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PATHS TO
**GREEN ECONOMIC
RECOVERY**

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PHILIPPINES' GREEN ECONOMIC RECOVERY

Green economic recovery is defined as “sustainable economic recovery from COVID-19, where a green recovery benefits and complements environment, health, and economic growth altogether.” While the public health crisis exposed the Philippine health system’s structural limitations, these problems are compounded by misplaced priorities and ineffective implementation.

Disease outbreaks have always altered the course of history – the Black Death during the 14th century, the Polio epidemic of the early 20th century, to the H1N1 swine flu, Ebola, and Zika virus of the 21st century. But ultimately, these have led to new scientific discoveries and ways of thinking that allowed society to recalibrate and thrive.

The COVID-19 pandemic may probably be one of the worst we have seen, but it is no different. It highlighted our weaknesses and brought an opportunity to make our systems better and emerge stronger by rethinking how we do things and reboot. That is by acknowledging the reality that environmental health, human health, and the economy are all inextricably linked.

The coronavirus pandemic has brought unprecedented effects, challenged healthcare systems globally, and slowed economic movement with long-lasting impacts.¹ At the onset of the public health crisis and quarantine restrictions, the National Economic and Development Authority (NEDA) projected a reduction of -0.6 to 4.3 percent in 2020 without mitigating measures.² However, by the second quarter, the Philippine economy entered into a recession.

The country’s gross domestic product (GDP) rate dived by 16.5 percent in the second quarter of 2020, “the lowest recorded quarterly growth since 1981,”³ according to the Philippine Statistics Authority (PSA). The

economic slowdown hit manufacturing, construction, and transportation the worst at -21.3 percent, -33.5 percent, and -59.2 percent, respectively. Industry and Services both decreased by 22.9 percent and 15.8 percent, respectively. On the expenditure side, almost all major items declined as well. Consumption, which makes up 73 percent of the economy, dropped by 15.5 percent, while exports and imports were slashed by 40 percent. Gross capital formation or investments in fixed assets/capital formation and changes in inventories and acquisitions posted the largest decline of 53.5 percent from a 0.8 percent decline last year.⁴ Meanwhile, significant positive growth was posted by Agriculture and Government Final Consumption Expenditure with 1.6 percent and 22.1 percent, respectively. Continued government spending and stable food supply chains were necessary to buffer the initial social and economic impacts of the crisis and disruptions in the food supply and avoid social unrest.

According to the World Bank, the GDP drop is expected to “push an additional 2 million Filipinos below the poverty threshold.”⁵ The unemployment rate in July 2020 was at 10 percent, which is equivalent to 4.6 million⁶ unemployed Filipinos, higher than the 5.4 percent in July 2019. As quarantine restrictions were gradually lifted, the current unemployment rate was significantly lower than the 17.7 percent unemployment rate in April 2020.⁷ The employment rate likewise picked up at 90 percent.

* THE VIEWS AND OPINIONS EXPRESSED IN THIS PAPER ARE THOSE OF THE AUTHOR AND DO NOT NECESSARILY REFLECT THOSE OF THE INSTITUTE.

The pandemic's impacts seem to be disproportionate, with the urban poor being more severely affected than those in rural areas. The urban center of the country, National Capital Region, holds the highest unemployment rate at 15.8 percent, followed by other provinces: Region IV-A (CALABARZON) (12.4 percent), Region VII (Central Visayas) (11.7 percent), Region I (Ilocos Region) (11.1 percent), and Region III (Central Luzon) (10.9 percent). As testing in rural areas catch up and travel restrictions ease given health and safety precautions are not strengthened, rural areas are more vulnerable with health resources not as equipped as in larger cities.

ACCELERATED GOVERNMENT SPENDING AND SUPPORT

The Duterte administration's Philippine Program for Recovery with Equity and Solidarity (PH-PROGRESO) was considered a stimulus fund for COVID-19 response. As of May 2020, the same has reached a total expenditure of PHP 1.74 trillion,⁸ with the highest allocations to Pillars 3 and 4, comprising 5.7 percent of the GDP, followed by Pillar 1 at 3.1 percent and Pillar 2 at 0.2 percent.

After six months of lockdown, the Bayanihan to Recover As One Act or Bayanihan 2 was signed in September 2020 to support operations and response measures and further cushion the pandemic's prolonged effects.⁹ The law provides a stimulus package of PHP 140 billion in regular appropriation and PHP 25.5 billion as standby funding.¹⁰

