safety-action-plan-2023-2028

28 European Commission. (n.d.) Intelligent transport systems: Road. Retrieved from https://transport.ec.europa.eu/transport-themes/intelligent-transport-systems/road_en

29 Universal Technical Institute. 04 February 4 (2021). What Are Anti-Lock Braking Systems (ABS)?. Retrieved from https://www.uti.edu/blog/automotive/abs-braking-system

30 Bhalla, K. & Gleason, K. (2020). Effects of vehicle safety design on road traffic deaths, injuries, and public health burden in the Latin American region: a modelling study. Lancet Glob Health 8(6). DOI: 10.1016/S2214-109X(20)30102-9

31 United Nations Economic Commission for Europe. (2021). UN Vehicle Regulations for road safety Cost-benefit methodology. Retrieved from https://unece.org/sites/default/files/2021-09/CBA%20publication%20E%20web_0.pdf

32 World Health Organization. (31 May 2023). Department of Transportation, World Health Organization launch Philippine Road Safety Action Plan 2023-2028. Retrieved from https://www.who.int/philippines/news/detail/31-05-2023-department-of-transportation—world-health-organization-launch-philippine-road-safety-action-plan-2023-2028

is sufficient and stable.

The Philippines is poised to make substantial gains toward a more efficient, inclusive, and secure transportation system. In 2021, the Committee on the Harmonisation of Vehicle Standards and Regulations (CHVSR) was reconstituted to coordinate initiatives involving vehicle standards and technical guidelines across the country.[33] The Philippines also joined the World Forum for Harmonization of Vehicle Regulations (WP 29) in 2022 and with this accession, the country will be able to implement further UN technical regulations for motor vehicle systems, components, and safety features such as automatic braking, electronic stability control, pedestrian protection, and front and side impact protection.[34]

Taking these developments into account, stakeholders, notably industry practitioners and policymakers, are collaborating to advance policies and solutions for creative and sustainable mobility systems that can address current transportation challenges. As the mobility ecosystem grows more complex, digital technology assists and encourages players to spawn revolutionary innovations. From the deployment of intelligent infrastructure to the promotion of eco-friendly alternatives, ushering in unprecedented growth in the Philippines amplified a notable shift toward mobility-as-a-service, such as courier services and transport network vehicle service (TNVS). By leveraging the power of data analytics, Internet of Things (IoT) devices, and other emerging technologies, the Philippines can optimise traffic flow and better respond to road incidents. Moreover, intelligent transportation systems can enable more accurate monitoring and management of public transportation, leading to improved service reliability, smarter road, safer vehicles, and safer road users.

WHERE ARE WE NOW?

In recent developments, the government has enacted policies well within the scope of the mobility sector. Legislative bodies have initiated proposals that push for more active transport in the country. Such measures play a vital role in the establishment of a smart and safer mobility framework in the Philippines.

- With the aim of accelerating infrastructure development in key areas such as transport, the **Philippine Development Plan (PDP) 2023-2028** was crafted by the NEDA to establish "seamless and inclusive connectivity through modernised and expanded transport." According to the PDP, a National Transportation Master Plan will be developed and implemented. This will direct the rational development of an intermodal transportation infrastructure network by integrating land use and urban planning approaches incorporating transit-oriented development, township approach, and high-density development.

  The strategy framework to expand and upgrade infrastructure also includes addressing universal mobility needs, modernising fleets, and providing quality ancillary service. Relatedly, legislative agenda includes priority bills on the following: (1) Public–Private Partnership (PPP) Act; (2) National Transport Policy Act; (3) Magna Carta for Commuters; (4) enactment of a law institutionalizing the use of bicycles and other active and sustainable modes of transportation, including updating standards for accessible and safe pathways, and green open spaces; (5) rationalizing the mandates of transport agencies; and (6) creating an independent body for transport safety and security.[35]

33 Ibid.
34 United Nations. (2022). Agreement Concerning the Adoption of Harmonized Technical United Nations Regulations for Wheeled Vehicles, Equipment and Parts which can be fitted and/or be Used on Wheeled Vehicles and the Conditions for Reciprocal Recognition of Approvals Granted on the Basis of These United Nations Regulations. Retrieved from https://treaties.un.org/doc/Publication/CN/2022/CN.393.2022-Eng.pdf
35 National Economic and Development Authority. (2023). Philippine Development Plan (PDP) 2023-2028. Retrieved from https://pdp.neda.gov.ph/wp-content/uploads/2023/01/PDP-2023-2028.pdf

- **Electric Vehicle and Industry Development Act (EVIDA):** The Electric Vehicle Industry Development Act, which lapsed into law last 15 April 2022, promotes the expansion of the electric vehicle industry, which is likewise aimed at increasing employment opportunities for local skilled workers and lessen the country's dependency on imported gasoline. The new law requires the establishment of a Comprehensive Roadmap for the Electric Vehicle Industry (CREVI) to stimulate the development, marketing, and use of EVs in the country, which includes the construction or installation of charging stations in designated parking slots and spaces. It also gives tax incentives to EV manufacturers and assemblers, charging station operators, and other EV-related businesses.[36]

  The DOE has begun public consultations on the CREVI in March 2023, which will set a timetable for the mandated EV share in corporate and government fleets in key sectors. The Agency is pushing for an increase in the rollout of EVs to 10% from the original 5% mandated under the EVIDA. From that 10% baseline, EV deployment will be increased to 50% by 2040. This move seeks to stimulate demand and develop the industry and is viewed as the most motivating factor for the EV sector.[37] The government published the final version of the CREVI in April 2023.[38] Moreover, the EVIDA Implementing Rules and Regulations (IRR) was signed and issued last 2 September 2022 and will be effective on 20 September. This will develop a blueprint that would provide a comprehensive and coordinated policy direction among national agencies to accelerate the development, commercialisation, and utilisation of EVs.[39]

  The ECCP lauds the passage of this measure as it would allow the Philippines to partake in the global transition to EVs. The Committee believes that this law would also provide a national EV policy framework to promote the EV sector in the Philippines, support vital infrastructure to encourage the use of EVs, and incentivise EV adoption and charging stations in the country. The Committee also welcomes the inclusion of EVs in the 2022 Strategic Investment Priority Plan (SIPP), approved last May 2022 under Memorandum Order No. 61, as well as the plan of the DOTr to centre its EV industry promotion by developing "green" transportation routes, with operators receiving incentives for deploying EVs.[40]

  Rich in natural resources, there is also potential for the Philippines to supply critical raw materials to other markets such as Europe, which are needed for the production of green technologies, specifically e-vehicles.

- Three years after the blueprint's original adoption, the government issued the implementing rules and regulations (IRR) of the **National Transport Policy** in January 2020, with the goal of creating a "safe, secure, reliable, efficient, integrated, intermodal, affordable, cost-effective, environmentally sustainable, and people-oriented national transport system that ensures improved quality of life for the people." Among other significant aspects, the strategy strives to prioritise the movement of people rather than automobiles, as well as to build a foundation for delivering other modes of mobility. According to the IRR, a Philippine Transportation Master Plan would be developed to help transportation agencies and local

36 Torregoza, H. (28 April 2022). Gatchalian: Electric vehicles now a more viable option with EVIDA law. Manila Bulletin. Retrieved from https://mb.com.ph/2022/04/28/gatchalian-electric-vehicles-now-a-more-viable-option-with-evida-law/
37 Velasco, M. (17 March 2023). DOE eyeing rollout of 6.3M EVs until 2040. Retrieved from https://mb.com.ph/2023/3/17/doe-eyeing-rollout-of-6-3-m-e-vs-until-2040
38 Department of Energy. (2023). Comprehensive Roadmap for the Electric Vehicle Industry. Retrieved from https://doe.gov.ph/energy-efficiency/comprehensive-roadmap-electric-vehicle-industry
39 The issued and published Implementing Rules and Regulations of the Electric Vehicle Industry Development Act can be accessed through https://bit.ly/3U4cwyE
40 Jocson, L. M. J. (20 February 2023). Electric vehicle rollout strategy to incentivize 'green' transport routes. Retrieved from https://www.bworldonline.com/economy/2023/02/20/505884/electric-vehicle-rollout-strategy-to-incentivize-green-transport-routes/

governments in building the transport network through coordinated planning and execution of projects and programs as an integrated network. The IRR also directs and establishes the parameters for the integrated development and regulation of the Philippine transportation industry.[41]

- In 2019, Land Transportation Office (LTO) developed its **Road Safety Action Plan (RSAP)**, complementing the PRSAP 2017-2022, in an effort to achieve the Philippine-declared target of zero road deaths, with an interim goal of reducing road collision mortality rates by 20% by 2022. The LTO-RSAP coordinates, integrates, and mainstreams all of the agency's road safety initiatives while adhering to accepted international and Philippine standards. It is a tool for all LTO Offices in carrying out road safety programs that meet the five (5) LTO Mandate-related Pillars of Road Safety: Qualified Drivers, Road Worthy Vehicles, Traffic Discipline, Community Relations, and Legislative Initiatives.[42]

- The **National Coalition on Child Road Traffic Injury Prevention (CRTIP)** was formed in 2019. The Coalition is a multi-sectoral partnership of government agencies, civil society organizations, the academe, and the private sector with the purpose of reducing road traffic fatalities affecting children, particularly those traveling to and from school.[43]

- Other sets of policies and programs that recognize the importance of the link between urban mobility and climate change are the **Greenways**, which promotes the construction of walkways and bike lanes to connect key areas, and the **Green, Green, Green Programme** that allocated special fund to the local government units (LGUs), allowing them to enhance their open spaces and connectivity.[44]

- The **Public Utility Vehicle Modernization (PUVM) Program** was launched by the Department of Transportation in 2017. This intends to transform the public transportation road sector through the deployment of safer and more environmentally friendly vehicles, enhanced regulation, and industry consolidation. The initiative seeks to enhance urban quality of life, minimize economic losses due to wasted travel time, reduce health expenditures and early deaths, cut down GHG emissions, and improve the operators' economic status by enhancing service quality standards.[45]

41 *National Economic and Development Authority. (n.d). Retrieved from https://neda.gov.ph/national-transport-policy/*
42 *Department of Transportation. Philippine Road Safety Action Plan (PRSAP) 2023 - 2028. Copy requested and retrieved from the World Health Organisation.*
43 *Department of Transportation. Philippine Road Safety Action Plan (PRSAP) 2023 - 2028. Copy requested and retrieved from the World Health Organisation.*
44 *Metke, C., Kaenzig, R., & Mariano, P. (2020). Philippine Urban Mobility Programme. Retrieved from https://www.changing-transport.org/wp-content/uploads/2020_Philippine_Urban_Mobility_Programme.pdf*
45 *Agoot, L. (31 July 2019). PUVMP to professionalize PH transport system. Retrieved January 6, 2022, from PNA website: https://www.pna.gov.ph/articles/1076510*

On the 19th Congress legislation related to smart and safer mobility:

- **Alternative Modes of Transportation Act**: Senate Bill No. (SBN) 739 has been filed in an attempt to provide regulations to govern alternative modes of transportation.[46] Similarly, legislators in the Upper House have presented proposals creating a national policy on sustainable urban mobility and the use of alternative sustainable modes of transportation. All proposed measures are currently pending at the Committee level as of writing time.

- Following calls from some lawmakers and the riding public for a suspension, the implementation of the **Child Safety in Motor Vehicles Act** was deferred in February 2021. The said measure no longer allows children aged 12 and below to take the front seat and requires the use of child restraint systems. Cambodia, Lao PDR, and Singapore are the only other Southeast Asian states with national child-restraint laws.[47]

  As such, the ECCP urges the government to initiate dialogues with various stakeholders and address public concerns to fully implement the Child Car Seat Law for private vehicles. Formulating the necessary guidelines for its full enforcement is imperative, especially in designing standards for fitting stations and technical standards for car seats. Similarly, concerned government agencies should work together in setting out a transition plan with concrete steps for the law's full implementation, once the Office of the President approves the resumption of the measure's enforcement. This will guarantee the safety and welfare of infants and children, and prevent traffic-related deaths and injuries.

- **Dashboard Camera Act:** There are four House bills filed requiring the installation of dashboard cameras (dash cams) and other recording devices to deter traffic violations and promote responsible driving. House Bill No. (HBN) 817 requires dashcams installation on motor vehicles while HBN-1017 mandates the installation of not only dashcams but also closed-circuit television (CCTVs) and global positioning system (GPS) inside public utility vehicles (PUVs), transportation network vehicle (TNVs), and other public transport vehicles. Likewise, HBN-5745 also provides the installation of dashcam systems in vehicles operated for public utility.

  The Chamber believes that mandating the use of dashcams will prevent criminal incidents from happening including kidnapping, road rage, and carnapping. In resolving such cases, dashcams can serve as a great addition to closed-circuit televisions (CCTVs) and provide a different angle of incidents for accuracy. The Automotive Committee underlines that the use of such devices will be effective for evidence-based recording on the streets and of violations of traffic rules. The ECCP will continue monitoring developments in the Legislative branch and support efforts that will further promote road safety and responsible driving.

- **Heavy Vehicle Preventive Maintenance Act:** Another lone bill proposed in the Lower House has been pending at the Committee on Transportation since August 2022 and requires buses, trucks, and other heavy vehicles to undergo preventive maintenance with their respective companies as well as monthly inspections with the Land Transportation Office (LTO) to prevent accidents caused by mechanical malfunction and to ensure road safety.[48]

46 *Senate of the Philipines. (2022). Senate Bill No. 739 - Alternative Modes Of Transportation Act. Retrieved from http://legacy.senate.gov.ph/lisdata/3843534890!.pdf*
47 *Aning, J. (12 February 2021). Duterte suspends child car seat law. Retrieved from https://newsinfo.inquirer.net/1394924/duterte-suspendschild-car-seat-law*
48 *House of Representatives. (2023). House Bill No. 2008 - An Act Mandating All Buses, Trucks, and Other Heavy Vehicles to Undergo Preventive Maintenance With Their Respective Companies and Monthly Inspections with The Land Transportation Office (LTO) to Prevent Accidents Due to Mechanical Malfunction/Failure and to Ensure Road Safety. Retrieved from https://hrep-website.s3.ap-southeast-1.amazonaws.com/legisdocs/basic_19/HB02008.pdf*

- **Motorcycles-for-Hire Act**: Multiple bills have been filed in the 19th Congress revising the Land Transportation and Traffic Code to legalise and regulate motorcycles-for-hire and motorcycle ride-sharing services in the Philippines in response to the developing niche of technology- and app-based transport network vehicle service (TNVS) largely employing two-wheeled vehicles. As of writing, all proposed measures have been pending in their respective Senate and House Committees.

