



Stichting Deltares

SAR FTR | Inclusive Growth

**Manila Bay Sustainable Development Master Plan
Situation Analysis Report | Focal Theme Reports**



Inclusive Growth

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Acronyms and Abbreviations

CHED	Commission on Higher Education	MMDA	Metro Manila Development Authority
BCDA	Bases Conversion & Development Corporation	MWWS	Metropolitan Waterworks and Sewerage System
BFAR	Bureau of Fishery and Aquatic Resources	NB	NEDA Board
CSW	Completed Staff Work	NEDA	National Economic Development Authority
CWA	Clean Water Act	NGA	National Government Agency
DA	Department of Agriculture	NHA	National Housing Authority
DENR	Department of Environment and Natural Resources	NPC	National Power Corporation
DepEd	Department of Education	NRDC	National Resources Defense Council
DILG	Department of Interior and Local Government	NWRB	National Water Resources Board
DOH	Department of Health	PAMB	Protected Area Management Board
DOST	Department of Science and Technology	PAPs	programs, activities, projects
DOTC	Department of Transport and Communications	PCG	Philippine Coast Guard
DPWH	Department of Public Works and Highways	PER	Project Evaluation Report
DRR	Dutch Risk Reduction	PIA	Philippine Information Agency
DTI-BOI	Department of Trade and Industry - Board of Investments	PPA	Philippine Ports Authority
ECC	Environmental Compliance Certificate	PPP	Public Private Partnership
EIS	Environmental Impact Statement	PRA	Philippine Reclamation Authority
EO	Executive Order	PEZA	Philippine Economic Zone Authority
GOCC	Government Owned or Controlled Corporations	PHIVIDEC	Philippine Veterans Investment Development Corporation
HLURB	Housing and Land Use Regulatory Board	PNP	Philippine National Police
IA	Implementing Agreement	PPA	Philippine Port Authority
IEE	Initial Environmental Examination	PRRC	Pasig River Rehabilitation Commission
ICC	Investment Coordination Committee	PSA	Philippine Statistics Authority
IRR	Implementing Rules and Regulations	PWSSMP	Philippine Water Supply and Sanitation Project
JV	Joint Venture	RA	Reclamation Agreement
LGU	Local Government Unit	RBCO	River Basin Control Office
LLDA	Laguna Lake Development Authority	RDC	Regional Development Council
MBCO	Manila Bay Coordinating Office	RIZLAQUE	Rizal-Laguna-Aurora, Quezon
MBEMP	Manila Bay Environmental Management Project	SMBA	Subic Bay Metropolitan Authority
MBSDMP	Manila Bay Sustainable Development Master Plan	WD	Water District
		WQMA	Water Quality Management Area

Preface

The Manila Bay Sustainable Development Master Plan (MBSDMP) is to be a comprehensive and sustainable master plan for Manila Bay and the immediate coastal zone together with its larger catchment area – the Manila Bay basin.

Consistent with the Philippine Development Plan (PDP) and contributes in achieving AmBisyon 2040, the master plan is to be instrumental in linking economic planning and development projects to environmental and resource management goals for Manila Bay and addressing social and ecological issues (such as poverty alleviation, food security, public health and biodiversity) through the rehabilitation and sustainable development of marine and coastal resources with appropriate financing/funding.

While the traditional plans for Coastal Management and Development assume public financing, the MBSDMP approach aims to make use of solicited private sector investments to achieve strategic management and development goals for five (5) focal themes, namely:

- inclusive growth,
- ecosystem protection,
- climate change adaptation and disaster risk reduction,
- water quality improvement, and
- upgrading informal settlements.

In preparing the Situation Analysis Report, five (5) Focal Theme Reports are prepared accordingly in preparation for the next step – the Strategy Building Phase.

The Situation Analysis Report consist of:

- Executive Summary of the 5 Focal Themes,
- Manila Bay Area 2018 | A Situational Atlas, and
- Five (5) Focal Theme Reports, namely:
 - Inclusive Growth
 - Ecosystem Protection,
 - Climate change adaptation and disaster risk reduction,
 - Water quality improvement, and
 - Upgrading informal settlements.

This is the **Focal Theme Report for Inclusive Growth**.

1 Introduction

Rhetoric has been used to encapsulate dominant thinking and policy direction in development economics. In the past, the terms “trickle down”, “ripple effect”, “broad-based growth”, and “pro-poor growth” have been constantly used to describe models, sets of policies, targets, or desirable outcomes. Inclusive growth emerged as a term that supports both economic growth and the poor in an astute catchphrase. It is an overarching theme that generally means economic development for all while reducing inequality. It has multiple dimensions including: income, living conditions, access to basic services, environmental protection, equal employment opportunities, access to innovations, financial inclusion, participation, and empowerment in pursuing the path for economic growth and development.



Plate 1. Stark income disparity in the urban core of Metro Manila is seen in this photo of the slums along the Pasig River, one of the major rivers that discharge into Manila Bay, and the high rise structures in the Ortigas central business district at the background.