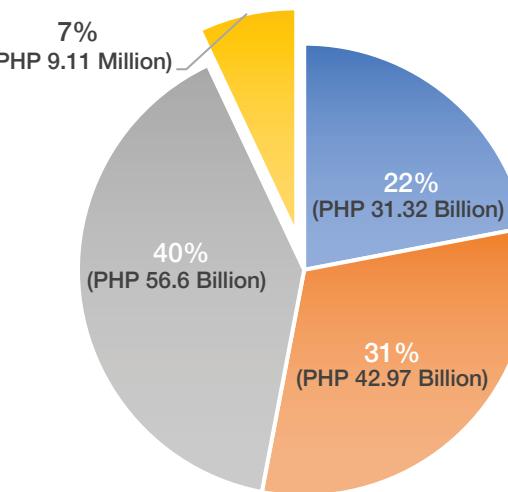
Given the increasing number of cases, the economy in recession, and trailing unemployment and closed businesses, it makes sense that the bulk of the budget is allocated to loans (31 percent) and assistance (40 percent) for displaced workers and sectors hit by the pandemic like micro, small and medium-scale enterprises (MSMEs), transport, tourism, and agriculture. The third highest allocation at 22 percent will augment medical resources, improve health facilities, and

TABLE 1 . PILLARS UNDER PH-PROGRESO

PILLAR	EXPENDITURE
Pillar 1. Emergency Support for Vulnerable Groups	PHP 595.6 billion
Pillar 2. Expanded medical resources to fight COVID-19 and ensure safety of frontliners	PHP 58.6 billion
Pillar 3. Fiscal and Monetary Actions	P1.1 trillion
Pillar 4. An Economic Recovery Plan	

NOTE: PILLAR 4 WAS FUNDED PARTLY BY PILLAR 3 BUT WAS NOT INCLUDED IN THE TOTAL OF TABLE 1
SOURCE: DEPARTMENT OF FINANCE (2020)

FIGURE 1 . ALLOCATION MIX OF BAYANIHAN 2 LAW



NOTE: SIMILAR ITEMS ARE GROUPED INTO CATEGORIES BY THE AUTHOR
SOURCE: DEPARTMENT OF BUDGET AND MANAGEMENT (2020)

construct additional isolation facilities for repatriated workers. It also provides for a PHP 10 billion standby fund for the arrival of the vaccine.

Though understandable, it is incomplete. Health research was only allocated PHP 10 million while green-related initiatives (e.g., assistance to farmers, Plant, Plant, Plant Initiative, and development of accessible sidewalks and protected bicycle lanes and procurement of bicycles) only had a combined allocation of PHP 24 billion.

If we take a closer look at the PHP 4.506 trillion budget spending priorities for 2021, its focus is mainly on reviving infrastructure projects.¹¹ It is a fact that infrastructure investment has always had an essential role in rebooting economies. It is a stimulus for employment generation in the short-term and fundamentally strengthens the economy in the long-term. However, the very systems and structures that drive infrastructure investment will have to adapt. As AECOM puts it, “resilience and innovation will be more important than ever”; and stimulus or recovery packages pursued and implemented by governments will “impact the speed and depth of recovery, influence the longer-term health of economies, and begin to define what our new normal is likely to be once the coronavirus is abated.”¹²

The point is, policies and regulations have been remiss of the importance of prioritizing or harmonizing climate and environment with cross-cutting sectors such as infrastructure, food security, and disaster preparedness.

Other legislative, economic measures that the Department of Finance (DOF) seem to be pushing for are the Corporate Recovery and Tax Incentives Act (CREATE); the Financial Institutions’ Strategic Transfer (FIST) bill; and the Government Financial Institutions Unified Initiatives to Distressed Enterprises

for Economic Recovery (GUIDE) should be complemented with changes that also ensure resilience and disaster preparedness, equity, community support and access to quality jobs, and inclusive growth.

The practice of neglecting environmental protection, emergency preparedness, health systems, and social safety nets to save funds failed. Now more than ever, going back to normal is not good enough, and this is where green economic recovery comes in.

A PHILIPPINE GREEN ECONOMIC RECOVERY

Green economic recovery is defined as “sustainable economic recovery from COVID-19, where a green recovery benefits and complements environment, health, and economic growth altogether.”¹³ Truth be told, this is easier said than done. While the public health crisis exposed the Philippine health system’s structural limitations, these problems are compounded by misplaced priorities and ineffective implementation. Incremental changes in funding allocation and proper implementation can make a difference until policy changes work their way up to other resource-consuming areas. For this reason, this paper focuses on four aspects of green economic recovery in the Philippines: improving health strategy, investing in green innovation, strengthening environmental protection, and building stronger broad-based partnerships.

International organizations, the World Economic Forum (WEF), Asian Development Bank (ADB), UN Environment, and the World Health Organization (WHO), among others, agree that a green economic recovery is key for more sustainable development. Key themes are clean innovation, sustainability and inclusivity in infrastructure, food systems, transport and mobility, essential services and waste management, and environmental protection.