- In March 2021, the DOTr ordered the LTO to temporarily stop the implementation of its memorandum directing all its regional offices to adopt the mandatory Private Motor Vehicle Inspection Centers (PMVICs) until the issue on the Geographic Areas of Responsibility (GAOR) is fully resolved.[49] Starting on 26 July 2021, the LTO began reimplementing the **Motor Vehicle Inspection System** provided under Memorandum Circular Number MC-SC-2021-02[50], which makes vehicle testing procedures on light vehicles and motorcycles mandatory, particularly in areas where PMVICs are already operational. Under the new MVICs, vehicles to be registered must pass a stringent 73-point inspection system to be conducted in three stages with the use of state-of-the-art equipment that sends, automatically and in real-time, the results to the Land Transportation Office's information technology (IT) system.

  The existing PMVICs are insufficient to cover the country's demand and make the inspections user-friendly. According to the DOTr, only 99 MVICs are operational as of 2021.[51] On this note, the ECCP Automotive Committee recommends the appointment of independent, certified workshops manned by qualified trained personnel and for the PVICs to have the necessary and effective test equipment. The appointment for the inspection could be accessed through a centralised online system (integrating all existing PMVICs) where the vehicle owner could access and select the closest PMVIC in the area of residence and select the available time slot for the inspection. The Chamber remains committed to public-private sector cooperation that will facilitate the full implementation of the MVIS program and the promotion of global best practices on modern, safe, and sustainable vehicle registration standards.

- The **Philippine Motor Vehicle Manufacturing Industry Act** has been filed in the House of Representatives. The proposed legislation, which has been pending in the Committee of Trade and Industry since September 2022, intends to develop a comprehensive policy that will accelerate the sound development of the Philippine motor vehicle manufacturing industry. It also aims to encourage technology transfer and advances and promote automotive skills development as a means to drive industry competitiveness.[52]

- **Philippine Transportation Safety Board (PTSB) bill:** The proposed PTSB bill seeks the creation of a non-regulatory and independent agency attached to the Office of the President to be the primary agency responsible for the conduct of an impartial investigation of transportation-related accidents and incidents. The main objectives of the Board are (a) to improve transportation safety measures that will help in the prevention of transportation accidents and mitigation of dangers to human lives and property, and (b) to ensure the implementation of transportation safety standards.

49 Fernandez, D. (24 August 2021). DOTr halts LTO order allowing private MVIS centers to inspect motor vehicles. Retrieved from https://newsinfo.inquirer.net/1477927/dotr-halts-lto-order-for-motor-vehicles-to-undergo-inspection-at-private-emission-centers

50 Department of Transportation. (2021). Implementation of Geographical Area of Responsibility (GAOR) for Renewal of Registration for Light Vehicles and Motorcycles. Retrieved from https://drive.google.com/file/d/1081LOtpzQ8WTa2mxvyQpJGF0IE8ACgbp/view

51 According to the DOTr Undersecretary for Road Transport and Infrastructure Mark Steven C. Pastor during the meeting with the ECCP Automotive Committee last 15 February 2023.

52 House of Representatives. (2023). House Bill No. 4206 - An Act To Strengthen The Competitiveness Of The Philippine Motor Vehicle Manufacturing Industry. Retrieved from https://hrep-website.s3.ap-southeast-1.amazonaws.com/legisdocs/basic_19/HB04206.pdf

Following the recent veto of the PTSB bill by the Office of the President, the Chamber remains committed to working with the government, its partners, and other stakeholders to continue pushing for the creation of a non-regulatory and independent agency primarily responsible for the conduct of impartial investigation on transportation-related accidents and incidents. In the 19th Congress, Senate Bill No. (SBN) 1121 and House Bill No. (HBN) 1801 have been filed to push for the PTSB creation. Senate Committee Report No. 38 has been filed in March 2023 while HBN-1801 is still with the Committee on Government Reorganization since August 2022.[53]

- Since 2018, the LTO has been consulting with relevant sectors regarding the government's proposal on **restricting car tints on public and private vehicles**. The measure seeks to ban window tints for public transportation vehicles and regulate those of private vehicles for anti-crime purposes.[54] Dark tinted windows are more susceptible to causing road accidents, especially at night due to low visibility of roads resulting in a much slower reaction time among drivers. The ideal vehicle light transmission level of tints for the front windshield and passenger windows is 70% and above. Restricting dark car tints will aid in effectively implementing the No Contact Apprehension Policy, which refers to active traffic management and road traffic safety measures devised to ensure accountability among drivers who committed violations. The Committee maintains its position that safety and security should be the primordial concern for this matter.

- **Road Safety Education Act:** Several pieces of legislation have also been introduced in Congress, proposing the mandatory inclusion of basic road safety, traffic, and comprehensive driver's education in the enhanced basic education curriculum, with the goal of developing well-rounded and responsible citizens at a young age. All bills are now pending in their respective Senate and House Committees.

- **Sustainable Transportation Act:** By developing an integrated and efficient transport system, the proposed legislation seeks to mandate the DOTr and other concerned agencies to create a Sustainable Transport Plan. Non-motorized transportation, the creation of a seamless and inclusive public transportation system, green infrastructure and facilities, and the implementation of transportation demand management mechanisms are all part of the Plan. Furthermore, this legislation shall require the DOTr to adopt regulations and standards to encourage non-motorized transportation. The measures in question are now pending before their respective Committees.

- **Walkable and Bikeable Communities Act** underscores the importance of infrastructure in encouraging and accommodating sustainable and healthy means of active transport such as walking, biking, and the usage of other non-motorized vehicles, as well as providing safe and convenient pathways for commuters. This proposal has been approved in third reading in September 2022.[55]

53 Senate of the Philippines. (2023). Senate Committee Report No. 38. Retrieved from https://legacy.senate.gov.ph/lisdata/4103137390!.pdf

54 Cabato, R. (02 January 2018). Gov't proposal restricts car tint on public, private vehicles. Retrieved from https://www.cnnphilippines.com/news/2018/01/02/government-proposal-restricts-car-tint.html

55 Senate of the Philippines. Senate Bill No. 1290. Retrieved from http://legacy.senate.gov.ph/lisdata/3928335907!.pdf

ECCP ADVOCACIES

It is undeniable that the socioeconomic benefits of a sustainable, seamless, smarter, and safer mobility future have the potential to enable the promise of sustainable cities and communities, as demonstrated by SDG 11, which aims to make cities and human settlements inclusive, safe, resilient, and sustainable. The integration of smart technologies can play a pivotal role in preventing accidents and promoting responsible driving behavior. The European business community in the Philippines is pleased to contribute to the policy discourse with the following cross-sectoral campaign recommendations and their respective alignment with the respective mobility targets under the Global Goals (see Table 4).

Table 4. Alignment between the ECCP Advocacies recommendations and the specific SDG targets on mobility

ECCP Advocacies recommendations	Specific SDG targets on mobility		
	3.6	9.1	11.2
Further promotion and use of measures towards cleaner emissions and improved roadworthiness testing • Full and efficient implementation of the motor vehicle inspection system or MVIS (mandatory nationwide) • Improved implementation and enforcement framework of the Euro 4 emission standards	✓	-	✓
Institutionalisation of mechanisms to improve vehicle and road safety • Adopt compulsory vehicle safety standards for passenger cars and two-wheelers, including anti-lock braking systems (ABS) and electronic stability programs (ESP) • Fully implement the Child Seat Law, require the installation of dashboard cameras (dash cams), and restrict dark car tints on public and private vehicles • Incorporate road safety education in basic education curriculum	✓	✓	✓
Development of a comprehensive support program for the domestic market adoption of electric vehicles following the passage of the Electric Vehicle Industry Development Act	-	✓	✓
Enactment of the Philippine Transportation Safety Board (PTSB) bill	✓	-	-
Effective Implementation of the Energy Efficiency and Conservation Act	-	✓	✓
Prioritisation and allocation of funds for green infrastructure	-	✓	-

As the Global Goals necessitate collaborative efforts of all sectors of society, including the business community, so does the overarching goal of amplifying the transport sector's sustainability impact. The ECCP underscores that sustainable transport not only addresses climate change but also spurs economic growth and creates new employment opportunities. On this note, the ECCP is committed to collaborate with stakeholders to realise the benefits of future mobility solutions and make an effective influence on the environment, community, and economy. A whole-of-society approach is critical to achieving these breakthroughs and accelerating smart infrastructure implementation for better decision-making. For this reason, we urge the policymakers to build an enabling environment that encourages innovation and incentivises investments in smart and safer mobility approaches.

STARTUP FOR SUSTAINABILITY

OVERVIEW

One of the world's most important issues, climate change, continues to exist alongside the financial losses and setbacks brought on by the COVID-19 epidemic. Environmental problems have been escalating at an alarming rate for years, prompting a resounding call for immediate and resolute measures to foster sustainability.

In response to these challenges, numerous organisations have embarked on a journey to incorporate sustainable and innovative practices into their daily operations. Innovation has the potential to bring about groundbreaking sustainable solutions while simultaneously serving as a key driver for gaining a competitive edge and ensuring enduring growth in an increasingly complex and uncertain environment. Notably, startups have distinguished themselves as formidable engines of innovation, economic prosperity, and job creation, even in the face of recent economic turmoil. By offering cutting-edge products and services, introducing adaptable business models that align with evolving societal and market demands, and embracing strategies that foster workforce development, these emerging enterprises are fundamentally reshaping the way firms approach sustainability.

The startup landscape in the Philippines has garnered a reputation for its dynamism and great potential, enjoying significant support across sectors. Manila has emerged as a notable contender in the global startup arena, securing a place among the top 30 cities worldwide in the 2023 Global Startup Report (GSER). This achievement underscores Manila's rapid ascent as one of the world's most promising startup ecosystems. In a remarkable testament to its growth, the value of Manila's startup ecosystem has surged over the past two years, catapulting from USD 2.1 billion to USD 3.5 billion—a staggering 85% increase. This exponential growth strengthens the Philippines' case as a premier choice for businesses seeking development opportunities. Notably, the quick development of digital transformation facilitated the development of finance and e-commerce in the nation. According to the 2023 GSER, Manila was also part of the top 30 Asian Ecosystems in Talent and Experience as well as Performance[1].

Furthermore, it is worth noting that the COVID-19 pandemic has had a significant impact on micro, small, and medium-sized enterprises (MSMEs) and startups, particularly those employing innovative business strategies. According to the 2020 Philippine Startup Survey: COVID Edition, published in May 2021, which provided insights into the pandemic's effects on the country's tech startups, a notable 48% of respondents (comprising 90 startup founders) expressed heightened concerns regarding the pandemic's implications for their businesses. Their top three apprehensions revolved around challenges related to funding, the looming global recession, and the financial repercussions on their operations. On a more positive note, 21% of entrepreneurs reported an increased demand for their services and products as a result of the outbreak. Consequently, the majority of companies decided to launch new products and services that might cater to customers' demands during the lockdown in order to mitigate any potential negative effects on their businesses.

1 Startup Genome. (2023). 2023 Global Startup Ecosystem Report (GSER). Retrieved from: https://startupgenome.com/reports/gser2023.

The nation is home to a large number of startups that promote economic development and sustainability by offering a variety of opportunities for the underprivileged to earn a living and collaborating with nearby groups and communities to have a positive impact on both the local environment and their communities. With the reopening of the economy, it is important for the government, the public and private sectors, and relevant stakeholders to rally behind these startups and provide the necessary support for their global-scale growth and success.

Notably, the nation's startup ecosystem has the potential to evolve into a driving force for a sustainable and resilient economy, making a remarkable shift towards environmental conscientiousness and economic robustness.

WHERE ARE WE NOW?

According to the **Global Innovation Index (GII) 2022** released by the World Intellectual Property Organization (WIPO), the Philippines ranks **59th out of 132 countries** that are featured[2], inching down 8 places from its rank of 51st in the previous year's GII[3]. The dip in the ranking for 2022 can be attributed predominantly to a decrease in performance ratings across the Knowledge and Technology Outputs indicators. These indicators encompass critical aspects such as knowledge generation, knowledge impact, and knowledge dissemination, all of which contributed significantly to the nation's lower standing in the GII this year.

Although the Philippines broke its three-year record of being given the status of *innovation achiever* which is given to countries with economies outperforming in innovation-to-development as compared to other nations, the country still performed best in *business sophistication.* However, it is worth noting that the Department of Science and Technology (DOST) reported that the government continues to yield a greater number of innovation outputs relative to its level of innovation investments, despite the decline in performance scores in Knowledge and Technology Outputs. Despite this performance decline, the Philippines maintains a competitive edge when benchmarked against neighboring nations in Southeast Asia, East Asia, and Oceania, securing the 11th position out of 17 countries in this group and ranking 5th among 36 lower-middle-income economies.

The Philippine government has since signed initiatives into law, created forums to assist shape Filipinos' crafts, and supported projects, programs, and awards in order to further push for innovative development in the industry, national development, and expand sustainability efforts.

The Innovative Startup Act[4] or Republic Act (RA) No. 11337 and the **Philippine Innovation Act (RA 11293)**[5] were both signed into law in April 2019 with the intention of fostering innovation as a step towards advancing the economy and fostering more sustainable initiatives. These measures also encourage both public and private institutions to support these initiatives by paving the path for investors to enter the innovations and startups industry. Additionally, these laws have recently drawn attention to the department of science, technology, and innovation (STI), which has made it possible to formulate long-term proposals for the development of the Philippines through technological research, development, and finance.

Filipino entrepreneurs and startups have also received funding to help the realisation of their innovative ideas through various government departments such as the Department of Trade and Industry (DTI), the Department of Science and Technology (DOST), and the Department of Information and Communications Technology (DICT). The Startup Grant Fund Program and the Startup Venture Fund are among two examples.

