PHILIPPINE GREEN ECONOMIC RECOVERY

A green economic recovery strategy is key to sustaining development and building back better from COVID-19. Restructuring priorities by integrating the limitations and risks of climate change and environmental degradation are integral to achieve this recovery. The findings of this paper illustrate that while there is a decline in green expenditures to address relief efforts, the window to shift towards recovery is not closed yet.

It has been more than a year since the World Health Organization declared a COVID-19 pandemic and the Philippine government imposed the world’s longest lockdown. Since then, cases still continue to surge at unprecedented and alarming levels, with the highest recorded single-day tally at 15,310 infections on 2 April 2021, and the occupancy of intensive care units in Metro Manila nearly breaching critical levels.

Despite trailing behind a science-based pandemic response, any indication of sustained recovery or return to normalcy seems far as the government rolls out its vaccination program. If there are no delays in its timeline, around 50% of the Philippine population should be inoculated by the third quarter of 2021.

Going back to normal, however, is not good enough. In a study published by the Stratbase Albert del Rosario Research Institute (ADRI), “Paths to Green Economic Recovery,” it argued that the pandemic provided an opportunity to incorporate interventions to ensure not only health preparedness and social safety nets but resilience, disaster preparedness, and environmental protection.

As we celebrate Earth Month, we gloss over the developments in the environmental and climate front the Philippines has achieved in so far as green recovery from the COVID-19 pandemic is concerned.

This paper briefly discusses the country’s progress in green economic recovery, the lessons and challenges of current environmental and climate issues, and the opportunities of green financing in economic recovery.
**IS THE PHILIPPINES ON TRACK FOR A GREEN RECOVERY?**

As of February 2021, green recovery spending from the PHP 568 trillion allotment releases under Bayanihan I and II was insignificant. This is glaring as only PHP 24 billion was planned to be allocated for environment-related measures in the Bayanihan II Law (e.g. Plant, Plant, Plant Initiative; development of accessible sidewalks and protected bicycle lanes; and procurement of bicycles).

This is reiterated by Global Recovery Observatory noting that there was no green recovery spending from the government’s USD 13 billion total recovery expenditures. Understandably so, the bulk of allotment releases was spent on stimulus packages for vulnerable sectors, enhancement of healthcare facilities, and development of isolation facilities, among others.

A report by ING Bank indicates that this phenomenon is similarly observed for countries with low environmental performance indices (EPI). This is ironic as those with lower EPIs need to boost efforts to address environmental challenges; whereas those with higher EPIs continue to make more efforts such as Singapore and New Zealand.

Although the ability to spend on environmental measures is a factor of income and development, the challenge is to build back better through a green economic recovery. Core aspects of this recovery approach revolve around investing in better and green buildings; improving access to a healthy and sustainable food system; promoting smart and sustainable mobility; building habitable cities; investing in sustainable and resilient infrastructure development; institutionalizing better partnerships; and improving environmental protection and regulation. Conventional or business-as-usual disregard of social and environmental elements in spending has failed and revealed that we are unprepared to face unexpected crises such as the pandemic or whatever comes next.

Many high-income countries are likewise clustered at 0% green recovery spending. In the report, “Are We Building Back Better? Evidence from 2020 and Pathways for Inclusive Green Recovery Spending,” Oxford’s Economic Recovery Project and the UN Environment Programme (UNEP) analyzes COVID-19-related fiscal rescue and recovery efforts by leading economies.

UNEP notes that “while green or environmentally positive spending grew over 2020, it remains low as a proportion of recovery spending.” The same report underscores that “recovery spending has fallen short of nations’ commitments to build back more sustainably” as only USD 368 billion of USD 14.6 trillion COVID-induced spending (rescue and recovery) in 2020 can be considered ‘green.’

So, is the Philippines on track for a green recovery? The short answer is, ‘no’.

The opportunity to spend on green and sustainable recovery, however, is not over yet. Perhaps, the key lies in building on the lessons built throughout the years.