TABLE 2 . SYNTHESIS OF RECOMMENDATIONS FOR A GREEN ECONOMIC RECOVERY



Invest in Better and Green Buildings	An energy transition towards renewable energies such as wind and solar should be prioritized. In urban areas, significant improvements in green growth can be exemplified in infrastructure. WEF suggests “improving insulation, replacing windows, reducing air leakage, and improving heating (and cooling) systems” ¹⁴ in buildings.
Improve Access to a Healthy and Sustainable Food System	Food security can be ensured if local food production and processing are strengthened. Crop diversification and the use of sustainable food production and natural resource management practices should be promoted. Local governments and agencies should explore innovation in linking the oversupply of fruits and vegetables in rural areas, especially in densely populated areas. Similarly, support for the agricultural sector should be sustained, especially for storage, preservation, transport, and distribution technologies and infrastructure.
Promote Smart and Sustainable Mobility	WEF recommends that flexible working schemes should be maintained to ease environmental pressures as economies open up and business operations normalize after the COVID-19 threat. “With less commuting, carpooling and car-sharing encouraged, well-developed public transportation and acceleration of biking infrastructures with interconnected cycle highways, air pollution will likely lessen.” ¹⁵ Furthermore, WHO adds that “improving walking and cycling infrastructure for people of all ages and abilities and creating citywide access to safer walking, biking, nature, public spaces, and public transport will support mobility, physical activity, recreation, access to services and social interactions, and to reduce the use of energy and resources.” ¹⁶

TABLE 2 . SYNTHESIS OF RECOMMENDATIONS FOR A GREEN ECONOMIC RECOVERY	
Build Livable Cities	<p>City design should integrate health into urban planning policies by introducing connected, mixed-use, and compact spaces that promote “active living, sustainable mobility, energy efficiency, healthy diets, and access to essential services.”¹⁷ The government should be serious in planning cities that are more resilient to climate change and natural disasters and ensure the availability of essential services such as “well-managed water, sanitation, and hygiene facilities, adequate waste management”¹⁸ and clean energy. These services should also be made available in healthcare facilities.</p>
Invest in Sustainable and Resilient Infrastructure Development	<p>Infrastructure projects must meet environmental and human health targets. As infrastructure projects are linked with access to affordable housing, mobility, and green spaces, it should ensure access to a solid waste management system, the basic connection of sewage treatment plants, especially for commercial and industrial establishments. Investing in climate-resilient health and sustainable infrastructure, technologies and services must be considered.</p>
Institutionalize Better Partnerships	<p>Partnerships must be scaled up among stakeholders – communities, businesses, and government – to pursue strategic goals moving forward. As the effects of the pandemic have had disproportionate impacts, especially on marginalized communities, the UN Environment notes that “partnership is needed now more than ever”¹⁹ to reinforce inclusive development.</p>
Improve Environmental Protection and Regulation	<p>WHO emphasizes that “economies are a product of healthy human societies, which in turn rely on the natural environment - the original source of all clean air, water, and food.” Damaging and unregulated human activities (e.g., deforestation, pollution, intensive agricultural practices) and unsafe management and consumption of wildlife have an effect on these services. Biological diversity, integrity, and protection must be kept in check and improved as well as for air quality standards and efficiency of material use, recycling and re-use of materials and products.</p>

Improving Overall Health Strategy. The pandemic led to heightened health consciousness among individual and household consumers, communities, businesses, and policy-makers alike. In the workplace, health and safety protocols should be reviewed and standardized. Health strategies, such as health insurance standards, occupational safety standards, approaches, and programs for physical and mental wellness, among others, should be incorporated. While short-term measures have been put in place to protect employees and sustain business operations, long-term solutions should be assessed moving forward.

However, this heightened consciousness must be translated well into public policy and spending. For instance, major allocations in Bayanihan II are health resources, facilities, and safety equipment. Yet, the 2021 budget is not as health-centric as it was hoped. It also ranks lower from the budget allocated to the Department of Public Works and Highways (DPWH) (PHP 667.3 billion) Department of National Defense (DND) (PHP 209.1 billion).²⁰ However, higher by PHP 27 billion from the year 2020, the Department of Health’s (DOH) budget for 2021 (PHP 203.1 billion)²¹ is only 5% of the 2021 proposed national budget (PHP 4.506 trillion) and only 3 percent of the GDP (PHP 4.15 trillion).²²

Looking closely at the National Expenditure Program (NEP), reduced budgets are noted on four programs, namely: Health Policy and Standards Development Program, Epidemiology

and Surveillance Program, and Health Emergency Management Program. While there are obvious increases to other equally important programs, these reductions seem to be counterintuitive to a more health-oriented budget.

Likewise, the budget for health research (68 percent of the first component) was slightly slashed to PHP 173.13 million (from PHP 203 million). Stronger healthcare systems will enable the local and national government to anticipate, prevent, prepare, and respond to traditional and emerging health risks. This requires health research and development to be taken more seriously.

Enhancing health facilities²⁴ is also critical and should be in the context of improving access, especially for rural and geographically-isolated and disadvantaged areas. This means coordination and collaboration between the national and local government and private sectors are critical to the delivery of services both for COVID-19 and other conditions. The trend in health outcomes in rural areas differed from metro centers not only because of the variability in population density but in delays in testing, lack of health resources, which characterizes a fragmented healthcare delivery system. To avoid stretching local health systems to its limits, this should all be tied up with health financing, health governance, human resources, health infrastructure, and health service delivery. This should also be linked with other socioeconomic strategies.