Fourteen firms from all around the Philippines were able to receive funding thanks to the **Startup Grant Fund Program**, which was launched in December 2020. For research and development and to hone their skills, they were given funding totaling PHP 43 million[6]. The program continues to fund startups through another round of proposals gathered from companies with the assistance of public and commercial institutions.

The **Startup Venture Fund (SVF)** was formally introduced in November 2021 by the DTI, National Development Company (NDC), and QBO Innovation Hub, with a budget of PHP 250 million. Due to the fact that *Venture PIlipinas: The Startup Venture Fund Pitch* was introduced in the midst of the pandemic, startup pitches were conducted online. This encouraged the nation to engage in bigger partnerships with the private sector, particularly venture capitalists, as they recognized its value in fostering the startup economy's growth as well as economic and corporate expansion, sustainability, and innovation.[7]

As part of the aforementioned measures' objectives, several diverse projects and programs have been initiated to nurture innovation development by providing training, facilitating access to international markets, and offering various non-monetary incentives. Notable initiatives in this regard include the Startup Acceleration and Incubation by DTI (startupAID), SMART (Strategic MSMLE & Startup) Link, International and Local Exposure Assistance Program (ILEAP for Startups), and the Global Acceleration Program.

As previously stated, the laws that were approved allowed for future planning to achieve the objective of making the Philippines a leading nation in innovation. The government has launched a number of initiatives including strategies, recommendations, and roadmaps aimed at improving and advancing STI in the nation. To name a few, there is the PAGTANAW 2050, the Innovative Green EV Technology, and the Philippine Roadmap to Digital Startups.

The **Philippine Roadmap to Digital Startups** seeks to develop businesses that may spur economic development while simultaneously developing ground-breaking answers to the nation's most pressing issues. Three components make up this initiative: (i) a clear definition of terms, benchmarks, and goals; (ii) perspectives on other startup ecosystems from around the world, how they can be applied in the Philippines, and how the local ecosystem can learn from them; and (iii) short- and long-term plans and strategies for the general improvement of the startup ecosystem in the Philippines.[8]

PAGTANAW 2050: Agham Tungo sa Mabuting Kinabukasan, also known as Looking Ahead 2050: Science for a Sustainable Future, is the first cross-sectoral and multi-sectoral project to focus on STI in the nation. The National Academy of Science and Technology Philippines (NAST PHL) unveiled a 30-year STI plan and roadmap as a long-term vision for innovation for the development of the nation. The DOST provided funding for the project totaling more than PHP 7.4 million, and in November 2021, both the DOST and the National Economic and Development Authority (NEDA) received the project.[9]

Globally, STI has been acknowledged as a leader in building progressive nations. This realisation is thought to provide the extra push the nation needs to achieve an even higher GII. The project's

2 World Intellectual Property Organization. (2022). Global Innovation Index 2022. Retrieved from: https://www.wipo.int/edocs/pubdocs/en/wipo_pub_2000_2022/ph.pdf
3 World Intellectual Property Organization, Dutta, S., Lanvin, B., León, L. R., & Wunsch-Vincent, S. (2021). Global Innovation Index 2021, 14th Edition. WIPO.
4 The Official Gazette. Republic Act No. 11337. Retrieved from https://www.officialgazette.gov.ph/downloads/2019/04apr/20190717-RA-11337-RRD.pdf
5 The National Economic and Development Authority. Republic Act No. 11293. Retrieved from: https://neda.gov.ph/the-philippine-innovation-act/
6 BusinessMirror. (27 June 2021). 14 startups get P43 million in R&D grants from DOST-PCIEERD. Retrieved from: https://businessmirror.com.ph/2021/06/27/14-startups-get-%E2%82%A743-million-in-rd-grants-from-dost-pcieerd/
7 Department of Trade and Industry (23 November 2021). DTI launches P250-M Philippine Startup Venture Fund. Retrieved from: https://www.dti.gov.ph/archives/news-archives/dti-launches-philippine-startup-venture-fund/
8 Department of Information and Communications Technology. ( ). Philippines Roadmap for Digital Startups. Retrieved from: https://dict.gov.ph/wp-content/uploads/2016/08/StartupRoadmap_Final.pdf
9 Philippine News Agency. (22 November 2021). Sci-tech, innovation 'Pagtanaw 2050' turned over to DOST, NEDA. Retrieved from: https://www.pna.gov.ph/articles/1160560

12 key areas of focus—the Blue Economy, Governance, Business and Trade, Digital Transformation and Information and Communications Technology, Science Education and Talent Retention, Food Security and Nutrition, Health Systems, Energy, Water, Environment and Climate Change, Shelter, Transportation and Other Infrastructure, and Space Exploration—highlight approximately 200 technologies. Through the *PAGTANAW 2050 project*, it is hoped that by 2050, the people's aspirations for STI, such as inclusive growth, sustainability, and competitiveness, will have been realised.[10]

The Philippine government has been working hard to establish conditions that would allow green technology to be created and implemented through the **Innovative Green EV Technology** in order to improve its sustainability efforts. With support from the Global Environment Facility, the Department of Transportation and UNDP Philippines do this through promoting innovative forms of transportation including e-trikes, e-jeepneys, and other electric vehicles that leave smaller carbon footprints.[11]

The National Innovation Council is currently drafting the **National Innovation Agenda and Strategy Document (NIASD)**, which is anticipated to be published soon. It seeks to launch and coordinate the target goals, initiatives, schedules, and strategies of the innovation industry during the next ten years. According to RA 11293, all government organisations must abide with the NIASD regulations.[12]

Although the nation has created aforementioned fundings and grants, for new startups, money is still a major barrier. As mentioned, the earliest financial source for startups in the Philippines was venture capital provided by big businesses, and it is still the main source of funding today. The country has at least 40 venture capital firms, however investments are mainly made in established digital industries like fintech, media and entertainment, and e-commerce. According to experts, for innovations in other areas such as *agritech, cleantech, edtech, and healthtech* to have a better chance of developing and striving, there is a need to attract investments in these sectors[13].

Another difficulty with startup governance has been identified as *interagency coordination*. Entrepreneurs have urged governmental organisations to offer comprehensive assistance to new businesses. Some drew attention to the Innovative Startup Act's numerous implementing agency structures. Currently, the DTI, DOST, and DICT work together to oversee the application of this legislation, switching off as chairman every two years. However, due to the requirement that one government agency must engage with two others before reaching a decision, founders harbour concerns that this bureaucratic structure may lead to further delays in the implementation of these laws. In the fast-paced world of tech companies, any delay could have detrimental long-term consequences. To bridge the gap between government bureaucracy and tech entrepreneurs, there is a growing call for the establishment of a dedicated office. This office would handle the specific requirements and concerns of tech startups and serve as their primary advocate within the government, ensuring a more agile and responsive approach to their needs.[14]

While we have seen some positive developments on this front, there remains a considerable amount of work ahead to propel the Philippine startup scene to greater success. The Philippines has made significant strides, and looking ahead, there is ample room for increased investments and growing optimism regarding the prospects of the Philippine startup economy in the years to come.

10 NAST. (19 November 2021). PAGTANAW 2050: THE PHILIPPINE SCIENCE, TECHNOLOGY, AND INNOVATION FORESIGHT. Retrieved from: https://www.nast.ph/index.php/pagtanaw-2050

11 Klingler-Vidra, R. and Lor, R. (10 May 2021). Bringing the Environment back into our Understanding of Inclusive Innovation. Retrieved from: https://www.ph.undp.org/content/philippines/en/home/blog/bringing-the-environment-back-into-our-understanding-of-inclusiv.html

12 BusinessWorld. (8 February 2022). NEDA prepares long-term innovation plan. Retrieved from: https://www.bworldonline.com/neda-prepares-long-term-innovation-plan/

13 Asian Development Bank. (23 May 2023). Philippines' Tech Startup Ecosystem Making Progress. Retrieved from: https://www.adb.org/news/philippines-tech-startup-ecosystem-making-progress

14 Asian Development Bank. (May 2023). The Philippines' Ecosystem for Technology Startups. Retrieved from: https://www.adb.org/sites/default/files/publication/884641/philippines-ecosystem-technology-startups.pdf

SUSTAINABLE AGRI-FOOD

OVERVIEW

In the face of the increasing world population, rising global prices, and food insecurity, transforming agri-food systems is essential to sustainably increase agricultural/food production, decrease food losses, and address hunger and malnutrition while protecting our biodiversity which is quintessential to food security and proper nutrition. While the correlation of food and health is a widely known fact, public awareness on the impact of food production and consumption on our environment and resources leaves a lot to be desired.

For most ASEAN Member States (AMS), agriculture remains an important sector with farming, fishing, and forestry activities accounting for over 10% of the regional GDP while an estimated one billion people are employed in the agri-food system globally.[1] According to a 2017 report by the Food and Agriculture Organization (FAO), global agricultural production tripled between 1961 and 2011.[2] However, it is important to note that high productivity and efficiency in the sector through the intensive use of chemical inputs and products, massive land conversion, and monoculture have adversely affected the environment. The Philippines, as a predominantly agriculture country, is no exception from this scenario with land degradation and loss of biodiversity relatively caused by several agricultural practices such as unsustainable agricultural intensification coupled with the effects of climate change posing a great threat to the country's agri-food system and ultimately to attaining food security.[3]

Land degradation in the country is typically exhibited by (i) soil fertility loss as a result of over-cultivation; (ii) expansion of slash-and-burn agriculture in critical slopes; (iii) loss of productive topsoil due to water erosion; and (iv) loss of vegetation cover through massive forest tree cutting and illegal logging.[4] Other types of degradation which are not as widespread are (i) soil salinization caused by over-harvesting of ground water near coastal areas; (ii) soil pollution due to excessive use of pesticides and industrial and household wastes contamination; and (iii) waterlogging caused by substandard water management and drainage.[5]

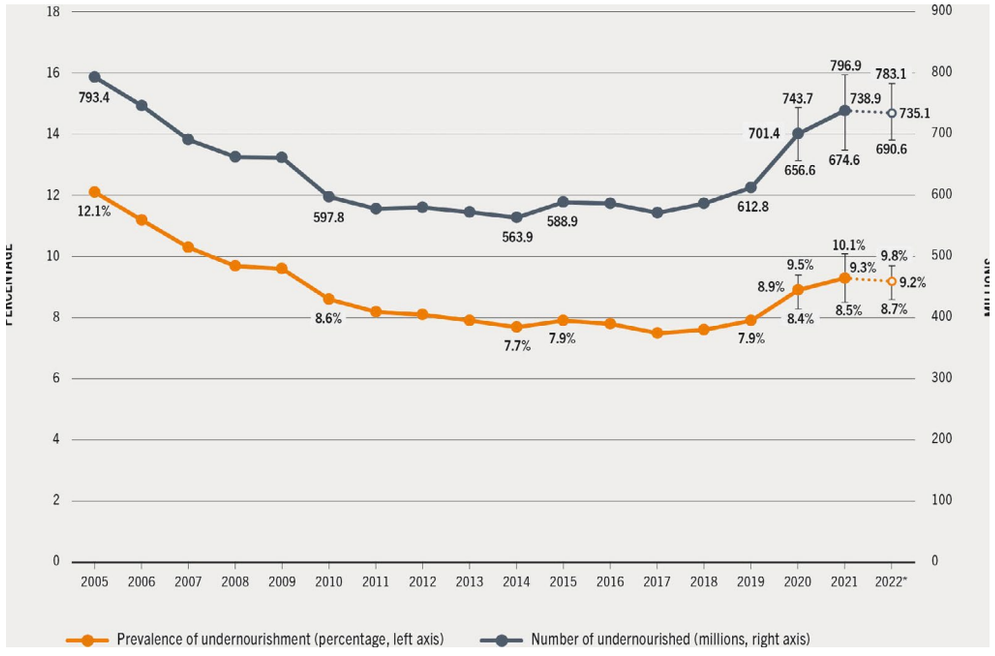
Data from the Department of Environment and Natural Resources (DENR) shows that nearly 457 million tons of soil is lost annually due to erosion thereby risking 75% of the Philippines' cropland.[6]

1 *ASEAN Center for Biodiversity. (16 October 2021). The Future is in Sustainable Agri-Food Systems. Retrieved from https://pia.gov.ph/press-releases/2021/10/16/the-future-is-in-sustainable-agri-food-systems*
2 *Ibid.*
3 *Ortiz, A. & Torres, J. (23 October 2020). Assessing the Impacts of Agriculture and Its Trade on Philippine Diversity. Retrieved from https://doi.org/10.3390/land9110403*
4 *Bureau of Soil and Water Management. (n.d.). Implementation of Sustainable Land Management (SLM) Practices to Address Land Degradation and Mitigate Effects of Drought. Retrieved from https://www.bswm.da.gov.ph/program/implementation-of-sustainable-land-management-slm-practices-to-address-land-degradation-and-mitigate-effects-of-drought/#:~:text=Land%20degradation%20in%20the%20Philippines%20is%20manifested%20by%20(i)%20the,bum%20agricu*
5 *Ibid.*
6 *Atienza, K. (21 July 2023). Marcos says Soil Degradation calls for 'Innovative' Solutions. Retrieved from https://www.*

Relatedly, 11-13 million hectares in the country are classified as degraded land with the loss of 47,000 hectares of forest cover annually and conversion of land contributing significantly to soil degradation. It was also reported that 2.2 million hectares are affected by insufficient levels of soil fertility.[7]

To tackle the twin challenge of responding to the needs of a rapidly increasing population while addressing environmental issues, it is imperative to pursue a transformative and sustainable change in the way we produce and consume food by adopting innovative and sustainable agricultural practices and approaches to natural resources management. Doing so would also prove significant in addressing the long-standing global issue of food insecurity. According to the latest publication of the State of Food Security and Nutrition in the World (SOFI) report, the number of people who suffered from hunger in 2022 was estimated between 691 and 783 million with a mid-range of 735 million, thereby posting an increase of 122 million people before the pandemic, in 2019[8]. Global hunger, measured by the prevalence of undernourishment (PoU), remains to be higher than the pre-pandemic levels but is relatively unchanged from 2021 to 2022, impacting about 9.2% of the world's population in 2022 as opposed to 7.9% in 2019[9].