**PHILIPPINE ENVIRONMENTAL AND CLIMATE LESSONS IN THE LAST 10 YEARS**

In the most recent EPI ranking, the Philippines scored 38.4 and ranked 9th in the region as reflected on the table below. This score is slightly below the regional average of 40.8, and reflects an aggregate change of -4.1 in the last 10 years.

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### TABLE 1. PHILIPPINES EPI 2020 SCORECARD

<table>
<thead>
<tr>
<th>Environmental Performance Index</th>
<th>EPI Score</th>
<th>10-Year Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENVIRONMENTAL HEALTH</td>
<td>34.1</td>
<td>+4.9</td>
</tr>
<tr>
<td>Air Quality</td>
<td>30.4</td>
<td>+3.8</td>
</tr>
<tr>
<td>Sanitation &amp; Drinking Water</td>
<td>39</td>
<td>+7.1</td>
</tr>
<tr>
<td>Heavy Metals</td>
<td>48</td>
<td>+3.1</td>
</tr>
<tr>
<td>Waste Management</td>
<td>17.4</td>
<td>-</td>
</tr>
<tr>
<td>Ecosystem Vitality</td>
<td>41.4</td>
<td>-10.0</td>
</tr>
<tr>
<td>Biodiversity &amp; Habitat</td>
<td>56.6</td>
<td>-3.4</td>
</tr>
<tr>
<td>Ecosystem Services</td>
<td>31.9</td>
<td>-7.4</td>
</tr>
<tr>
<td>Fisheries</td>
<td>12.3</td>
<td>-0.7</td>
</tr>
<tr>
<td>Climate Change</td>
<td>42.8</td>
<td>-17.9</td>
</tr>
<tr>
<td>Pollution Emissions</td>
<td>68.4</td>
<td>-31.6</td>
</tr>
<tr>
<td>Agriculture</td>
<td>44.1</td>
<td>+5.8</td>
</tr>
<tr>
<td>Water Resources</td>
<td>0.7</td>
<td>-</td>
</tr>
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**SOURCE:** Yale Center for Environmental Law & Policy (2020)
The report notes the largest increases in the last decade were in the areas of Ozone exposure (+19.8) under Air Quality, Protected Areas Representativeness Index (+16.5) Biodiversity and Habitat, and Methane growth rate (+17.2%) under Climate Change. Meanwhile, the largest decreases were Species Habitat Index (-51.3) under Biodiversity and Habitat, and Carbon Dioxide growth rate (-33.7). Notably, indicators that scored the lowest were Household solid fuels, Waste Management, Marine Protected Areas, Fisheries, and Water Resources (i.e. Wastewater Treatment).

According to the Climate Action Tracker (CAT), the Philippines is rated “consistent with the 2009 Copenhagen 2°C goal and therefore fall within a country’s “fair share” range.” However, this may just be conditional as pollution emissions continue to increase. It does, however, provide the government an opportunity to particularly curb CO₂ emissions and meet the Paris Agreement target. CAT notes that at this rate, this will help reduce emissions growth in 2010 by up to 30% (~60 MtCO₂e) below current policy projections. So far, the Philippine government was able to set a moratorium on new coal or Greenfield Coal-Fired Power Projects and seems to steer away from an energy-neutral policy towards a preference for renewable energy (RE) resources.

The current energy mix, while still dominated by coal, is almost 30% made up of renewable energy. It is worth noting that this reflects the growing interest in and collaboration with the private sector to pursue an economically viable transition. Data from the Department of Energy (DOE) shows that the current RE mix is made up of hydro energy (3,779 MW), followed by geothermal (1,928 MW), solar (1,010 MW), biomass (447 MW), and wind (443 MW). Luzon has the highest number of RE installed capacity at 4,466 MW, followed by Visayas at 1,757 MW, and Mindanao at 1,394 MW. Most of the hydro plants are located in Luzon, while most of the geothermal plants are in the Visayas. See Figure 2.