Investing in Clean Innovation. A green recovery investment plan incorporates an energy transition to more sustainable energy sources. A promising example is the Department of Energy's (DOE) PHP 2.15 budget for the year 2021, the majority of which are allocated to the Renewable Energy Development Program (PHP 117.9 million). This will be funneled to promoting renewable energy (RE) resources, as well as regulating exploration, development, and utilization of RE resources and technologies.²⁵

However, coal remains to be the main source of electricity generation for Luzon, Visayas, and Mindanao.²⁶ In 2017, coal still has the largest share of total installed capacity at 36 percent, still surpassing renewable energy (RE) at 31 percent (7,079 MW), oil-based at 18 percent (4,153 MW), and natural gas at 15 percent (3,447 MW). The DOE is confident that installed capacities and awarded projects in biomass, geothermal, solar, hydro, and wind are close to or have exceeded its 15,304 MW by the year 2030. Many power generation companies are expanding their RE portfolio as green objectives are prioritized, and prices of alternative energy sources continue to be more competitive.

DOE has recently launched a Grid Planning and Competitive Renewable Energy Zones (CREZ), "geographic areas with high concentrations of cost-effective RE and strong developer interest."²⁷ This opens opportunities for current and potential RE developers and reduces investment risks. CREZ are "pre-screened for high-quality resources, suitable topography, potential land-use constraints, and demonstrated private developer interest, thereby reducing overall feasibility assessment costs." The overall coordination with the Energy Regulatory Commission (ERC), National Grid Corporation of the Philippines (NGCP), the National Transmission Corporation (TransCo) enables a proactive transmission planning approach, innovative financing, and timely investment management.

TABLE 3 . BREAKDOWN OF DOH PROGRAM ALLOCATIONS OPERATIONS BY PROGRAM

Operations by Program	2020 GAA	2021 NEP ²³
Health Policy and Standards Development Program	294,864,000	255,888,000
Health Systems Strengthening Program	19,332,324,000	22,567,888,000
Public Health Program	17,519,002,000	27,725,911,000
Epidemiology and Surveillance Program	115,501,000	112,631,000
Health Emergency Management Program	830,069,000	783,140,000
Health Facilities Operation Program	42,032,937,000	47,703,537,000
Health Regulatory Program	880,379,000	932,482,000
Social Health Protection Program	10,483,474,000	17,306,974,000

SOURCE: DEPARTMENT OF HEALTH NEP (2020)

TABLE 4 . EXISTING INSTALLED AND DEPENDABLE CAPACITY (IN MW) IN 2016 AND 2017

Fuel Type	Installed 2016*	2017	Dependable 2016*	2017
Coal	7,419	8,049	6,979	7,674
Oil-based	3,616	4,154	2,821	3,287
Natural Gas	3,431	3,447	3,291	3,291
Renewable Energy	6,959	7,080	6,004	6,263
Geothermal	1,916	1,916	1,689	1,752
Hydro	3,618	3,627	3,181	3,268
Biomass	233	224	157	160
Solar	765	886	594	700
Wind	427	427	383	383
TOTAL	21,425	22,730	19,095	20,515

NOTE: 2016 DATA WAS ONLY FOR GRID-CONNECTED POWER PLANTS

SOURCE: DEPARTMENT OF ENERGY (2020)

The 25 individual CREZ across the Philippines have an estimated 807,870 MW gross capacity, with 50.5 percent of potential projects coming from Mindanao, 44.6 percent in Luzon, and 4.9 percent in the Visayas. Hydropower has the potential to contribute 47.3 percent of total capacity, which may bring down prices and ensure reliability as more baseload capacity comes online. This also supports the prospective benefits of the upcoming Mindanao interconnection in 2021.

Tackling energy sustainability is not only about energy sources but also infrastructure reliability and resiliency as well as reliable energy systems. COVID-19 disrupted global value chains, which included energy systems, dampened demand especially for manufacturing, industrial and commercial loads, and risked variability in supply, especially for high-risk areas. Investing in sustainable energy should also ensure a reliable and affordable electricity supply for off-grid and marginalized areas.

The energy transition can also be incorporated in infrastructure, mobility, urban spaces, and provision of essential services. For one, investments in more e-transportation vehicles should also be encouraged. At the height of the pandemic, a number of local government units participated in the use of e-trikes for emergency transport of patients and relief goods.

Furthermore, the DOE released an Energy Resiliency Policy in 2018, which aims to institutionalize resiliency standards in the sector, especially for emergency situations. Its framework is built on a “Build Back Better” principle, particularly on strengthening existing infrastructure facilities, mitigation improvements in reconstruction and rehabilitation, operational and resiliency standards, and practices. The government could also look into prioritizing infrastructure and utility projects based on their green criteria such as compliance to the Green Building Code, contribution to lowering carbon footprint, and inclusion of socioeconomic initiatives, among others.