Figure 1. Global hunger remained virtually unchanged from 2021-2022 but is still far above pre-covid-19 pandemic levels,



NOTES: * Projections based on nowcasts for 2022 are illustrated by dotted lines. Bars show lower and upper bounds of the estimated range.

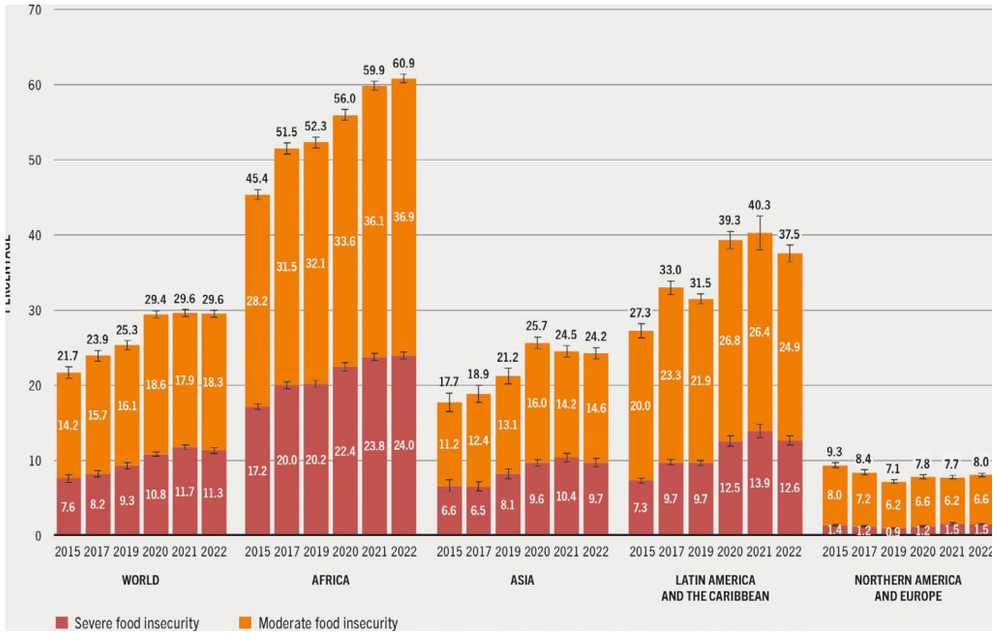
SOURCE: FAO. 2023. FAOSTAT: Suite of Food Security Indicators. In: FAO. [Cited 12 July 2023]. www.fao.org/faostat/en/#data/FS

bworldonline.com/economy/2023/06/21/530033/marcos-says-soil-degradation-calls-for-innovative-solutions/
7 Ibid.
8 United Nations. (2023). State of Food Security and Nutrition in the World. Retrieved from https://www.fao.org/3/cc3017en/online/cc3017en.html
9 Ibid,

According to the Food Insecurity Experience Scale (FIES), the prevalence of moderate or severe food insecurity remained the same in 2022, following a significant increase from 2019-2020, with an estimated 2.4 billion people — or 29.6% of the world population — struggling to have constant access to adequate food; 900 million people of which suffer from severe food insecurity as measured by the prevalence of moderate and severe food insecurity[10]. The said figure is still far above pre-pandemic figures by 391 million people and 745 million people more as opposed to the launch of the 2030 Sustainable Development Agenda by world leaders at the UN Sustainable Development Summit in 2015[11].

Figure 2. Moderate or severe food insecurity remained unchanged at the global level from 2021-2022 with worsening food insecurity levels in Africa and in Northern America and Europe, and improvements in Asia, Latin America and the Caribbean.

NOTE: Differences in totals are due to rounding of figures to the nearest decimal point.



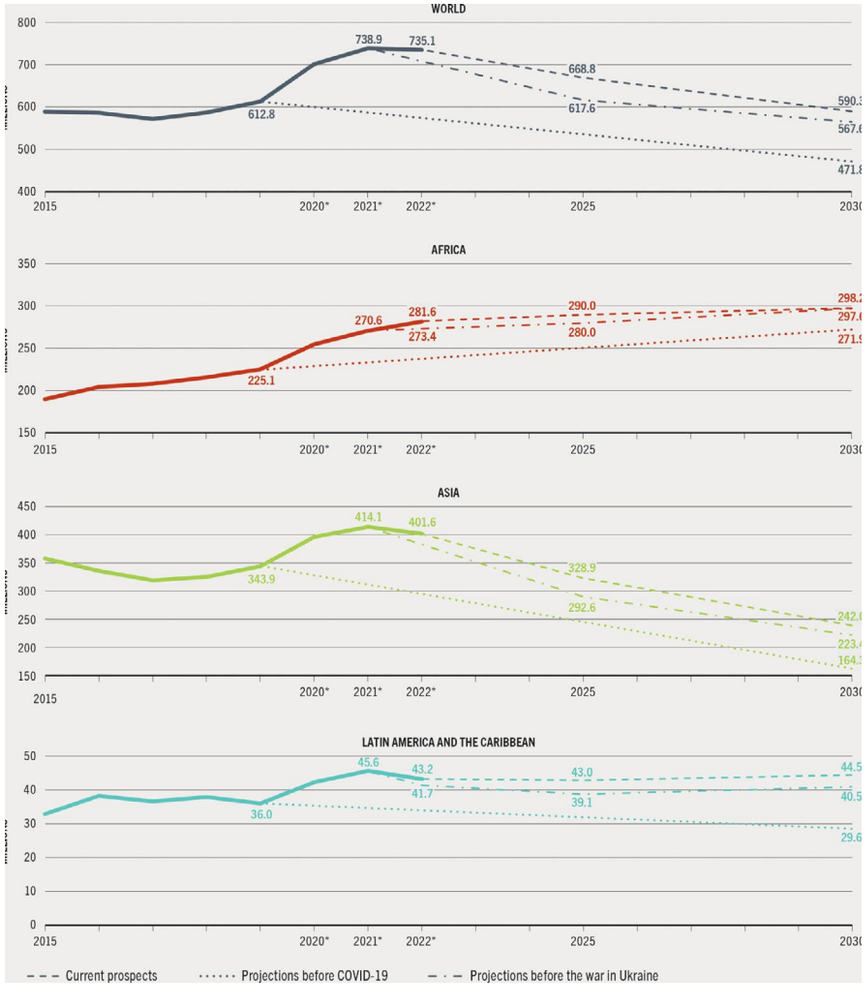
SOURCE: FAO. 2023. FAOSTAT: Suite of Food Security Indicators. In: FAO. [Cited 12 July 2023]. www.fao.org/faostat/en/#data/FS

Access to healthy diets continue to be a struggle across the world. In fact, over 3.1 billion people worldwide, or 42%, were unable to afford a healthy diet in 2021, indicating a global increase of 134 million people in comparison to 2019[12]. Similarly, the prevalence of malnutrition continues to affect the global population with millions of children suffering from the said health issue. It was reported that an estimate of 37 million (5.6%) children under five years of age were overweight, 148 million (22.3%) were stunted, and 45 million (6.8%) were wasted[13].

10 United Nations. (2023). The State of Food Security and Nutrition in the World. Retrieved from https://www.fao.org/3/cc3017en/online/cc3017en.html
11 Ibid,
12 World Health Organization. (12 July 2023). 122 Million More People Pushed into Hunger since 2019 due to Multiple Croses, Reveals UN Report. Retrieved from https://www.who.int/news/item/12-07-2023-122-million-more-people-pushed-into-hunger-since-2019-due-to-multiple-crises—reveals-un-report
13 Ibid.

Following these trends, the Food and Agriculture Organization of the United Nations (FAO), the International Fund for Agricultural Development (IFAD), the United Nations Children's Fund (UNICEF), the World Health Organization (WHO) and the World Food Programme (WFP) has warned that meeting the Sustainable Development Goal of ending hunger by 2030 will not be realized. Projections based on current scenario as stated in the report indicated that the number of chronically undernourished people in 2030 will reach nearly 400 million people[14].

Figure 3. Projected numbers of undernourished people by 2030.
NOTE: * The 2020, 2021 and 2022 values are based on the projected midranges which can be found in **Annex 2.**



SOURCE: Authors' (FAO) own elaboration.

14 *United Nations. (2023). The State of Food Security and Nutrition in the World. Retrieved from https://www.fao.org/3/cc3017en/online/cc3017en.html*

WHERE ARE WE NOW

- **National Urban and Peri-Urban Agriculture Program:** Launched by the DA in 2022, the banner program aims to boost urban and peri-urban agriculture (UPA) and other emerging agriculture practices to promote food security, food safety and economic development in partnership with National Government Agencies (NGAs), local government units (LGUs), and other relevant stakeholders.[15]

- **Health Promotion:** On 28 February 2023, the DOH and the University of the Philippines Manila National Institutes of Health (NIH) ratified two Memorandum of Understanding (MOU) on the expansion of the National Practice Guidelines Program and for the establishment of the Institute of Health Program which seeks to boost health promotion by conducting research to further promote health literacy in the country.[16]

  Prior to this, in 2022, the Department of Education (DepEd) along with the DOH and other relevant national government agencies[17] issued Joint Administrative Order (JAO) 2022-001 on the Guidelines for Healthy Setting Framework in Learning Institutions, in accordance with the Universal Health Care Act. As of October 2022, 273 last-mile elementary schools in eight provinces and one city have adopted the Healthy Learning Institutions (HLI) framework as part of its pilot-test. The said program is also targeted to be the framework for Oplan Kalusugan sa DepEd (OK sa DepEd) which is the "convergence of the Department's health and nutrition initiatives for their effective and efficient implementation at the school level, in partnership with various stakeholders".[18]

- **Plant-based Food Industry Roadmap:** In partnership with the University of the Philippines, the Board of Investments (BOI) has commenced the appraisal study for the inception of the said Plant-based Food Industry roadmap. The study, known as the Rapid Industry Appraisal (RIA) study, will be conducted for six months in order to have a fuller understanding on the industry's status, performance and prospects which will then serve as a basis in the formulation of the industry roadmap.[19]

- **HAlina't magtanim ng Prutas At Gulay sa Barangay Project | Kadiwa Ay Yaman | Plants for Bountiful Barangays Movement (HAPAG KAY PBBM):** Officially launched on 1 March 2023, HAPAG kay PBBM aims to attain food security, accessibility and affordability through community engagement and urban and peri-urban agriculture. The program is the result of combining two government projects from the Department of the Interior and Local Government (DILG) and the DA[20], which are the HAPAG sa Barangay Project and the Green Revolution 2.0: Plants for Bountiful Barangays Movement (PBBM). Aside from food security, the program also encourages environmental conservation by employing urban agriculture innovations and practices including aeroponics, aquaponics, container gardening, fruit-

15 *Department of Agriculture. (2022). Administrative Order No. 03 Series of 2022. Retrieved from https://www.da.gov.ph/wp-content/uploads/2022/02/ao03_s2022.pdf*
16 *Lingdas, C. (28 February 2023). UP Manila, DOH sign MOU on Health Promotion, Expanded National Practice Guidelines. Retrieved from https://www.upm.edu.ph/node/4163*
17 *Department of Social Welfare and Development (DSWD), Department of Education (DepEd), Commission on Higher Education (CHED), Legal Education Board (LEB), Technical Education and Skills Development Authority (TESDA), and Department of Interior and Local Government (DILG)*
18 *Department of Education. (n.d.). DOH, DepEd launch Healthy Learning Institutes to Strengthen School Health Programs. Retrieved from https://www.deped.gov.ph/2022/10/12/doh-deped-launch-healthy-learning-institutions-to-strengthen-school-health-programs/*
19 *Talavera, C. (18 February 2023) BOI Starts Industry Study on Plan-based Food. Retrieved from https://www.philstar.com/business/2023/02/18/2245701/boi-starts-industry-study-plant-based-food*
20 *Led by the Bureau of Plant Industry (DA-BPI), the National Urban and Peri-Urban Agriculture Program (DA-NUPAP) and the High Value Crops Development Program (DA-HVCDP)*

bearing tree planting, hydroponics, square-foot gardening, and vertical gardening.[21]

- **Philippines Multisectoral Nutrition Project (PMNP):** On 29 March 2023, the Philippine government launched the PMNP which targets to combat malnutrition and other nutrition-related issues in the Philippines through a comprehensive approach that involves multi-agency collaboration between the government, NGOs, and other stakeholders. The project aims to reduce anemia, wasting, and stunting prevalence by 5%, 2%, and 2% respectively by 2025 through its five components: (i) nutrition governance, (ii) maternal and child nutrition, (iii) adolescent nutrition, (iv) food fortification, and (v) behavior change communication.[22]

- **Crafting of Commodity Industry Roadmaps:** Spearheaded by the Philippine Council for Agriculture and Fisheries, the DA in partnership with various industry stakeholders officially launched its 20 Philippine Commodity Industry Roadmaps (CIRs) last 17 June 2022. The CIRs are categorised into three clusters namely: (i) High Value Crops Cluster composed of the abaca, banana, coffee, cacao, coconut, mango, onion, and vegetable industries; (ii) Fisheries and Aquaculture Cluster focused on milkfish, seaweed, shellfish, shrimp, and tilapia industries; and (iii) Poultry, Livestock, and Corn Cluster which includes carabao, dairy, hog, poultry broiler, poultry layer, small ruminants, and yellow corn industries.[23] These Roadmaps were made through the joint efforts of Government and the Private Sector for the purpose of guiding industry players on utilizing the full value chain support for farmers of current time and in years to come.

- **Soil Health:** On 21 June, the government held the 1st National Soil Health Summit which gathers leaders in the government and experts from the agriculture sector to discuss gaps and opportunities to improve the country's soil and boost agricultural productivity. During the forum, President Marcos—also the concurrent Agriculture Secretary—shared that the administration has a 5-point priority agenda on soil and water management including the implementation of Sustainable Land Management and the PhP523 million National Soil Health Program which aims to resolve land degradation, increase the income of farmers, boost crop productivity, and ensure proper soil use and management.[24]

- **New Agrarian Reform Emancipation Act or Republic Act 11953:** Signed last 7 July 2023, the New Agrarian Emancipation Act or RA No. 11953 "condones all the unpaid amortizations of the principal debt, including interest and surcharges, if any, incurred by Agrarian reform beneficiaries (ARBs)". According to the Department of Agrarian Reform (DAR), unpaid principal debt amounting to PhP57.56 billion will be condoned thereby benefitting 610,054 ARBs tilling 1.173 million hectares of land.[25] Last 12 September, DAR presented the IRR of the said law to the President; this comes after the signing of the two-year extension of another executive order (EO) imposing a moratorium on amortization [26]payments by farmer beneficiaries on agrarian debt.