**Figure 1. Existing Grid and Off-Grid Connected Power Plants in the Philippines, by Installed Capacity (MW)**

**Figure 2. Installed Capacity of Renewable Energy Sources, by Region (MW)**
The drive to increase RE investments, as indicated by the increasing share of RE in the energy mix in particular wind and solar,\textsuperscript{16} will contribute to the considerable decrease of emissions. CAT expects a 5% to 8% reduction of emissions in 2020 compared to 2019, “mostly driven by the sharp reduction in energy demand, especially in the transport sector.”\textsuperscript{17} DOE’s Philippine Energy Plan (PEP) 2018 – 2024 notes that a secure and stable supply of energy through a technology-responsive energy sector will be prioritized through the use of “electric vehicles, hybrid electric vehicles, auto-LPG vehicles, and compressed natural gas-fed vehicles. Other initiatives also involve the development of solar-powered motorized boats, government vehicle re-fleeting using “Next Generation Vehicles,” prototyping of Original Engine Manufacture for Auto-LPG jeeps and the mainstreaming of Alternative Fuels Vehicle.”\textsuperscript{18}

Indeed, exploring additional supply from alternative sources will require sufficient planning, collaboration with the private and public sector, and analysis of current energy facilities and their corresponding capacities vis-à-vis projected demand. There is also a need to balance this with ramping consumer awareness on energy efficiency, improved retail competition in the electricity market, and ensured energy quality from generation, transmission, and distribution facilities.

Truly, the Philippines has made significant policy strides on the environmental front and continues to do so. A profound realization this pandemic taught us is that physical shocks such as public health crises can translate to sweeping socioeconomic consequences;\textsuperscript{19} the same is something we are not resilient from. In the same vein, climate and environmental risks are economic vulnerabilities that we are unprepared for and need to be taken seriously.

The Expanded National Integrated Protected Areas System or E-NIPAS Act of 2018 (RA 11038) is one of the recently adopted laws that strengthens environmental protection and biodiversity conservation. Currently, the Philippines has 244 Protected Areas making up 7.8M hectares (107 legislated; 13 proclaimed; 124 remaining initial components) in the area.\textsuperscript{20} This is significant as the country “contains two-thirds of the earth’s biodiversity and between 70% and 80% of the world’s plant and animal species; and also, one of the world’s biodiversity hotspots with at least 700 threatened species.”\textsuperscript{21} Thirty percent (30%) of protected areas are situated in Region IV-B or MIMAROPA Region, followed by Region II or Cagayan Valley and Region VII or Central Visayas Regions at 13% and 8%, respectively.\textsuperscript{22} (Figure 3) This is where we will find the more famous watershed forest reserves and mangrove forest reserves of Palawan, the Apo Reef Natural Park, and Puerto Princesa Subterranean River Natural Park, among others.
The E-NIPAS Act reinforces and supports stricter compliance and enforcement of policies. It provides for “scientific and technical support for biodiversity conservation; delineation and demarcation of boundaries; deputation of support especially on enforcement to the Protected Area Superintendent; and regular reporting on the status of the Integrated Protected Area Fund and allocating 75% of all revenues raised to the Protected Area Management Board.” It also expands the mandate of the Department of Justice (DOJ) allowing them to appoint special prosecutors to handle cases related to protected areas, and to assist in the training of wardens and rangers in arrests and criminal procedures.

Illegal wildlife trade (IWT) is a serious threat to our biodiversity. Data from the Department of Environment and Natural Resources—Biodiversity Management Bureau (DENR-BMB) shows that “of the 337 seaports registered with the Philippine Ports Authority (PPA), 17 had cases of wildlife confiscations from 2010-2020.” Coincidentally, most seaports where these wildlife confiscations occur are in the MIMAROPA Region with large protected areas and needless to say, a thriving yet at-risk habitat and species.

Recently concluded assessment workshops reveal that while there are established standard operating procedures for inspection and seizure of wildlife and other illicit goods, there are loopholes that traffickers can to exploit. To name a few, “absence of a single window environment for Electronic Clearance System; lack of intelligence and intelligence access on a regional scale that may help the early detection and interception of wildlife contrabands entering the port; and lack of risk profiling system complemented with wildlife crime risk indicators, among others.”