1.1 A Short Narrative

The term “inclusive growth” appears to have been first used in an article “What is Pro-Poor Growth” by Nanak Kakwani and Ernesto Pernia that was published in *Asian Development Review* in 2000. The article attempted to explain pro-poor growth which represents a major departure from the earlier notion of “trickle-down” development. It then goes on to develop an index for pro-poor growth applied to empirical cases of Lao, Korea and Thailand. Inclusive growth was mentioned in the article in a way that makes it synonymous to “pro-poor growth”. More recent discussions point to the difference between the two.

According to the OECD, inclusive growth is economic growth that is distributed fairly across society and creates opportunities for all. In the context of developing and emerging economies where existing income inequalities are large, inclusive growth means economic growth that reduces rather than magnifies inequality and “leaves no one behind”. While pro-poor growth gives focus mainly on the welfare of the poor, inclusive growth looks into protecting losers and gainers in the economy: the poor, the near poor, the middle-income groups, and even the rich.

Inclusive growth goes beyond GDP and embodies other dimensions that determine the quality of life of all income groups (now and in the future) and existing equity and equality in opportunities, including the opportunity to influence decision making process or so-called social inclusion.

Inclusive growth in the context of a city takes a slightly different emphasis. Cities are places where most opportunities concentrate, they could be considered “full” of opportunities. However, cities are often divided and isolate the most vulnerable groups of society in disadvantaged neighbourhoods. There are significant intra-urban and spatial inequalities in cities that are a major challenge for inclusive growth. Some of the indicators used for instance by the OECD to measure these spatial inequalities are income segregation (entropy index): the extent to which poor and rich people live in separate neighbourhoods. The neighbourhood where people live influences not only the living conditions, as the poorest neighbourhoods are often the most exposed to floods and other hazards, but also the access to jobs. A study of these inequalities in cities (OECD 2018) indicates that important factors to reduce intra-urban inequalities are: equal access to quality education and health, efficient public transport and a well-planned housing policy.

The previous Philippine Development Plan (PDP) 2011-2016 embraced the inclusive growth theme, making it a vision of the medium-term plan. It defined inclusive growth to be, first of all, “growth that is rapid enough to matter”. Meanwhile, PDP 2017-2022 sets the first steps towards the long-term AmBisyon 2040 with the vision of “matatag, maginhawa at panatag na buhay”, in which the country is a middle-class society where no one is poor. It is a vision where poverty is eradicated, not merely reduced --- which is central to inclusive growth.

1.1.1 Evaluation Framework and Scorecard

In the context of a city master plan and an investment plan, inclusive growth translates to an evaluation lens that includes in the economic analysis whether the planned investments not only aggregate surpluses but goes deeper to analyse whether the net benefits are fairly distributed across the population and generate the expected Wider Economic Benefits (WEB). If that is not the case, then these investments could be considered inequitable and not conducive to inclusive growth.

In more simple terms this means evaluating whether the planned investments not only increase winners but also do not leave behind losers.

1.1.2 What is and what is not Inclusive growth?

- Differentiated from trickle-down: a vertical model of growth wherein the poor only benefits when the rich start spending their gains; inclusive growth ensures all income tiers have an equitable share on the gains
- Differentiated from pro-poor growth: pro-poor growth focuses on reducing poverty, neutral on growth of other income tiers and on other dimensions of growth; inclusive growth strives for growth for all tiers, while working on redistribution to lessen inequality
- Differentiated from business-as-usual: latter is distribution-neutral
- Differentiated from sustainable development: sustainable development is broader - balancing economic growth with social and environmental benefits; inclusive growth is ensuring that the social benefit from sustainable development is equitable

1.2 Relevance of Inclusive Growth for Manila Bay

The Manila Bay basin area includes all of NCR, parts of Region 3 and Region 4A. The combined total population of all three regions is 38.51 million in 2015 and makes up 67% of the total population of the major island of Luzon. Meanwhile, relative to the total population of the country, they make up 38% of the total population in 2015, or more than one-third.

The Manila Bay study area is therefore an example in terms of the number of job opportunities and all type of facilities such as education, health and so forth. This underscores the fact that that policies, natural environments, economy, and other such factors directly impacting on the general populace of the Manila Bay study area can potentially have significant effects on the rest of the population of Luzon, and the entire country.

Some of the factors that make the three regions a natural magnet for Filipinos to reside in are: (1) the presence of 35 manufacturing economic zones located in Region 4A, out of a total of 74 in the country (or 47%), (2) the 155 information technology (IT) centers and parks in NCR, out of 262 (or 59%), and (3) the presence of an alternative international gateway through the Clark International Airport in Pampanga in Region 3.