- **Three-year Agriculture Development Program:** The program seeks to boost agricultural productivity specifically on corn, fisheries, high-value crops, livestock, poultry, and rice. The following are the DA agencies/banner programs involved in the program:

    - **DA-National Corn Program (DA-NCP):** Identify production areas for genetically modified and open-pollinated varieties to increase corn production. In particular, the DA-NCP is looking into using double cropping to utilise 700,000 hectares of land and intensify production by 1.5 million metric tonnes.

    - **Bureau of Fisheries and Aquatic Resources (BFAR):** Improve production of fisheries by locating areas for capture fisheries and aquaculture.

    - **Bureau of Plant Industry (BPI) and DA-HVCDP:** Determine high-value crops for export and local consumption. In collaboration with the DA-HVCDP, the BPI plans to boost production and export of avocados, bamboo, bananas, cacao, calamansi, cashew, coffee, durian, dragonfruit, jackfruits, mangoes, nuts, ornamentals, pili, pineapples, shallots, and ube.

    - **DA–National Livestock Program (NLP):** Sustain and intensify implementation of biosecurity and repopulation programs to combat transboundary animal pests and diseases like the avian influenza (AI) and ASF.

    - **DA–Agricultural Credit Policy Council (ACPC):** Devise credit development and credit assistance programs that are responsive to the needs of the animal feed industry and are complementary to the current credit initiatives for fisherfolks and farmers, in partnership with the DA-Bureau of Animal Industry (DA-BAI).

    - **DA-National Rice Program:** Develop strategies to cultivate newly irrigated areas and select areas for hybrid and inbred rice production.[27]

21 Vergaram K. Y. (1 March 2023). HAPAG KAY PBBM Signifies Gov't Sincerity, Resolve to Address Food Crisis – PBBM. Retrieved from https://www.da.gov.ph/hapag-kay-pbbm-signifies-govt-sincerity-resolve-to-address-food-crisis-pbbm/
22 Sicat, A. (29 March 2023). President Marcos to Launch Program in Combatting Malnutrition, Stunting. Retrieved from https://pia.gov.ph/news/2023/03/29/president-marcos-to-launch-program-in-combatting-malnutrition-stunting
23 Philippine Council for Agriculture and Fisheries. (n.d.). PCAF Quarterly Newsletter. Retrieved from http://www.pcaf.da.gov.ph/wp-content/uploads/2023/02/2022_CIR_Part-2_PCAF-Newsletter.pdf
24 Presidential Communications Office. (21 June 2023). PBBM tasks DA, DENR, DOST to arrest soil degradation, ensure food security and better nutrition. Retrieved from https://pco.gov.ph/news_releases/pbbm-tasks-da-denr-dost-to-arrest-soil-degradation-ensure-food-security-and-better-nutrition/
25 Department of Agrarian Reform. (7 July 2023). President Marcos signs New Agrarian Emancipation Act (RA No. 11953). Retrieved from https://www.dar.gov.ph/articles/news/104503
26 Presidential Communications Office. (12 September 2023). PBBM on completion of IRR of the New Agrarian Emancipation Act: 'Best ever gift I received'. Retrieved from https://pco.gov.ph/news_releases/pbbm-on-completion-of-irr-of-the-new-agrarian-emancipation-act-best-ever-gift-i-received/

ECCP ADVOCACY

Promote investment in food manufacturing.

To induce further growth in the food manufacturing sector, we advocate for increased incentives with the intention of boosting the sector's competitiveness as an investment destination and at the same time, increase food options for consumers. The Chamber highly recommends incentivizing investments for high technology adoption/technology transfer, sustainability contributions, employment generation and/or improved health and nutrition outcomes (e.g., reformulation for better health outcomes). Further to this, we urge the government to implement policies and programs that would strengthen local supply chains for raw materials and, when necessary, lower trade barriers for essential commodities like corn. We strongly believe that such measures will greatly contribute to temper the impact of inflation on food commodities and aid in resolving the ongoing food crisis. The Chamber also supports the imposition of trade remedies to equal the playing field between domestic production and imports, bringing Government attention to raising local supply while giving opportunities for Europe to serve the gap between current supply and current demand.

Pursue agricultural value chain development to increase food production and achieve stable food supply.

27 Rivera, D. (26 February 2023). Government Drafts 3-year Agriculture Development Program. Retrieved from https://www.philstar.com/business/2023/02/26/2247634/government-drafts-3-year-agriculture-development-program

Promote innovation and the use of digital technology in the agriculture sector.

The world's experience with the pandemic has undoubtedly caused a shift on how we view and approach agriculture and food production, resulting in increased focus on the role of the sector in improving the population's nutritional status and its overall impact to the economy. Today, the call to fasten the transformation of the agriculture sector has never been more urgent.

The Chamber firmly believes that investment in innovation as well as creating an innovative culture is imperative to fully maximise the sector's potential, attract investments, and promote sustainable growth and development. As such, we highly encourage the government to actively support and pursue investments and initiatives aimed at innovating the sector, particularly those that aim to promote sustainability in agriculture with a longer-term goal of zero emissions. This is in recognition of how agriculture significantly contributes to climate change and is notably adversely affected by its consequences. Some examples of ways to do this include the use of incentive schemes and implementation of policy support to entice investors to participate in the sector.

Relatedly, the ECCP recognizes the significant benefits of regenerative agriculture to combat the adverse effects of climate change and increase productivity of the sector. Through regenerative agriculture, farmers can boost their yields without compromising soil health and contribute to the creation of a healthier environment where a wider variety of plants and animals can thrive as the farming method also reduces carbon emissions and improves water systems. We also advocate for the development of a roadmap on farming technologies and systems such as agri- and aqua-energy farms and renewable energy-powered irrigation systems to promote renewable and clean energy in the agriculture sector.

Increase food production by providing assistance to farmers and fisherfolks as well as boost efforts to encourage youth participation in the sector.

The vital role of farmers and fisherfolks to the food supply chain and food security is undeniable. In order for the country to succeed in attaining a sustainable food system, the government must pay close attention to their current situation.

Access to financial services remains to be a critical challenge for farmers, particularly for smallholder farmers and rural Micro, Small and Medium Enterprises (MSMEs), to acquire the appropriate technology or high-quality seeds. While the ECCP recognizes the government's efforts to uplift the wellbeing of our farmers, further builds can be done through granting of more comprehensive financial support and conduct of skills development programs for farmers.

We then recommend implementing further measures to reduce the risks in the sector and to make farmers more bankable such as developing an effective crop insurance system, reforming the land title regime, promoting financial literacy to farmers, and facilitating long- gestation high-value crops to ensure cash flow capabilities, to name a few. Innovations in rural and agricultural financing through technology can also be explored to promote inclusive microfinancing models for these smallholder farmers. Promoting financial literacy to farmers by making relevant information public will also mitigate credit risks to them and the sector. All of these could then translate to increased profit, improved skills, and enhanced output.

Additionally, we urge the government to look for alternative ways to expand modes of compliance, reduce administrative burdens and conduct a reassessment of current lending processes to streamline and mitigate paperwork required by applicants, while speeding up the review and approvals process for qualified applicants.

Aside from financial support and to ensure the sustainability of our agricultural system, we push for intensifying youth engagement efforts by furthering education, training, and extension programs to equip young farmer leaders and agripreneurs with the necessary skills that will support achieving the twin goals of increasing agricultural productivity and achieving food security.

Invest in Sustainable Agricultural Infrastructure

The ECCP strongly supports the President's directive to prioritise the construction and maintenance of agricultural infrastructure to aid the country in its pursuit of food security.[28] Likewise, we welcome the inclusion of agriculture infrastructure projects in the list of the 197 high-impact infrastructure flagship projects under the Build Better More program.

The Chamber maintains its position that development of infrastructure should include not only the construction of farm-to-market roads and post-harvest facilities, which are essential to reduce transportation costs and post-harvest losses, but also the construction and maintenance of irrigation systems, which is a common and major problem for farmers. In this sense, we strongly push for the use of other alternatives such as solar-powered irrigation systems. Since more investment is a must in this field, we opine that European businesses will be able to help modernise the sector and help alleviate the impact of natural disasters on agriculture with their state-of-the-art solutions through public-private partnerships.

Facilitate Ease of Doing Business

Ease of doing business plays a vital role to ensure the unimpeded and efficient flow of food systems in the country. Not only will it aid in the accessibility of food in terms of production but would also help in terms of affordability as reduction of red tapes would encourage more producers and manufacturers to enter and participate in the market resulting in more options for consumers to choose from.

As one of its core advocacies, the ECCP has long supported and championed for ease of doing business to improve competitiveness of the country's business and investment climate, as well as to increase competition in the market and ensure food self-sufficiency. As such, the Chamber welcomes the significant improvements in terms of the country's business and investment environment with the passage of Republic Act No. 11032 or the Ease of Doing Business and Efficient Government Service Delivery Act of 2018 and most recently the passage of the amendments to the Foreign Investment Act, Retail Trade Liberalisation Act, and Public Service Act and other sector specific initiatives. The Chamber also appreciates the creation of a green lanes for strategic investments through Executive Order No. 18 which was signed in February 2023.

While these are major breakthroughs, we strongly believe that it is vital to introduce policies that further open the food and agriculture sector to trade and investment. As such, the government must analyze which of the food commodities and products would be more efficient to be outsourced and which should be nurtured locally to maximize food production in the country. Likewise, improvements of regulatory processes in the agri-food sector are also pivotal to ensure the unimpeded and efficient flow of food systems in the country.

28 Balinbin, A. (7 July 2022). Marcos Orders DPWH to Focus on Infra Projects Aiding Agriculture. Retrieved from https://www.bworldonline.com/economy/2022/07/07/460024/marcos-orders-dpwh-to-focus-on-infra-projects-aiding-agriculture/

WASTE MANAGEMENT

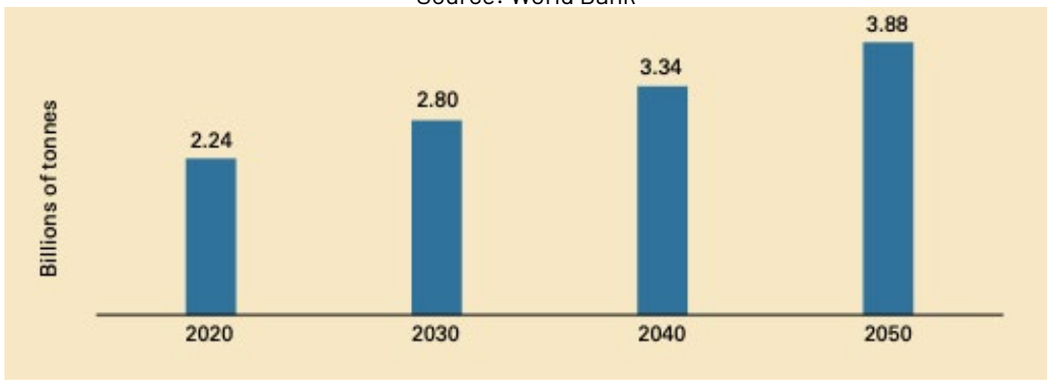
OVERVIEW

Waste management is a global concern affecting numerous, if not all, sectors of society and the whole global population. Throughout the years, the mismanagement of wastes has become a bigger concern as waste generation has massively increased around the world thereby threatening long-term environmental, public health, and socio-economic losses.[1] According to the World Bank, waste generation has grown from 0.74 kg per capita per day in 2016 to 0.79 kg/capita/day in 2020. An estimate of 2.24 billion metric tons of municipal solid waste was generated in the same year, only 55% of which is managed in controlled facilities, with the residual fraction[2] being estimated to be 1.86 billion tons.[3]

Alarmingly, this upward trend in waste generation has no signs of slowing down. In fact, by 2050, the total amount of waste generated is estimated to increase to 3.88 billion tons under the current scenario thereby posting a 73% growth from 2020 and a 93% increase as opposed to figures in 2016.[4] Similarly, global waste generation is estimated to be at 1.09 kg/capita/day, on average while residual waste or waste that is not recovered is expected to increase to 3.32 billion tons, indicating a 0.94 kg of residual waste per capita per day provided that the existing waste management practices are still in place.

Figure 1. Projected Global Waste Generation.

Source: World Bank



1 Alves, B. (14 July 2023). Global Waste Generation - Statistics & Facts. Retrieved from https://www.statista.com/topics/4983/waste-generation-worldwide/#topicOverview
2 Includes waste that is landfilled, incinerated or otherwise ultimately disposed.
3 Kaza, S., Shrikanh, S., & Chaudhary, S. (15 July 2021). More Growth, Less Garbage. Retrieved from https://openknowledge.worldbank.org/entities/publication/ba7feea4-0abe-59fb-bc60-ce6b60eb1ceb
4 Ibid,

Food waste also remains to be a perennial problem despite the ongoing global food crisis. According to the Food Waste Index Report published by the United Nations Environment Programme (UNEP), an estimated 931 million tons of food waste was generated, representing 17% of the total global food production in 2019. Out of the said figure, the biggest bulk came from households at 61% followed by service and retail at 26% and 13% respectively[5]. Globally, 121 kilograms of consumer-level food are wasted annually, with households accounting for 74 kilograms of this waste.[6] This comes at a time where 821 million people were reported to have suffered from hunger while 3 billion people do not have access to a healthy diet.[7]

Table 1. Estimates of global food waste by sector.