Stronger partnerships and cooperation have since then been inked to deter IWT in ports, as well as support for capacity-building training and assessment workshops. Increasing accessibility to islands will be disadvantageous especially with porous borders and lax enforcement. DENR together with law enforcement and regulatory agencies and local government units conducted webinar training to equip stakeholders with sufficient knowledge and appropriate skills to respond to rising cases of IWT in the country.

Partnerships with businesses are also a key aspect in biodiversity conservation. Some large companies have exceeded expectations in doing their part in protecting the environment. Ayala Land, one of the sustainability champions in the country, was recently granted an “A” leadership rating on climate change by the Carbon Disclosure Project. The company reportedly is on track in reaching 100% of carbon neutrality goal in 2022 by switching to RE and protecting 586 hectares of its land bank by designating...
it as carbon forests. Another conglomerate, FDC Misamis Power Corporation (FDC Misamis), was also applauded by DENR-Region 10 as a “show window of a successful carbon sink for coal-fired power plants in the Region.” The report highlighted its sustainability of its carbon sink management program area and management and supervision scheme of existing forested areas. Private sectors’ social development programs in carbon management and reforestation are essential biodiversity conservation particularly in capturing carbon emissions and maintaining air quality.

Aside from the management of green and brown resources, it can be surmised that the current conditions of our marine resources are affecting our EPI. Climate change, through the increased warming of temperatures and increased acidification, and ocean pollution are detrimental and most pressing concerns to livelihoods, the economy, and our quality of life.

The Philippines, together with China, Indonesia, Malaysia, Thailand, and Vietnam, make up almost 60% of global marine plastic debris that enters the ocean. In 2018, ADRI wrote that the Philippines has a serious plastic waste pollution crisis that roots from lack of quality waste management systems which includes large-scale recycling facilities and mechanisms; negligent consumer behavior; and the need for more sustainable innovation and plastic design, among others.

Water pollution is said to come from untreated domestic (also called “municipal”) wastewater discharges (33%), industrial sources (27%), agriculture and livestock (29%), and non-point sources such as agricultural farms (11%). This reinforces the nuance of ocean pollution, particularly plastic waste leakage from both collected and uncollected wastes that find their way to water sources. Needless to say, engaging consumers to be responsible for their behavior in recycling and discarding wastes is as important as other scales in plastic innovation, plastic bans, and even increased regulations for the private sector. For instance, there are initiatives such as deposit return schemes to collect back beverage containers made of plastic, metal, and glass, and discounts for using reusable cups.

Some companies have taken the lead in sustainability as well. Coca-Cola Philippines’ PHP 2.3 billion recycling plant recently approved by the Board of Investments is a pioneer in large-scale recycling system in the country. It is projected to recycle almost two billion pieces of plastic bottles annually; and hopefully, will make a dent in mismanaged plastic waste especially with stronger partnerships in the collection and material recovery. In terms of energy efficiency, 65% of Coca-Cola’s total energy consumption in its Philippine operations is being sourced from RE. Renewable and clean sources of energy, such as solar and biomass, are well integrated into their operations.

Unilever Philippines recently announced the launch of its plastic collection program, Walastik na Pasig. In partnership with the City of Pasig and Cemex Philippines, the program invites the participation of households and community junk shops in practicing proper segregation and recycling. With a corresponding cash incentive, participants are encouraged to collect and clean sachets, plastic bags, and other single-use packaging.

Upscaled and replications of such solutions will be important as plastic mismanagement can be exacerbated as the ongoing pandemic led to an increased reliance on plastic from single-use surgical masks, gloves, plastic shields, and plastic packaging for most of the necessities delivered to homes.

Lack of wastewater treatment and management is a persistent problem in the Philippines that adds to marine pollution, and not to mention, risks availability of good quality of water. When the issue of pollution at Manila Bay resurfaced the news in 2019, it was found out that only 21% of commercial establishments and 30% of hotels were connected to a sewerage treatment plant (STP). Roughly 50% of “10,168 industries were served with Notices of Violation (NOV) for failure to acquire permits to discharge treated wastewater.” In fact, only 10% of wastewater is treated and only 5% of households are connected to sewerage networks and treatment facilities. Though a vast majority are connected to septic tanks, sludge treatment, and disposal facilities are rarely availed by household consumers, a large part of domestic wastewater is discharged without treatment. This poses a great risk to already depleting water sources.