Strengthening Environmental Protection. The disruption caused by the pandemic provides an opportunity for environmental health. During the first few weeks of the lockdown, air quality improved where PM2.5 concentrations in the northern part of Metro Manila moderated to 7.1 ug/m³ from 20 ug/m³ and even exceeded that of WHO's limit of 10 ug/m³.²⁸ Meanwhile, for the tourism industry, it meant an opportunity for tourism destinations to recover and for tourism professionals and plans to re-strategize and re-tool. This disruption opened the door to discuss sustainable communities, more green spaces, and biodiversity conservation.

The recent green allocations in support of smart mobility and sustainable food systems are welcome improvements. However, the protection and conservation of natural resources, especially in degradation hotspots and critical ecosystems, can still be improved.

Even while under community quarantine restrictions, the DENR confiscated an accumulated PHP37-million worth of illegal wildlife.²⁹ The country is seen as a strategic location as a stopover given porous boundaries and understaffed enforcement units. In some rural areas, monitoring of marine protected areas is limited because of low funds

and lack of financial and technical support for local sea patrols. There should be more stringent measures to deter poachers and illegal wildlife traders.

The WEF and WHO underscore that neighborhoods and cities should improve green spaces and ensure livable cities. In 2019, Metro Manila ranked fifth to the last among 109 countries in the 2020 Smart City Index as it dropped ten notches to 104th from 94th in 2019. The rating was largely brought down by concerns of road congestion, corruption, health care, air pollution, and unemployment.³⁰ On that note, green spaces contribute to climate goals, cleaner air, and improved human health. Through the Department of Budget and Management's “Green Green Green”³¹ project, more green and livable spaces should be normalized and implemented, especially in urban and rural areas alike (e.g., institutional open space, plazas, parks, streetscapes, waterfronts, mangrove parks).

The DENR has likewise ramped up projects to promote green spaces in highly urbanized cities. In rural areas, its National Greening Program is a step in the right direction as it restores denuded forests

TABLE 5. ESTIMATED COMPETITIVE RENEWABLE ENERGY ZONES (CREZ) OPPORTUNITY CAPACITY (MW)

System	Solar PV	Wind	Geothermal	Hydropower	Biomass	TOTAL
Luzon	35,031	54,115	285	270,603	210	360,244
Visayas	11,876	25,429	40	1,917	71	39,333
Mindanao	11,203	14,443	40	382,514	93	408,293
TOTAL	58,110	93,987	365	655,034	374	807,870

SOURCE: DEPARTMENT OF ENERGY (2020)

and manages existing forest lands. This will help provide much-needed employment or green jobs,³² widen community stakeholders' participation, and heighten appreciation for the value of natural resources.

Access to clean water supply and an efficient wastewater system also have to be improved as areas become more urbanized and increase pressure on scarce environmental resources. Alternative water supply should be tapped, along with technological innovations such as desalination facilities and more sewage treatment plants, among others.

Environmental protection also benefits food systems. The Department of Agriculture's "Plant, Plant, Plant" initiative aims to improve Filipinos' access to sustainable food production and, at the same time, benefit farmers. The government could promote the use of natural resource management practices instead of intensive and polluting agricultural practices. For it to be more sustainable, this should be linked to agricultural insurance, social amelioration for farmers, and resiliency projects. Farm-to-market roads, farm mechanization efforts, and technical training should also be in place.

Waste management is also a significant aspect of environmental protection. It is important in the city, regional, and national planning because of its role in sustainable, healthy, and inclusive communities. However, up until now, the ongoing waste pollution is one of the biggest environmental concerns. There is an urgent need to rethink and streamline waste management into a circular economy, especially with the increase in hospital waste. Aside from ramping up cleaning efforts, especially in waterways, improving waste collection, especially in underserved areas, and upscaling recycling are urgently needed. Closing the loop will complement regulations in plastic production, exploring sustainable raw materials, and the efficiency of material use.

As long as environmental and social safeguards are strictly enforced, extractive industries can also be a bastion of resource management and a reliable source of employment and government revenues.

The DOF recently identified the Mining Tax Regime as part of one of its tax reform packages to rebuild the economy.³³ The mining sector, along with other extractive industries, should demonstrate the utmost regard for the development of its host communities, environmental stewardship, innovation in operational practices such as energy efficiency, and tailings, and waste management. It can emulate best practices and protocols by Towards Sustainable Mining³⁴ (TSM) in Canada by incorporating sustainable development through all stages of development, from exploration, production, and recycling of products, to closure. Businesses, like governments, need to be accountable, transparent, and credible.³⁵

Building Stronger Broad-based Partnerships. This all comes in full circle with broad-based and strategic partnerships. In June 2020, the Albert del Rosario Research Institute (ADRI) held a Virtual Roundtable Discussion (VRTD), "Environmental Stewardship Post-Pandemic: The Path to a Green Economic Recovery." It was an avenue for private and public stakeholders to reimagine a new normal and to discuss actional ideas for green economic recovery. One of these ideas was the importance of partnerships.