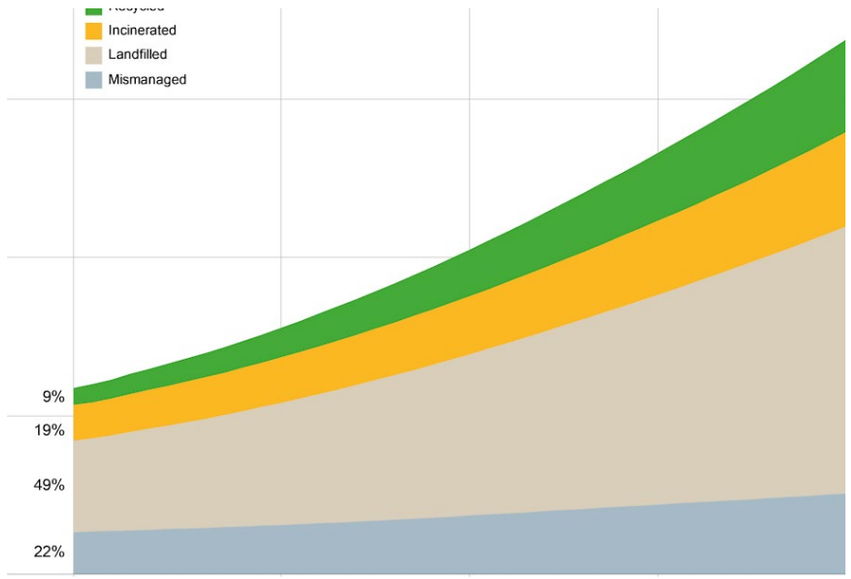
	Global average food waste (kg/capita/year)	2019 total (million tons)
Household	74	569
Food Service	32	244
Retail	15	118
Total	**121**	**931**

Source: United Nations Environment Programme

Similarly, the mismanagement of plastic waste has also been a long-standing economic and environmental issue worldwide. A report by the Organization for Economic Cooperation and Development (OECD) stated that plastic production has increased from 2 million tonnes (Mt) in 1950 to 460 Mt in 2019, while plastic waste more than doubled from 156 Mt in 2000 to 353 Mt in 2019. Despite these growing numbers, it was found that only 9% of plastic worldwide was recycled in 2019, while 19% was incinerated, 50% went to sanitary landfills, and the other 22% was disposed of in uncontrolled dumpsites, burned in open pits, or leaked into the environment.[8]

5 *United Nations Environment Programme. (4 March 2021). Food Waste Index Report 2021. Retrieved from https://www.unep.org/resources/report/unep-food-waste-index-report-2021*
6 *Ibid.*
7 *One Planet Network. (9 February 2022). UNEP Food Waste Index Report. Retrieved from https://www.oneplanetnetwork.org/knowledge-centre/resources/unep-food-waste-index-report*
8 *OECD. (2022). Global Plastics Outlook: Policy Scenarios to 2060. Retrieved from https://www.oecd-ilibrary.org/sites/aa1edf33-en/1/3/1/index.html?itemId=/content/publication/aa1edf33-en&_csp_=ca738cf5d4f327be3b6fec4af9ce5d12&itemIGO=oecd&itemContentType=book#section-d1e585*

Figure 2. Plastic waste in million tonnes (left-hand axis) by waste management category, after disposal of recycling residues and litter collection



Source: OECD ENV-Linkages Model

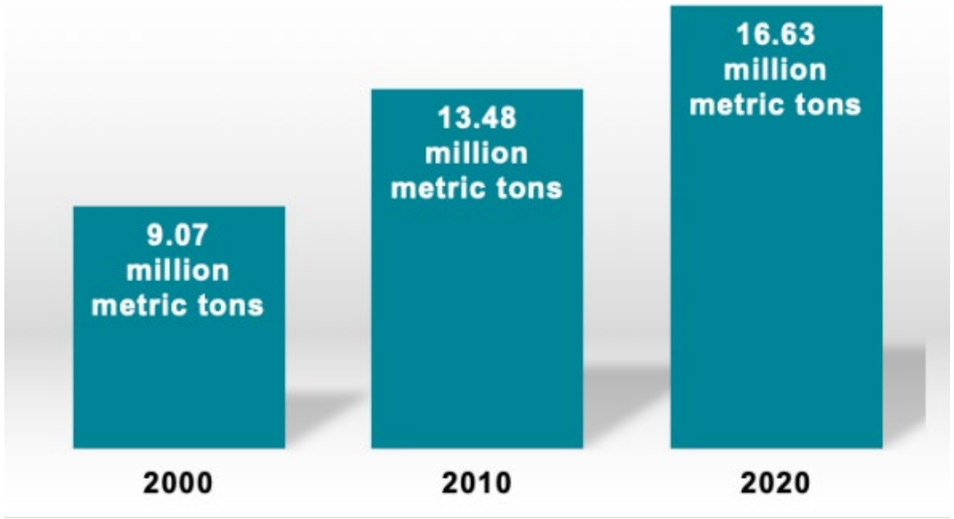
At present, the amount of plastic waste in the waters is estimated to be at 75 to 199 million tons, threatening wildlife and marine ecosystems, as well as producing a high carbon footprint.[9] The United Nations Environment Programme reported that the economic costs of marine plastic pollution in terms of its impacts on tourism, fisheries, and aquaculture are estimated to have been at least USD 6 to 19 billion globally in 2018. Further, the 2020 report indicated that the monetary value of losses of marine natural capital is estimated to be USD 2,500 billion per year.[10]

In the Philippine context, waste management and improving recovery rates have become a priority area to help resolve environmental issues, particularly waste pollution. Republic Act 9003 otherwise known as the Ecological Solid Waste Management Act of 2000 is the country's environmental landmark legislation and was enacted in response to the then looming waste problem in the Philippines. Signed into law on 26 January 2001, the law mandates the '*adoption of a systematic, comprehensive, and ecological solid waste management program in the country*'. Unfortunately, despite continued efforts from the government, the implementation of the said law remains to be a challenge with solid waste generation steadily increasing from 9.07% in 2000, year of implementation, to 16.63 million metric tons in 2020.[11]

9 *United Nations Environment Programme (2021). From Pollution to Solution: A Global Assessment of Marine Litter and Plastic Pollution. Retrieved from https://wedocs.unep.org/bitstream/handle/20.500.11822/36963/POLSOL.pdf*
10 *Ibid.*
11 *Commission on Audit. (April 2023).Performance Audit Report - Solid Waste Management Program. Retrieved from https://www.coa.gov.ph/reports/performance-audit-reports/2023-2/solid-waste-management-program/*

Figure 3. Reported Waste Generation for Calendar Years 2000, 2010, and 2020.

Source: COA | NSWMC Status Report 2006-2018, Case Study of RA 9003 Implementation



According to the April 2023 performance audit report on solid waste management program released by the Commission on Audit (COA), the current waste problem can be attributed to the weak enforcement and compliance to the legislation which is constrained by the technical, financial and political limitations of LGUs and other stakeholders with many LGUs yet to comply with the establishment of local SWM boards, submission of SWM Plans, and establishment of materials recovery facilities (MRFs).[12]

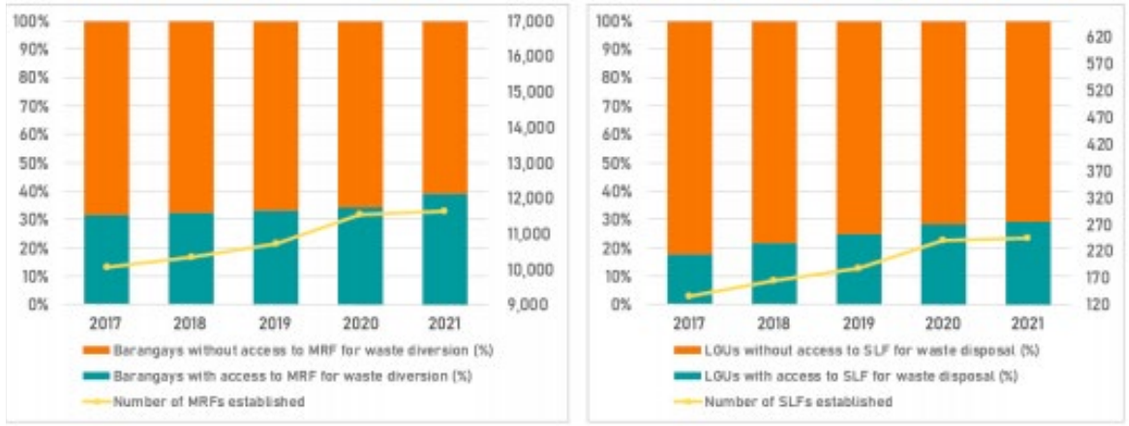
The inconsistent practice of waste segregation and diversion causing a significant bulk of mixed wastes in landfills has led to reduced capacity of MRFs for diversion and has resulted in exceeded capacity of waste volume in landfills and shortened serviceable lifespans in a time where the country has yet to have a sufficient number of waste facilities and landfills to cater to all LGUs and barangays.

According to the report, as of CY 2021, the country has a total of 11,637 MRFs servicing 16,418 or 39.05% of the 42,046 barangays; and a total of 245 operational Sanitary Landfills (SLFs) catering to 478 or 29.25% of 1,634 LGUs. Unfortunately, operation of illegal dumpsites still exists in some LGUs due to the lack of sufficient disposal facilities.

12 Ibid.

Figure 4. Access to MRFs by Barangays and SLFs by LGUs vis-a-vis Number of Established SWM Facilities

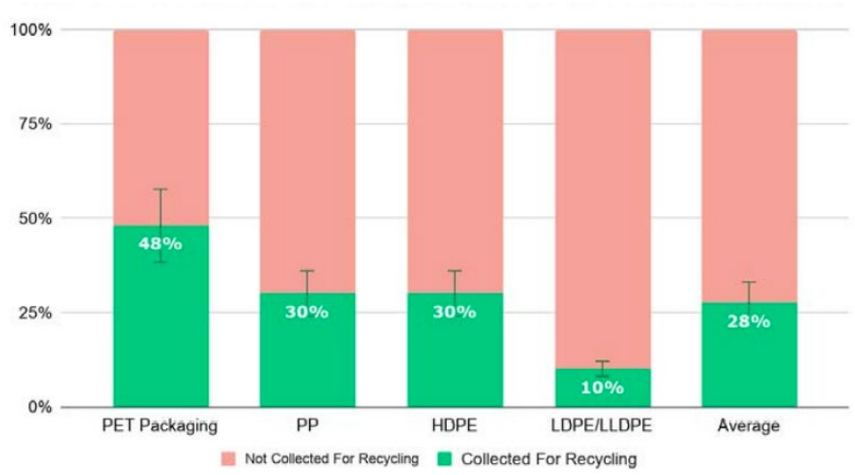
Source: COA | DENR-EMB and NSWMC Data (CYs 2017 to 2021)



Over recent years, plastic pollution has been a great concern for the Philippines and has therefore received increased attention. Plastic waste accounts for a significant share of the country's overall generated waste, with 35% of plastic items consumed being leaked into the open environment and 33% being disposed of in landfills and dumpsites.[13] In relation to recycling rates in the country, it was reported that only 28% of its key plastic resins[14] were recycled in 2019. With this, 78% of the material value of the key plastic resins, accounting to more than USD 890 million per year, is lost in the Philippines when recyclable plastic products are discarded rather than recycled into valuable materials.[15]

Figure 5. Estimated collected-for-recycling (CFR) rates for each resin, 2019

Source: World Bank



13 World Wide Fund for Nature Philippines. (2020). Extended Producer Responsibility (EPR) Scheme Assessment for Plastic Packaging Waste in the Philippines. Retrieved from https://wwf.org.ph/wp-content/uploads/2020/12/WWF_REPORT_EPR_Philippines_2020.pdf

14 Key resins assessed in the study are Polyethylene Terephthalate (PET), Polypropylene (PP), High Density Polyethylene (HDPE) and Linear Low Density Polyethylene/Low Density Polyethylene (LLDPE/LDPE).

15 World Bank Group. (2021). Market Study for the Philippines: Plastics Circularity Opportunities and Barriers. East Asia and Pacific Region Marine Plastics Series. Retrieved from https://openknowledge.worldbank.org/handle/10986/35295

WHERE ARE WE NOW

- **2020 Waste Analysis and Characterization Study (WACS):** The NSWMC released Resolution No. 1380, Series of 2020 which adopts and promulgates guidelines on the conduct of Waste Analysis and Characterization Study (WACS) on municipal solid wastes (MSW) intended to guide local governments in crafting their solid waste management plans. The new WACS properly classifies various waste materials to ensure recyclability and divert waste away from landfills. As of 9 March 2022, approximately 7,700 copies of the manuals were delivered to the Bangsamoro Autonomous Region in Muslim Mindanao - Ministry of Environment, Natural Resources and Energy (BARMM-MENRE) and the Department of Environment and Natural Resources-Environmental Management Bureau (DENR-EMB) Regional Offices to be distributed to their respective LGUs

- **Extended Producer Responsibility Act:** Following the enactment of the legislation on last 22 July 2022 and a series of public consultations, the Department of Environment and Natural Resources (DENR) released DENR Administrative Order No. 2023-02 last 24 January 2023 on the Implementing Rules and Regulations (IRR) of the said law. As of July 2023, the DENR has reported that out of the 4,000 enterprises registered with the DTI, only 16.55% of 662 have submitted their EPR programs; 508 of which are PROs and micro, small, and medium-sized enterprises.[16]

- **Solid Waste Management Plans (SWMP):** Republic Act No. 9003 otherwise known as Ecological Solid Waste Management Act of 2000 mandates every local government unit (LGU) to have a 10-year SWMP containing the LGU's waste management plans in accordance with the national solid waste management framework. According to the National Solid Waste Management Council (NSWMC), as of April 2023, a total of 1,263 SWMPs have been approved. This is 79% of the total 1,592 LGUs mandated to submit and implement their SWMPs in accordance with the law.[17] The Environmental Management Bureau is expecting that the DENR will be able to approve all remaining SWMPs within the year.[18]