In 2025, it is estimated that “water availability will be marginal in most major cities and in 8 of the 19 major river basins in the country.” This will particularly be challenging for Metro Manila given its dense population, as well as other urban areas such as Metro Cebu, Davao, Baguio, Angeles, Bacolod, Iloilo, Cagayan de Oro, and Zamboanga.

The same report notes that septage management programs across the country need to be accelerated especially for low-density and small urban areas; while the rapid transition to centralized wastewater collection needs to be undertaken for densely populated and larger urban areas. Needless to say, this is constrained as government efforts are directed towards improving households’ access to water supply services. There is a “significant lack of wastewater collection and treatment facilities because of low investments in the required infrastructure.” Even treated and untreated industrial wastewater are allowed to be discharged to rivers and water bodies, given that they meet national standards. However, this is not observed at all times.

Only a few local governments have implemented sewerage or effective septage management schemes despite their clear responsibility to do so. In the meantime, private companies, mostly in residential areas and industrial parks, are mandated to have their wastewater systems installed and maintain them.
Traditional wastewater technologies are used in the treatment of industrial wastewater such as the use of activated sludge system, aeration system, and conventional biological treatment process and membrane filtration. At any rate, smart and sustainable wastewater treatment solutions are available in the Philippines. A few companies are implementing wastewater reuse, bioenergy production, and nutrient recovery for fertilizers from organic waste and wastewater. While this is common practice in industrial parks and economic zones, wastewater can also be re-used for residential, industrial, agricultural, and urban uses.

An economically viable energy transition, biodiversity conservation, and marine health are only three elements of sustainable development. While we have fallen short of our aspirations of building back better, after a year, spending on these green elements over time is invaluable. These have indirect impacts and associated gains that subsequent green efforts and investments can spring from. After all, “opportunities to spend wisely on recovery are not yet over” as the pandemic progresses to its later stages.

The Asian Development Bank (ADB) levels off on balanced but cascading pillars for green recovery strategies from relief, recovery to rejuvenation. [Figure 5] What this means is that while the attention of policymakers in some countries are currently on relief or rescue spending, this may eventually turn towards recovery measures. While an optimal window for the shift is recommended, what can be observed is that we have fallen behind our neighbors in pandemic response and vaccination rollout. We can only hold out hope that the shift happens soon but what is clear and definite is that we cannot afford to trail along with green recovery.

ADB underscores that “recovery measures focus on equitably raising prosperity can help governments catalyze new economic growth, innovation, and jobs to meet short-term needs and establish long-term strength.” While there are conflicting pressures and priorities on how government allocations are balanced, the framework serves as a reminder protection of our natural resources and climate resilience is as important and integral as relief and recovery efforts, commercial finance, public-private partnerships, and capital markets.

TAPPING INTO GREEN FINANCING

Access to finance is a critical element in green spending prior to the pandemic, and more so in green recovery. In 2020, the government borrowed a record of PHP 2.74 trillion, with the biggest share on domestic borrowing or from the sale of treasury bills and bonds, to address the health and socioeconomic crisis from the ongoing pandemic. It is not necessarily negative as solving the health aspect of the pandemic is arguably the only way to come close to economic recovery. That said, public policy and finance, as well as international support, are needed to achieve our sustainable goals.

There are welcome international funding opportunities before and during the pandemic that can initiate and strengthen green recovery. For energy transition, the European Union allotted PHP 3.76 billion in grant funding to the Philippines in October 2020 under the Access to Sustainable Energy Programme. This grant will “support sustainable recovery efforts in the Philippines, particularly within the energy sector.”

Since the inception of a three-year Global Environment Facility (GEF)- 6-funded project with ADB in 2017, DENR-EMB implemented various initiatives to strengthen capacity-building to combat wildlife trafficking and strengthen biodiversity conservation. Overall, the initiatives aim to focus on “legal and institutional reforms, capacity building in the full law enforcement chain, and reduction of demand for illegal wildlife and wildlife parts and derivatives.”