At the height of the pandemic, the private sector played a big role in cushioning the effects for millions of households. From millions in donated cash and goods, many companies continued to support their employees and consumers alike despite constrained operations. However, partnerships about capital infusion, technology, skills transfer, and community participation are as important and very invaluable in the long-term. This is demonstrated in corporate social responsibility projects and social development components of businesses (e.g., Social Development and

Management Program of the Mining Sector, ER 1-94 program for the Energy Sector, etc.).

Empowering LGUs and communities and strengthening their capacities require strong information and communications technology (ICT) development. In the face of physical and social distancing and mobility restrictions, the use of alternative payment options and digital services (e.g., digital payments, e-commerce, telemedicine, and online education) helped individuals, businesses, and the government cope with social distancing measures, ensure business continuity, and deliver public services during the pandemic. Strong ICT development opens up access to massive open online courses, financial services (e.g. lending through mobile applications), and life-changing economic opportunities to geographically isolated and disadvantaged areas.³⁶ It also encourages innovative governance culture, public management, and transparency.³⁷ Along with policy and regulatory changes that will improve doing business (e.g., lowering barriers to entry, streamlining permit requirements), and least cost deployment of broadband infrastructure and internet connectivity,³⁸ strengthening collaboration will maximize gains from digital technologies and the building of a robust nationwide digital infrastructure.

Public-private partnerships are also advantageous for finding solutions for environmental challenges and improvement of essential services. Companies such as Coca-Cola Philippines continue to recognize their role in sustainable packaging and proper collection. It has recently partnered with Plastic Bank to collect 100,000 kilograms of ocean-bound plastics in Cavite, where their pioneering state-of-the-art food-grade recycling facility (rPET) will soon be located. The rPET facility uses state-of-the-art technology that collects used polyethylene terephthalate (PET) plastic bottles that undergo a process that gives these materials a new life within a circular economy. It also aspires to develop an inclusive system that supports green jobs for Filipinos

across the country's waste materials value chain.

Ayala Corporation's power arm, AC Energy, in collaboration with Green Antz Builders, has installed a recycling facility that shreds plastic waste and upcycled into eco-bricks that can be used as construction materials for its solar plant facilities.³⁹ It has collaborated with partners and local communities to set up drop-off points and recycling centers for a more inclusive program. Initiatives such as these incentivize proper collection, educate consumers, increase the value of the recyclable material, and, ultimately, reduce plastic waste leakage.

PROMOTING GREEN JOBS THROUGH GREEN ECONOMIC RECOVERY

What links environmental and health to economic recovery is green jobs. It is to provide quality and productive jobs that are low-carbon and resource-efficient: one that improves standards of living and social equity possible while reducing environmental risks. It is through availability and access to green jobs that can make a sustainable recovery viable.

Before the pandemic, the green sub-sector was expected to contribute Gross Value Added (GVA) of PHP 2.6 trillion and grow at 22 percent from the year 2016 to 2030 as compared to the conventional sectors' PHP 9.5 trillion and 19 percent. Sub-sectors and employment demand are dominated by conventional areas. However, green sub-sectors, particularly in services and industry, had the potential to contribute largely to GVA at PHP 1.7 trillion and increase by 24 percent, respectively.⁴⁰ The International Labor Organization (ILO) notes that green economy policies should focus on industries with "higher employment multiplier to result in net job creation"⁴¹ such as energy, construction, transportation, and agriculture, among others.

Green service industries are also likely to prompt faster economic growth because of its productivity potential, compared to agriculture and industrial sectors. This means that improving waste management, water supply efficiency, scaling renewable energy projects, greening infrastructure, forest management, and e-service delivery will be remarkable stimuli to initiate faster, sustainable, and more inclusive growth. Furthermore, the ILO suggests that all of these efforts be harmonized with reorientation and skills training, alternative financing schemes, and tax incentives to promote green jobs and invest in greener technologies.

KEY TAKEAWAYS AND CONCLUSION

The purpose of this paper is not to provide a blank solution for sustainable economic recovery. Most likely, additional stimulus packages will still be required for economic recovery. Rather, this paper aims to augment existing recovery plans with proposed strategies and knit them all together to maximize the potential of bouncing back better.

An inclusive and quality health system, energy transition, environmental protection, and strategic partnerships are cornerstones for a green economic recovery. It allows us to improve the standard of life, inclusive development, and an overall healthy environment. As the pandemic magnified gaps and weaknesses and uncommon challenges, these must be addressed by strategic spending for social, health and environmental, and economic services, and unprecedented coordination and collaboration of stakeholders and interagency support.