- **Proposals on the Ban on Single-Use Plastics:** Following the observation of the National Zero Waste Month in January 2023, Senate President Pro Tempore Loren Legarda renewed her call to pass a legislation to regulate a national ban on single-use plastics. Under her proposed bill, the usage of the use of single-use plastics will be prohibited after a one year transition period wherein a PHP5 tax shall be charged to consumers for each single-use plastic already manufactured and in circulation.[19] The bill also provides for the creation of the Special Plastic Fund which will come from 80% of the collected amount from the said tax, while 20% will proceed to businesses to cover the cost of recycling[20]. The Climate Change Commission (CCC) has expressed its support to the proposed bill, stating that the bill "will not only lead to the phase-out and eventual ban of SUPs in the country, but also support the development and use of more eco-friendly packaging".[21]

16 Bautista, J. (7 August 2023). Only 17% of firms comply with plastic waste management. Retrieved from https://newsinfo.inquirer.net/1813069/only-17-of-firms-comply-with-plastic-waste management#ixzz8DeZm9Nqu
17 Department of Environment and Natural Resources. (16 May 2023). NSWMC Okays Solid Waste Management Plans of 54 LGUs. Retrieved from https://www.denr.gov.ph/index.php/news-events/press-releases/5377-nswmc-okays-solid-waste-management-plans-of-54-lgus
18 Department of Environment and Natural Resources. (16 February 2023). DENR-EMB eyeing 100 Percent Approval of Solid Waste Management Plans Nationwide in 2023. Retrieved from https://www.denr.gov.ph/index.php/news-events/press-releases/4816-denr-emb-eyeing-100-percent-approval-of-solid-waste-management-plans-nationwide-in-2023
19 Philippine News Agency. (23 January 2023). Senate Bill Renews Call to Ban Single-Use Plastics. Retrieved from https://www.pna.gov.ph/articles/1193343
20 Ibid.
21 Philippine News Agency. (13 February 2023). CCC Backs Bill Regulating Use of Single-Use Plastics. Retrieved from https://www.pna.gov.ph/articles/1195085

ADVOCACY RECOMMENDATIONS

Reduce Plastic Pollution through the implementation of an Extended Producers' Responsibility (EPR) Scheme and reconsider drastic move towards the banning of single-use plastics

The ECCP fully supports the government's move to enact a mandatory EPR scheme instead of legislating an outright, sweeping ban of sachet and multi-layered packaging, that is predominantly plastic, which could have a detrimental effect on businesses and the Philippine economy as a whole. Furthermore, in line with the government's effort to promote sustainability, we advocate for the development of incentives to encourage investment in innovative packaging and to make the market more attractive for recycling infrastructure. An example of this would be the proper accounting and system for reduction programs that translate to a company's plastic footprint. We also call on the government to pursue the establishment of recycling infrastructure, particularly for flexible plastics, to further capacitate government agencies, especially the DENR and LGUs, thereby promoting plastic circularity in the country as well as ensuring LGU compliance on the facilitation of proper solid waste management systems and infrastructure.

Relatedly, we maintain our position that an outright banning of single use plastics, when there are no affordable, viable alternatives in the market, will not properly address the growing plastic waste issue in the country. Banning single-use plastics necessitates the existence of affordable, viable alternatives. The alternatives must meet (1) the desired quality, (2) minimum specifications; and (3) circumstances for the use; (4) supply of materials; (5) policy side; and (6) competitive cost. Any alternative material that fails to meet the aforementioned criteria could do more harm than good. It is feared that hastily banning plastics without an appropriate alternative will lead to proliferation of untested substitutes. This could ultimately compromise consumers' health and safety as products could potentially get contaminated or spoiled.

We wish to raise our concerns on the viability of a major shift without conducting any research given that compostable or biodegradable plastics result in shorter shelf life, possible exposure to health hazards especially of food products, and of course, higher cost. Add to this, is the fact that there are currently no facilities in place for industrial composting and there is also a limited market for composts. We believe that there should first be a system, backed up by solid research, and alongside provisions of infrastructure and market support, that should be put in place before we agree to a drastic push for a shift on a commercial scale, given its ultimate effect on the supply and prices of goods and commodities.

Similarly, imposing tax on plastics will burden both the consumers who have to bear the costs of price increases, and the businesses who are already struggling to cope with the highly inflationary market, ultimately affecting the still recovering Philippine economy.

Addressing consumer habits

The Philippine economy is rooted in the strong consumer demand through sari-sari stores, groceries, or supermarkets. There are over 1.3 million sari-sari stores which hold a significant portion of the domestic retail market in the Philippines. Practically and on a regular basis, almost every Filipino prefers to buy/consume products in smaller sizes at lower prices. The need for a paradigm shift in the buying habits of Filipino consumers is an important facet that should first be acknowledged and addressed.

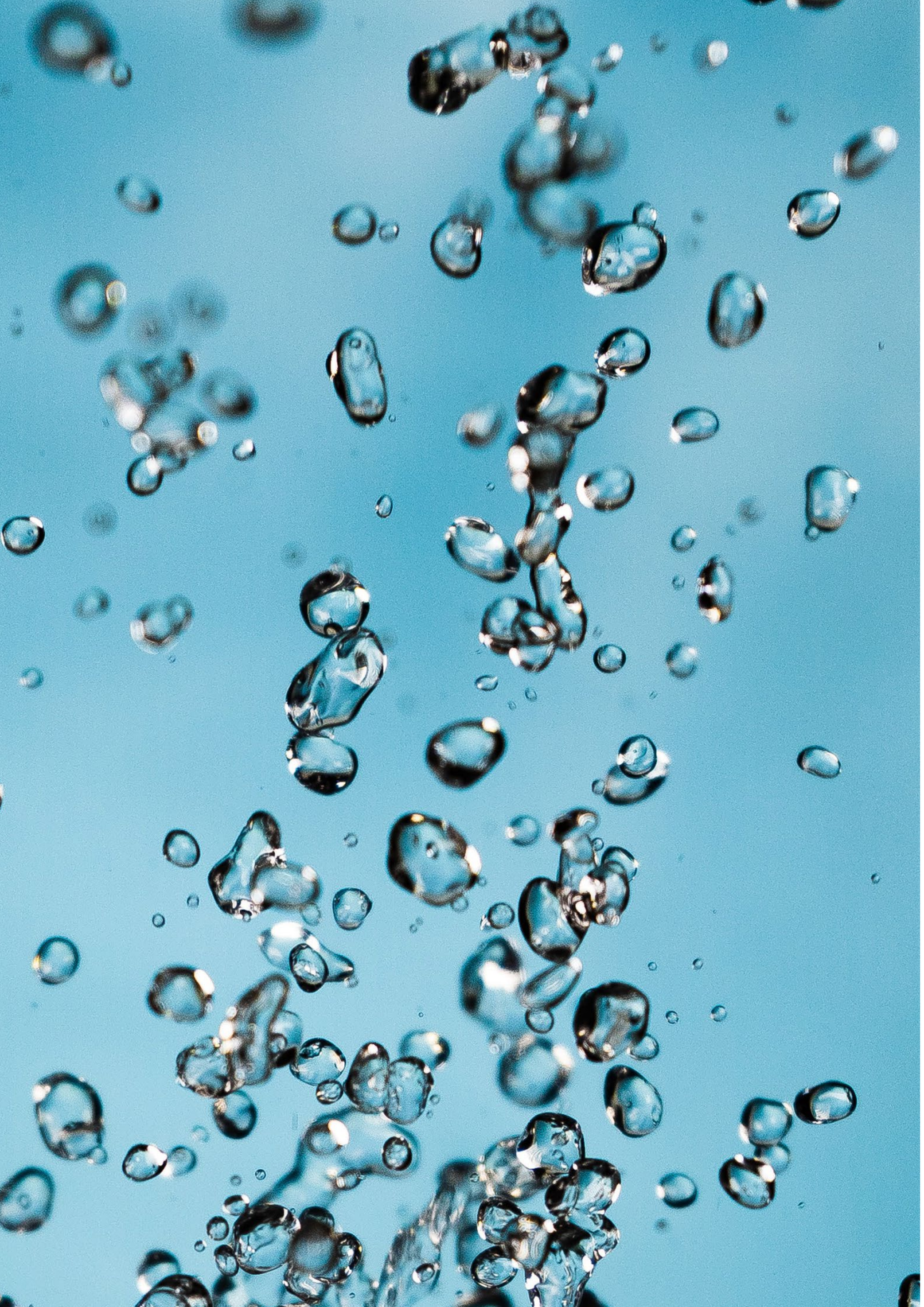
Education is a powerful tool to instil the practice of proper solid waste management to the youth and turn it into a sustainable practice. In recognition of this, the ECCP reiterates our advocacy for the implementation of the Environmental Awareness and Education Act of 2008 which facilitates the inclusion of environmental education in the formal curriculum across the board. It is also worth noting that RA 9003 (Solid Waste Management Act) and RA 9512 (Environmental Education) both provide for the policies and guidelines on environmental awareness and education. This responsibility, however, should not be imposed on businesses especially at the onset, so that it can focus its efforts on the

huge task of recovering plastic waste that has been sold in the market and before it gets to the landfills and our waters.

Facilitate multi-sector collaboration and establish regular dialogue between stakeholders

A regular dialogue among government agencies, business organisations and other stakeholders of the sector is key to the development and the effective implementation of a comprehensive national waste management policy that is responsive to the diverse facets of the issue. We highly believe that the establishment of such a platform will aid the Philippines achieve its net zero targets and comply with its international commitments.

As such, the ECCP reiterates its call to have closer collaboration with the government and other industry stakeholders to help develop sound, data-based and researched-based programs, solutions, regulations and legislation to help curb the persisting issue of plastic pollution. We believe that further collaboration among stakeholders will create better environmental and economic outcomes instead of unintended consequences that will promote the use of less recoverable/recyclable/reusable, unstudied alternatives. We look forward to fostering stronger collaboration and partnerships with the government and other stakeholders to discover and implement innovative solutions and regulations to achieve our shared advocacy.



WATER RESOURCES MANAGEMENT

OVERVIEW

The world continues to grapple with challenges such as climate change, growing population numbers, ineffective water resource management, among others. These factors collectively strain the availability of limited water resources worldwide. The immense scale of these global issues consistently widens the gap between the water supply that is available and the demand for it. For years, this crisis has increasingly posed risks to public health safety, economic productivity, and quality of life.

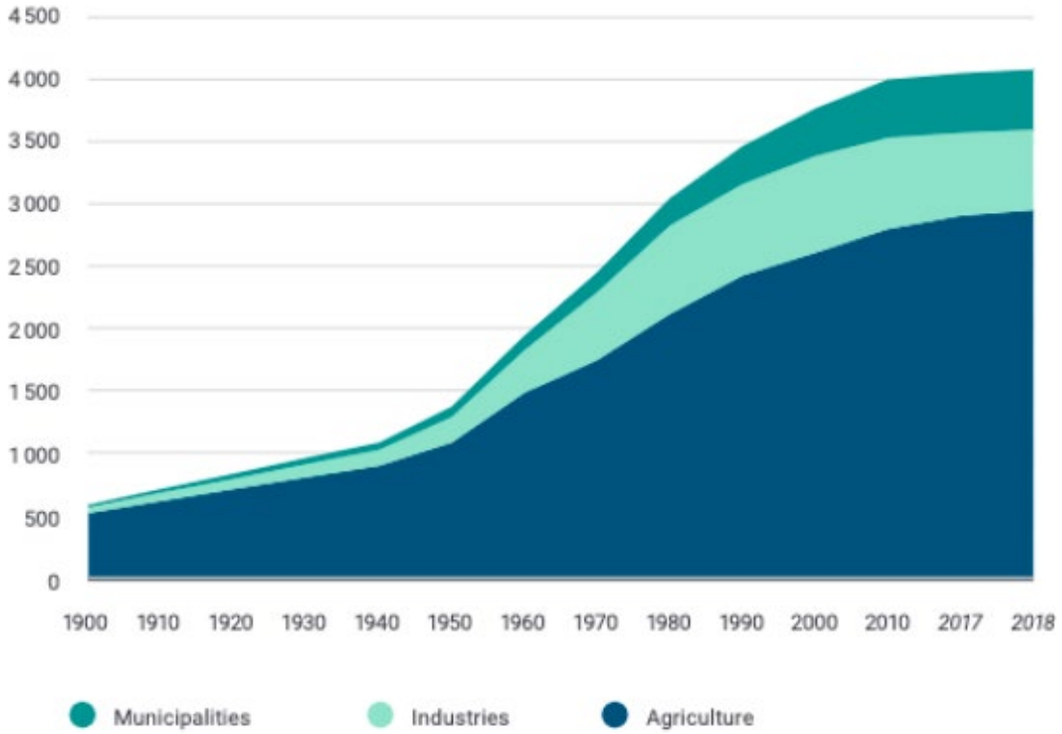
In the 2023 edition of the UN World Water Development Report, the United Nations Educational, Scientific and Cultural Organization (UNESCO) and UN-Water has warned against worsening conditions in terms of water shortages as global urban population experiencing water scarcity is expected to multiply to 1.7-2.4 billion people in 2050 from 930 million in 2016. According to the report, 2-3 billion people have experienced water shortages for at least one month annually thereby posing significant risks to livelihoods, particularly through access to electricity and food security. It was also reported that a total of 2 billion people or 26% of the global population lack access to safe drinking water while safely managed sanitation is inaccessible to 3.6 billion or 56% of the population.[1]

Global water use has continued to increase by around 1% every year over the course of 40 years and is estimated to continue to grow at the same rate up to 2050. Northern America and Central Asia accounted for the largest share of water withdrawals per capita among the regions. In terms of industry, agricultural withdrawals posted an increase of 5% from 2010-2018 and now accounts for 72% of total withdrawals. Municipal withdrawals also grew by 3% while industrial withdrawals were reported to decline by 12% which was mainly attributed to reductions in withdrawals for thermal power production.[2]

1 United Nations Educational, Scientific and Cultural Organization. (15 March 2023). The United Nations World Water Development Report 2023 - Partnerships and Cooperation for Water. Retrieved from https://www.unwater.org/publications/un-world-water-development-report-2023
2 Ibid.