More recently, the US Agency for International Development (USAID) granted USD 890,000 or nearly PHP 42 million in January 2021 to address plastic pollution in the Philippines. Grantees were Communities Organized for Resource Allocation (CORA) for a project in Parañaque City, the Catholic Relief Services for its Manila City project, Green Antz
Builders Inc. for a project in Pasig City, the Plastics Credit Exchange for its project in Manila City, and Project Zacchaeus for its undertaking in Puerto Princesa, Palawan. This partnership aims to "test new models to increase recycling rates, reduce landfill waste and leakage into nearby bodies of water, and improve community livelihoods." However, support from USAID in waste management is not novel as its traces back in 2016 through its Municipal Waste Recycling Program to "reduce land-based sources of ocean plastic pollution." The examples briefly discussed in the paper brought to light technical and financial assistance that strategic sectors, industries, and local government units have had that our aspirations to build back better can maximize. To name a few:

- Green Financing Program (GCF) is an umbrella program of the Development Bank of the Philippines (DBP) that supports its thrust of environmental protection, as well as the country’s green growth strategy. Through this GCF, DBP aims to provide technical and financial assistance to adopt "environment-friendly processes and technologies and incorporating climate change adaptation and mitigation and disaster risk reduction measures.

- Carbon Finance Support Facility (CFSF) under the Landbank of the Philippines (LBP) was developed, with the help of continued engagement with the World Bank, for projects that support climate change and promote sustainable development.

- The Bangko Sentral ng Philippines (BSP) is looking at investing more in green bond funds, an additional USD 200 million in green bonds in 2020, on top of the USD 150 million made in October 2021, as it bolsters its sustainable finance framework. This framework encourages banks to issue more green, social, and sustainability bonds. BSP notes that this signifies the growing significance of sustainability assets in investments which should be further advanced with a sustainable recovery plan. Its program is geared toward raising the central bank’s capacity for climate and environmental risk management and mainstreaming green practices within the organization and the industry.

The efforts of BSP unveils the role of green finance market and green bonds in green recovery. According to the ADB, “green bonds have seen massive growth in the last 4 years and more recently are giving rise to various thematic instruments such as sustainability bonds, social bonds, sustainability-linked bonds, green loans, and sustainable loans.” The same report notes that Climate Bonds Initiative (CBI) estimates the volume of green bond and loan issuance globally increased 50% to USD 258 billion in 2019.

In Southeast Asia alone, the “issuance of green bonds and green loans almost doubled in 2019, reaching USD 8.1 billion” despite representing only 3% of the global total and 12% of the Asia and Pacific region total in 2019. Green bonds in the Philippines grew exponentially in the last four years. At any rate, this reflects a strong and deepening appetite for green finance in the region, and a glance on the possibilities for green recovery.

This may even be a way to mainstream green recovery strategies to green infrastructure. This is promising as the government has been intent on ramping its infrastructure development plans. These massive resources can be channeled into low carbon investments in the Philippines which in return, could attract private investments to reach sustainable development goals.

UNEP explains that in energy transition, factors that affect a slow take-up of green measures include “high technological barriers to entry, low prevalence of enabling technologies (for instance, reliable electric grids for powering electric vehicles), low absorptive capacity in R&D, a domestic labor force without sufficient skills to implement investments, and an absence of existing assets to upgrade or retrofit.

The same can be said for other green elements. Rather than being treated as an isolated sector in national development priorities, green solutions through government allocations, structural policy changes, and green financing, need to be integrated. National and international climate and sustainable development goal commitments, as well as policies related to water security, food security, disaster risk reduction, sustainable and inclusive growth, and green jobs, need to be revisited and prioritized.

**KEY TAKEAWAYS AND CONCLUSION**

The COVID-19 pandemic is a reminder that there are gaps and weaknesses in our health and social systems that left us vulnerable and led to harsh socioeconomic consequences; and that we are glaringly ill-prepared. However, environmental challenges and climate risks are not unforeseen, that we have to prepare for and justify so much so as they already exist. As provided in this paper, supporting green measures and ramping up environmental protection standards build resilience against future pandemics and natural disasters alike. They also ensure more inclusive and sustainable recovery pathways.
As such, this paper reiterates the call for more government action and leadership, and corresponding accountability and transparency. While we expect more green measures and programs to be mainstreamed in the budget as government turns its attention to recovery, we need to build on our progress against long-term economic, environmental, and social objectives.