Businesses will not thrive if consumers or communities are not empowered, and the environment is not protected. Stratbase

ADR Institute underscores that broad-based partnerships must promote strict enforcement of and compliance with government policies. Industries' plans and operations must be aligned with a responsible approach to social, economic, and environmental goals and standards. Governments and businesses must focus on creating more green jobs and strengthening human resources in this transition.

A green economic recovery will help growth be more sustainable, inclusive, and equitable. It will increase the generation of productive and quality jobs that will mean more meaningful and stronger economic growth that will not compromise health, environmental, and social objectives. It needs to focus on areas that need to be urgently improved, such as our health systems, strict enforcement of and compliance to environmental regulations, better strategic planning for smart and sustainable cities, and quality investments in infrastructure, waste management, digital infrastructure to support the digital transformation of operations, clean water, energy, and food security.

Many of these changes will admittedly not happen overnight. However, as health and environmental pressures build up, finite budget resources, an economic slowdown, reimagining where we want to go, and how fast we want to get there require tough choices. It cannot be stressed any further that neglecting the value of health and the environment is irresponsible for economic growth and something we can no longer afford.

ENDNOTES

¹ Albert del Rosario Research Institute. (2020). Bracing for the Economic Impact of COVID-19.

² NEDA. (March 2020). Addressing the social and economic impact of the COVID-19 pandemic. Retrieved from: https://www.neda.gov.ph/wp-content/uploads/2020/03/NEDA_Adressing-the-Social-and-Economic-Impact-of-the-COVID-19-Pandemic.pdf

³ Philippine Statistics Authority. (August 2020). GDP growth rate drops by 16.5 percent in the second quarter of 2020; the lowest starting 1981 series. Retrieved from: <http://www.psa.gov.ph/press-releases/id/162842>

⁴ PSA (September 2020). Capital Formation suffers setbacks in the second quarter of 2020; records the lowest decline since the first quarter of 1985. Retrieved from: <https://psa.gov.ph/national-accounts>

⁵ Philippine Daily Inquirer. (2020, October 3). Retrieved from: <https://business.inquirer.net/308776/world-bank-sees-3-million-more-filipinos-unemployed-poor-this-year>

⁶ PSA. (September 2020). Employment situation in July 2020. <https://psa.gov.ph/content/employment-situation-july-2020>

⁷ PSA noted that employment rate picked up at 90 percent, higher than the record low of 82.3 percent in April 2020. This translates to about 41.3 million employed Filipinos.

⁸ Department of Finance. (2020). The Duterte Administration's Philippine program for recovery with equity and solidarity. Retrieved from: <https://www.dof.gov.ph/the-duterte-administrations-philippine-program-for-recovery-with-equity-and-solidarity-ph-progreso/>

⁹ Republic Act No. 11494. (July 2020). Retrieved from: <https://www.officialgazette.gov.ph/downloads/2020/09sep/20200911-RA-11494-RRD.pdf>

¹⁰ Standby funding allocates for the arrival of the vaccine, wholesale banking and equity infusion to LBP and DBP to support low-interest loans to persons and entities affected by the pandemic.

¹¹ Department of Budget and Management. (2020) 2021 budget at a glance. Retrieved from: <https://www.dbm.gov.ph/index.php/budget-documents/2021/2021-people-s-budget/2021-budget-at-a-glance-proposed>

¹² AECOM. (2020). The future of infrastructure: Creating opportunity for everyone. Retrieved from: https://infrastructure.aecom.com/hubfs/FOI3/report/future_of_infrastructure_AECOM_2020.pdf?utm_campaign=Future%20of%20Infrastructure%202020%20&utm_medium=email&_hsmi=86387434&_hsenc=p2ANqtz_-6PQN9qzltMID1PWq45JEmDCK6YqXQAPiHE8u4BrnV1YT7f5pHYJ2nP9mDMs67nV4YzxHGaprlslbGh0yYpE2x0yJpiCQSpqV3wtkFVzZmTDqHXQ&utm_content=86387434&utm_source=hs_automation

¹³ World Economic Forum. (June 2020). COVID-19: 5 ways to create a green recovery. Retrieved from: <https://www.weforum.org/agenda/2020/06/five-ways-to-kickstart-a-green-recovery/>

¹⁴ Ibid.

¹⁵ Ibid.

¹⁶ World Health Organization. (2020). WHO Manifesto for a Healthy Recovery from COVID-19. https://www.who.int/docs/default-source/climate-change/who-manifesto-for-a-healthy-and-green-post-covid-recovery.pdf?sfvrsn=f32ecfa7_8

¹⁷ Ibid.

¹⁸ Ibid.

¹⁹ UN Environment. (July 2020). Green economy & COVID-19 recovery. Retrieved from: <https://www.unenvironment.org/news-and-stories/story/green-economy-covid-19-recovery>

²⁰ Department of Budget and Management. (2020) 2021 budget at a glance. Retrieved from: <https://www.dbm.gov.ph/index.php/budget-documents/2021/2021-people-s-budget/2021-budget-at-a-glance-proposed>

²¹ This includes new general appropriations of PHP 127.3 billion, automatic appropriations of PHP 3.9 billion, and budget for Philippine Health Insurance Corporation of PHP 71.4 billion.