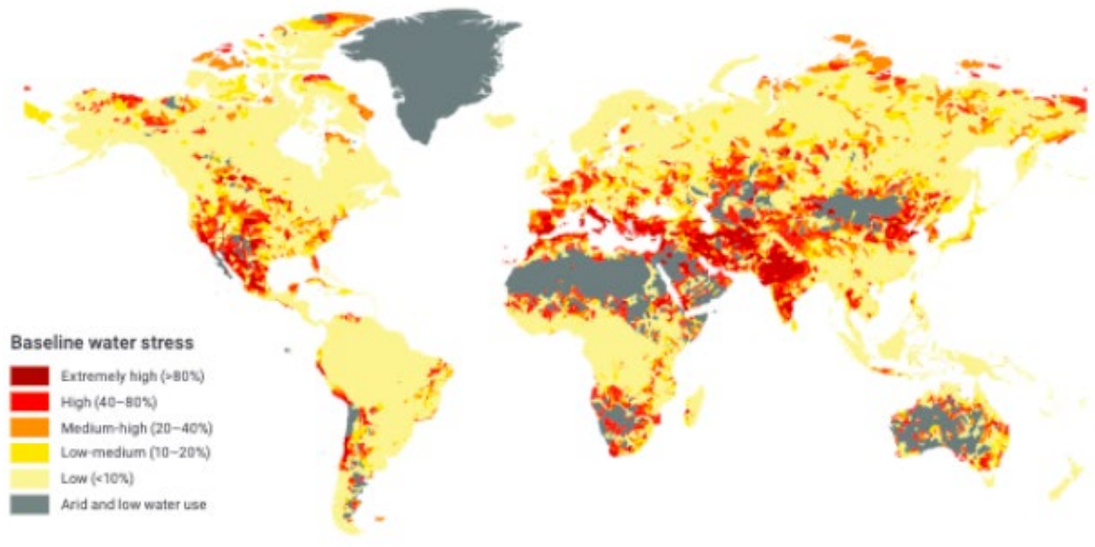
Figure 1. Evolution of global water withdrawals, 1900-2018 (km³/year)

Source: UNEP | FAO based on AQUASTAT



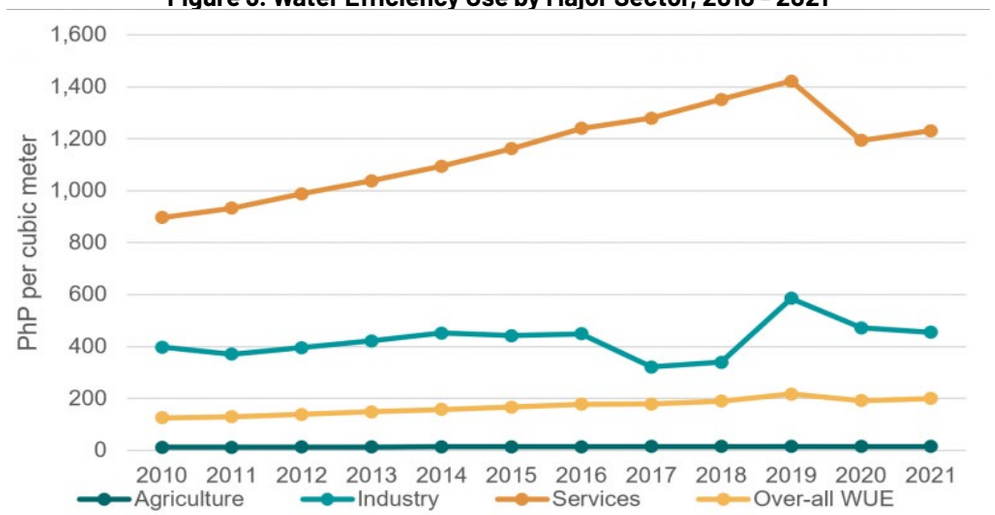
In terms of water availability and stress, available renewable freshwater global volume was reported at around 37,000 km³/year in 2015 while withdrawal was estimated at 3,800 km³/year in 2017. As a result of physical water stress combined with freshwater pollution, water scarcity continues to be one of the most pressing global concerns of today's generation.

Figure 2. Annual baseline water stress



In the Philippines, total water resources potential is at 145,990 million cubic metres per year (MCM/year), comprising 125,790 MCM/year of surface water and 20,2000 MCM/year of groundwater.[3] However, its longstanding challenge in achieving water security has caused over 3 million people relying on unsafe and unsustainable water sources, and 7 million lacking access to improved sanitation.[4] Latest report indicates the country's level of water stress in 2020 at 26.7% [5], with a water stress score at 3.01, which projects a loss of 40% to 80% of its total water supply by 2040.[6],[7] It was also reported that Water Use Efficiency (WUE) increased PHP 192.25 per cubic metre of water used in 2020 to PHP 200.06 per cubic metre in 2021, with the services sector consistently having the highest WUE from 2010 - 2021, contributing more then 63.5% to the total gross value added, but only shared 10.3% to the water used.[8]

Figure 3. Water Efficiency Use by Major Sector, 2010 - 2021



3 National Economic and Development Authority. (2021). Philippine Water Supply and Sanitation Master Plan (PSWSSMP). Retrieved from https://neda.gov.ph/wp-content/uploads/2021/09/102521_PWSSMP_Abridged-Version.pdf

4 Water.org. (n.d.). Philippines' Water and Sanitation Crisis. Retrieved from https://water.org/our-impact/where-we-work/philippines/

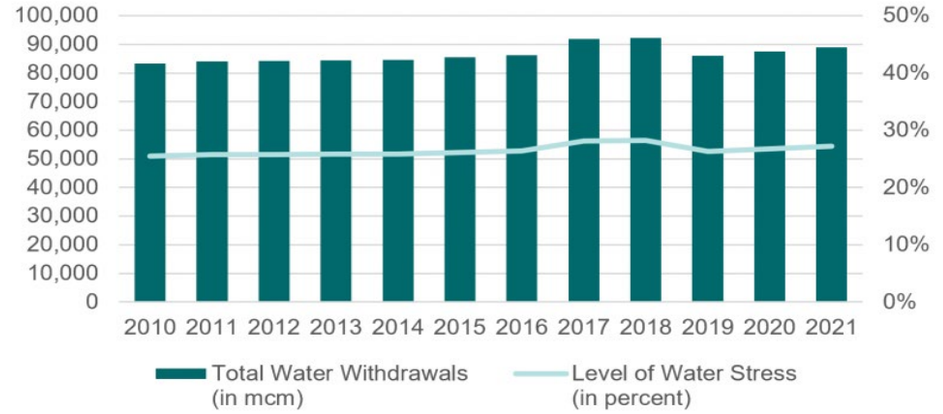
5 Philippines Statistics Authority. (2020). Country's Overall Water Use Efficiency Decreased while Water Stress remains at Low Level. Retrieved from https://psa.gov.ph/content/country%E2%80%99s-overall-water-use-efficiency-decreased-while-water-stress-remains-low-level

6 Luo, T., Young, R., Reig, P. (2015). Aqueduct Projected Water Stress Country Rankings. Retrieved from https://files.wri.org/d8/s3fs-public/aqueduct-water-stress-country-rankings-technical-note.pdf

7 The indicated are not to be seen as predictions, but rather as potential outcomes under specific climate and socio-economic trajectories, which are subject to uncertainties.

8 PSA. (06 October 2022). Country's Water Use Efficiency Increased from 2020 to 2021. Retrieved from https://psa.gov.ph/content/country%E2%80%99s-water-use-efficiency-increased-2020-2021

Figure 4. Level of Water Stress, 2010 - 2021



Source: Philippine Statistics Authority

WHERE ARE WE NOW

- **Creation of an apex body for the Philippine Water Sector:** Following pronouncements on the establishment of a governing agency for the water sector in 2021, the current administration approved the creation of the Water Resource Management Office (WRMO) as a "transitory body pending the creation of a Water Resources Department".[9] Placed under the Department of Environment and Natural Resources (DENR), the WRMO is mandated to develop and implement the Integrated Water Management Plan (IWMP). In the second State of the Nation Address (SONA) of President Marcos, the establishment of a national apex body for the Water Sector was once again mentioned as a legislative priority.

- **Philippine Development Plan (PDP) 2023-2028:** On 27 January, President Marcos signed Executive Order No. 14 thereby approving the PDP for the period of 2023-2028. The said development plan "aims to bring back the country to a high-growth trajectory and, more importantly, enable economic and social transformation for a prosperous, inclusive, and resilient society".[10] Of particular interest to the Environment and Water sector is Chapter 12 which details the government's agenda to improve water infrastructure for the promotion of universal access to safe, affordable, and sustainable water supply and sanitation services.[11]

- **Water Conservation Guidelines:** On 7 June, the Office of the President released Memorandum Circular No. 22 which urge the government agencies to implement water conservation measures with the objective of decreasing their water consumption by 10% following the looming El Niño phenomenon and tasked the WRMO to lead and monitor the implementation of a nationwide water conservation program.[12] Following this, the WRMO released Bulletin Nos. 1 and 2 which entails the water conservation guidelines.

9 Parrocha, A. (1 February 2023). Marcos OKs Creation of Water Resource Management Office. Retrieved from https://www.pna.gov.ph/articles/1194102
10 Galvez, D. (30 January 2023). Macos Jr. Signs Philippine Development Plan for 2023-2028. Retrieved from https://governance.neda.gov.ph/marcos-jr-signs-philippine-development-plan-for-2023-2028/
11 Philippine Development Plan 2023-2028. Retrieved from https://pdp.neda.gov.ph/wp-content/uploads/2023/01/PDP-2023-2028.pdf
12 Office of the President. (7 June 2023). Memorandum Circular No. 22, s. 2023 Retrieved from https://www.officialgazette.gov.ph/2023/06/07/memorandum-circular-no-22-s-2023/

- **Treaty on the Protection of High Seas**: The United Nations has passed a legally binding treaty seeking to protect marine life in international waters after nearly two decades of discussion.[13] Under the treaty, creation and management of marine protected areas in the high seas will now be allowed and will mandate countries to perform environmental impact assessments on their proposed activities prior to its conduct. The treaty also provides for sharing of possible benefits from ocean resources.[14]

- **Build Better More Program**: As part of the Administration's flagship infrastructure program, the National Economic and Development Authority (NEDA) recently signed off 197 high-impact priority projects amounting to PHP 9 trillion which includes projects in water supply and flood management.[15] The NEDA Board also approved the first phase of the Integrated Flood Resilience and Adaptation Project, to be financed by the Asian Development Bank through an Official Development Assistance loan. The estimated PHP20 billion project seeks to reduce and mitigate flood risk and damage as well as improve climate resilience in the country's three main river basins, including the Tagum Libuganon, Abra, and Ranao in Mindanao.[16]

- **UN 2023 Water Conference:** Along with the celebration of this year's World Water Day, the United Nations is hosting the 2023 Water Conference on 22-24 March, the first international conference focusing on freshwater in nearly 50 years.[17] The conference aims to identify innovative solutions and opportunities to fasten the progress on integrated water resources management. The Water Action Agenda, containing the voluntary pledges of countries and relevant stakeholders in pursuit of achieving global water-related objectives, is expected to be adopted by the conference.

13 Paddison, L. (6 March 2023). Countries Agree on Historic Oceans Treaty to Protect the High Seas. Retrieved from https://edition.cnn.com/2023/03/04/world/un-oceans-treaty-biodiversity-climate-intl/index.html
14 Bottolier-Depois, A. (5 March 2023). UN States Agree 'Historic' Deal to Protect High Seas. Retrieved from https://www.philstar.com/headlines/climate-and-environment/2023/03/05/2249501/un-states-agree-historic-deal-protect-high-seas
15 Presidential Communications Office. (9 March 2023). PBBM-led NEDA Board greenlights 194 high-impact priority projects under the Build Better More (BBM) program. Retrieved from https://pco.gov.ph/news_releases/pbbm-led-neda-board-greenlights-194-high-impact-priority-projects-under-the-build-better-more-bbm-program/
16 Gita-Carlos. R.A. (3 February 2023). NEDA Approves 6 more 'High-impact' Projects. Retrieved from https://www.pna.gov.ph/articles/1194310
17 Stockholm International Water Institute. (20 February 2023). 6 Things to know about the UN 2023 Water Conference. Retrieved from https://siwi.org/latest/6-things-to-know-about-the-un-2023-water-conference/

ECCP ADVOCACIES

Creation of an overseeing agency for the water sector

With over 30 government agencies involved in varying roles and jurisdictions, the governance of the Philippine water sector has long been fragmented and uncoordinated. This has unnecessarily created bottlenecks and confusion for potential and existing investors in the sector. To address this issue, and in line with our long-standing advocacy of attaining water security in the Philippines, the Chamber reiterates our call for the **creation of an apex bod**y to lead and harmonise the crafting and implementation of policies and initiatives for the Philippine water sector.

As an interim measure, we welcome the recent creation of the WRMO as a first step in fully realising the said objective as it aims to strengthen collaboration among various agencies in implementing water management programs in accordance with the Integrated Water Management Plan, to be crafted by the said agency. Furthermore, we highly encourage that a **Multistakeholder Advisory Panel** be established under the WRMO with representation from the private sector, academe and civil society to serve as an additional soundboard for the said office in the crafting and implementation of policies, programs and projects for the water sector

On a similar note, it is imperative to approach water resource planning using **Integrated Water Resource Management (IWRM).** The IWRM is an internationally recognized framework that is used to guide countries on their journey to water security. It is based on the idea that water issues should not be approached in isolation, but rather in a more holistic manner due to the interdependence of the uses of finite water resources.

To end, the ECCP reiterates its call to finally legislate an overseeing body for the said sector which has long been overdue. We believe that having an executive water department tasked to harmonise and monitor all water-related efforts will provide strategic direction which would not only help in solving water scarcity in the country but would also aid in the establishment and operation of businesses as well as attract new investors. We look forward to the sustenance of the interest from the government to bring about the much-needed changes in the water sector into fruition.

Establish regular public-private dialogue

We remain committed to working with the government and other stakeholders in resolving the current water-related issues in the country. The ECCP, together with its members, strongly advocates for regular multi-stakeholder engagements to be institutionalised in order to allow exchange of insights, facilitate coordination and come up with effective solutions on water-related issues. Doing so will hopefully provide more synergy with public-private partnerships as it leads and encourages the establishment of investments, technology, benchmarking, and sharing of best practices resulting in the improvement of the water sector and for the benefit of our people.