Second, public-private partnerships work and have meaningful and long-term impacts. At the onset of the pandemic, it cannot be discounted how the private sector steps in and augments limited government resources in relief efforts. It can also be gleaned that the private sector has so much to offer in terms of technological solutions and expertise, and financial resources from renewable energy investments, waste management, and wastewater treatment, among others. Broad-based partnerships must be able to promote responsible enforcement and compliance while encouraging participation in sustainability and environmental protection.

In a recent ADRI forum, Stratbase ADRI President Dindo Manhit said that the private sector is key in creating a more sustainable and inclusive economic recovery through eight strategic initiatives: addressing inequality and ensuring livelihood by creating jobs; reducing the digital divide through digital acceleration; addressing climate change and reducing greenhouse gas emissions; helping strengthen the health system; pushing for public private collaboration driven by public interest; focusing and advocating for stakeholder capitalism; creating access to opportunity, quality education and social protection for all; and demanding transparency and accountability in governance by encouraging an entrepreneurial state and smart local governments.

Lastly, international support can advance both developmental and environmental objectives, and in a recovery context, support can bring accelerated and higher impact. Incuring debt is tricky but it can be a way to steer the country to a more sustainable and resilient economy. This pivot is possible if resources are efficiently spent on green sectors whilst building on the achievements and learning from the environmental risks and vulnerabilities, and done so effectively before that window closes.
ENDNOTES