²² This is based on PSA's Q2 2020 figures.

²³ DBM. (2020). National Expenditure Program: Department of Health. Retrieved from: <https://www.dbm.gov.ph/wp-content/uploads/NEP2021/DOH/DOH.pdf>

²⁴ According to the NEP, "Health Facilities Enhancement Program (HFEP) shall be used for the construction, upgrading, or expansion of government health care facilities and purchase of hospital equipment for such facilities, with priority in the Universal Health Care sites and GIDAs, including the upgrading of facilities for COVID-19 response and equipping and construction of on-going projects." This was allocated PHP 4.7 billion, lower than PHP 8,35 billion in 2020."

²⁵ DBM. National Expenditure Program: Department of Energy. Retrieved from: <https://www.dbm.gov.ph/wp-content/uploads/NEP2021/DOE/DOE.pdf>

²⁶ Department of Energy. (2020). Power Development Plan 2017 – 2040. https://www.doe.gov.ph/sites/default/files/pdf/electric_power/pdp_2017-2040.pdf

²⁷ Department of Energy. (2020). Ready for renewables: Grid planning and CompetitiveRenewable Energy Zones (CREZ) in the Philippines. Retrieved from: <https://www.nrel.gov/docs/fy20osti/76235.pdf>

²⁸ Mongabay News. (2020, April 23). Manila gets its skyline back as air quality improves amid COVID-19 lockdown. Retrieved from: <https://news.mongabay.com/2020/04/manila-gets-its-skyline-back-as-air-quality-improves-amid-covid-19-lockdown/>

²⁹ Manila Bulletin. (2020, July 19). P37-million illegal wildlife seized. Retrieved from: <https://mb.com.ph/2020/07/19/p37-million-illegal-wildlife-seized/>

³⁰ Manila Bulletin. (2020, September 17). Manila slips to 5th to last in 2020 Smart City Index. Retrieved from: <https://mb.com.ph/2020/09/17/manila-ranks-fifth-to-the-last-in-2020-smart-city-index/>

³¹ DBM. <https://www.dbm.gov.ph/index.php/secretary-s-corner/press-releases/list-of-press-releases/1225-dbm-launches-landmark-initiative-green-green-green>

³² According to Republic Act No. 10771, "green jobs refer to employment that contributes to preserving or restoring the quality of the environment, be it in the agriculture, industry or services sector. Specifically, but not exclusively, this include jobs that help to protect ecosystems and biodiversity, reduce energy, materials and water consumption through high efficiency strategies, decarbonize the economy, and minimize or altogether avoid generation of all forms of waste and pollution."

³³ Department of Finance. (September 2020). 2021 National Expenditure Program.

³⁴ The Mining Association of Canada. (April 2019). Towards Sustainable Mining 101: A Primer. Retrieved from: <https://mining.ca/wp-content/uploads/2019/07/TSM-Primer-English-Final-1.pdf>

³⁵ Ibid.

³⁶ World Bank. (2020). A Better Normal Under Covid-19: Digitalizing the Philippine economy now. Retrieved from: <http://documents1.worldbank.org/curated/en/796871601650398190/pdf/Philippines-Digital-Economy-Report-2020-A-Better-Normal-Under-COVID-19-Digitalizing-the-Philippine-Economy-Now.pdf>

³⁷ Philippine Institute for Development Studies. (2018). Innovating governance: Building resilience against COVID-19 pandemic and other risks. Retrieved from: <https://pidswebs.pids.gov.ph/CDN/PUBLICATIONS/pidsdps2023.pdf>

³⁸ Ibid.

³⁹ AC Energy. https://www.acenergy.com.ph/2020/09/26/ac-energy-pilots-circular-approach-in-new-alaminos-and-palaui-solar-plants/?fbclid=IwAR1hQu0Mvpmp8GjlcZEIxTBTW8tKulqYqurSF5qDCosAbwfWE5y_Fb1WkywE

⁴⁰ International Labour Organization. (October 2019). Employment effects of green policies in the Philippines. Retrieved from: http://www.ilo.org/wcmsp5/groups/public/---ed_emp/---gjp/documents/publication/wcms_723310.pdf

⁴¹ Ibid.

⁴² Cover and back page image credit: usnews.com/news/world-report/articles/2020-06-04/rebuilding-post-pandemic-economies-to-be-more-sustainable

⁴³ Page 2 image credit: investors-corner.bnpparibas-am.com/investing/positioning-for-a-green-recovery-from-covid-19

⁴⁴ Page 6 and 7 image credit: garo.co.uk/energyhubarticledetails?article_id=76&article_desc=One-Million-New-Charging-Stations-Form-Part-of-EU-Green-Economic-Recovery



ABOUT

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