tion/coronavirus-cases-philippines-april-10-2021
com/newsbreak/up/timeline-philippines-2021-covid-19-vaccination-plan
3 Albert del Rosario Research Institute. 2020. Occasional paper: Paths to
Green Economic Recovery
4 Department of Budget and Management. 2021. COVID-19 Releases as of
and-by-funding-source
5 ADRIa. (Ibid.)
6 Global Recovery Observatory, n.d. Green recovery spending by country. Re-
trieved from: https://www.recovery.smithschool.co.uk/tracking
7 United Nations Environment Programme. 2021. Are We Building Back
better-evidence-2020-and-pathways-inclusive-green
8 UNEP. (Ibid.)
9 UNEP. (Ibid.)
10 Yale Center for Environmental Law & Policy. 2020, Environmental Per-
f ormance Index. Retrieved from: https://api.yale.edu/sites/default/files/files/PHIL-
EP2020_CP.pdf
org/countries/philippines/
12 Department of Energy, December 2020. Advisory on the moratorium of en-
dorsements for Greenfield Coal-Fired Power Projects in line with improving the sustain-
ph/announcements/advisory-moratorium-endorsements-greenfield-coal-fired-power-
projects-line-improving?ckattempt=1
13 DOEa. 2020. List of existing power plants: Grid & off grid connected as of
14 DOEa. (Ibid.)
15 DOEb. (Ibid.)
16 DOEa. (Ibid.)
17 DOEa. (Ibid.)
18 DOEb. (Ibid.)
19 DOEb. (Ibid.)
20 Moneod, T. 2020. Institute for Climate and Sustainable Cities. The chal-
lenge to macroeconomicand corporate governance in an era of pandemic and
cyNote_TMoneod_28Oct2020_IFIC.pdf
21 Department of Environment and Natural Resources-Biodiversity Man-
23 DENR-BMB. (Ibid.)
Republic%20Area%20Systems%20(NIPAS)%20Act.&text=It%20also%20prohib-
its%20the%20use%2C%20and%20sold%20permits%20for%20activities%20that%20are%20not
in%20the%20protected%20area.
25 DENR-BMB (b). n.d. DENR, ADB, PPA assess Canaga and NCR Sea-
resources/news-and-events/171-denn-adb-ddp-assess-canaga-and-nor-seaports-
for-wildlife-traffic-readiness
26 Ibid.
27 DENR-BMB (c). 2020. 137 NCR-based trainees from law enforcement
137-nrb-based-trainees-from-law-enforcement-agencies-and-lgus-graduate-from
virtual-wildlife-law-enforcement-training
28 Philippine National Agency. March 2021. Ayala Land 91% carbon neu-
tral, on track for zero footprint in ‘22. Retrieved from: https://www.pna.gov.ph/ar-
cicle/1133840
29 Business World. February 2020. DENR lauds FDC Misamis’ carbon sink
program. Retrieved from: https://www.businessworldonline.com/denr-lauds-fdc-misas-
carbon-sink-program/
30 World Wildlife Fund. 2020. Plastic Packaging in Southeast Asia and Chi-
sink-program
31 World Wildlife Fund. 2020. Plastic Packaging in Southeast Asia and Chi-
sink-program
32 ADRIb. (Ibid.)
33 World Wildlife Fund. 2020. Plastic Packaging in Southeast Asia and Chi-
sink-program
34 Ibid.
35 ADRI. 2018. A balanced approach to Solid Waste Management: Gover-
nance and total stakeholder participation.
36 ARCOWA SA. 2018. Wastewater management and resource recovery
in the Philippines: Current status and Opportunities. Retrieved from: http://seaknowl-
dgebank.net/sites/default/files/wastewater_management_and_resource_recovery_in
Philippines_0.pdf
37 ADB. (Ibid.)
38 De Vera, B. March 2021. Philippine Daily Inquirer. Amid pandemic, PH
net/318687/amid-pandemic-ph-borrowed-a-record-P2-74-trillion-in-2020
39 International Institute for Sustainable Development. 2020. EU allots
net/318687/amid-pandemic-ph-borrowed-a-record-P2-74-trillion-in-2020
40 Rappler, February 2021. Unilever launches plastic collection program in Pa-
sig City. Retrieved from: https://www.rappler.com/brandrap/good/good/unilever-plastic-
collection-program-pasig-city
41 ARCOWA SA (Ibid.)
42 ARCOWA SA (Ibid.)
43 ARCOWA SA (Ibid.)
economic recovery in Southeast Asia: Greening Recoveries for people and planet. Retrieved from: https://www.adb.org/sites/default/files/publication/639141/green-
45 Ranada, P. February 2021. Rappler. PH scores lowest among ASEAN coun-
asean
46 Manuel, P . February 2021. CNN Philippines. Palace downplays delay in PH's
vaccine delivery compared to ASEAN neighbors. Retrieved from: https://cnnphilip-
pines.com/news/2021/2/25/Palace-downplays-PH-delay-vaccine-delivery-ASEAN,
html
47 ADB. (Ibid.)
48 ADB. (Ibid.)
49 De Vera, B. March 2021. Philippine Daily Inquirer. Amid pandemic, PH
net/318687/amid-pandemic-ph-borrowed-a-record-P2-74-trillion-in-2020
Republic%20Area%20Systems%20(NIPAS)%20Act.&text=It%20also%20prohib-
its%20the%20use%2C%20and%20sold%20permits%20for%20activities%20that%20are%20not
in%20the%20protected%20area.
51 Rappler. February 2021. Unilever launches plastic collection program in Pa-
sig City. Retrieved from: https://www.rappler.com/brandrap/good/good/unilever-plastic-
collection-program-pasig-city
52 ARCOWA SA (Ibid.)
EPI rankings indicate which countries are best addressing the environmental challenges that every nation faces. It uses 32 performance indicators across 11 issue categories on environmental health and ecosystem vitality. These indicators provide a gauge at a national scale of how close countries are to established environmental policy targets.

The Paris Agreement, a legally binding global climate change agreement, adopted at the Paris climate conference (COP21) in December 2015. The same sets out a global framework to avoid dangerous climate change by limiting global warming to well below 2°C and pursuing efforts to limit it to 1.5°C.

According to a study by ARCOWA SA (2018), pollution can be classified into two: ‘point sources’ with emissions of harmful substances directly into a particular water body, or ‘non-point sources’ with pollutants delivered indirectly to surface water bodies from scattered or non-identifiable source.
ABOUT

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