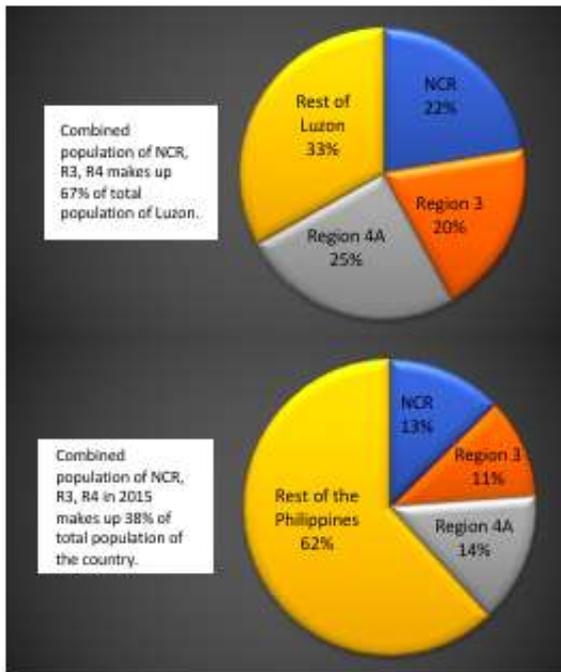


Figure 1. Population of NCR, Region 3 and Region 4A relative to Luzon and the Philippines in 2015.

Daytime population in NCR also increases by about 3 million according to the PSA (albeit there are no official surveys on this), with the influx of workers and students coming from the adjacent Region 3 and Region 4A.

In the last three years, these regions have been the major contributors to the GDP, with a combined output comprising 63% of the total national income. NCR consistently comprised one-third of the economy. Region 4A and Region 3 make up 17% and 10%, respectively. The rest of the country shares the remaining 37%. This emphasises the importance of the three MBSDMP regions to the national economy.

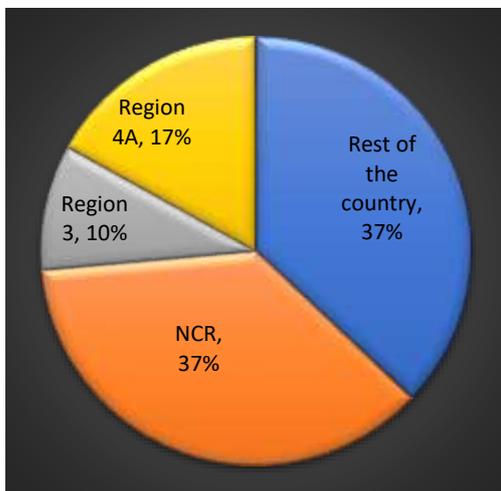


Figure 2. 3-Year Average Contribution to GDP.

Careful regional economic planning will be imperative to sustain the income contributions of these regions to the country. While stronger economic performance in other regions is warranted for a more robust countryside development that contribute to the overall economy, it is important that investments in the productive sectors in the MBSDMP regions be strategic to ensure that the growth momentum is sustained.

As in many other very large cities, intra-urban inequality is also very large. There is a high level of income segregation and different income groups have a very different level of access to these opportunities and services; resulting in a large number of informal settler families (ISF) which have often no access to public services and a high percentage of (unskilled) people working in the informal sector and having very uncertain and unstable sources of income.

Besides the quality of life of all citizens that is significantly impacted by pollution (air and water quality), frequency of floods, poor waste management system and a very inefficient and little inclusive transport system. Amongst these essential public services, the transport sector has attracted a number of PPP and ODA-funded investment proposals. However, investments on improved technology and scale in flood control, waste management and waste water treatment services which, although these could potentially generate a lot of green jobs, are not enough. The explanation of why these "public" services are not in place is probably in the limited capacity of the current governance system (combination of national and local responsibilities) to enforce and monitor the compliance with existing regulations and create the incentives for (private) investment to flow towards strengthening of these public services. Specifically, public waste collection, have been pushed by DENR to the LGU's realm of responsibilities and their contractors. Moreover, these contractors provide only collection and landfilling services and do not reduce waste volume through processing. Industrial waste processing is the responsibility of private polluters but the system-wide capability of DENR to monitor and enforce compliance leaves huge room for improvement. Wastewater treatment is largely a responsibility of the 2 main concessionaires accredited by MWSS for the NCR and selected adjoining areas. The rest are given to Local Water Districts. Where septic tank wastes go is hardly monitored. Technologies in these environmental engineering industries which have a direct impact on Manila Bay, are capital-intensive and require economies of scale, which may not be achieved in a highly fragmented and uncoordinated market, thus making massive investments into the sector unattractive.

The increasing climate variability and frequency in floods, combined with very poor solid waste management only exacerbates existing inequalities as the already disadvantaged neighbourhoods are the most affected.

In terms of sectors, the most vulnerable sectors in the plan area is the agriculture sector which includes the fishing communities. Increasing urbanization and land conversion has meant reduction in agricultural area, which, combined with very poor productivity levels results in a significant decrease in number of agricultural jobs and average income per farmer.

Productivity of the manufacturing industries and the services sector, which are the key economic drivers are also vulnerable to the increasing lack of sufficient infrastructure to support a constantly growing population that is concentrated in the core urban areas.

Although there are many solicited and unsolicited investments planned for the area and for different sectors that could have a great impact on economic growth, the way these are being conceptualized and designed does not indicate that this growth may result in a reduction of existing inequalities in the city.

Part of the explanation of why most planned investments in Manila Bay area do not result in a reduction of inequalities is because of the existing problem of social exclusion. Due to a number of governance patterns, the most vulnerable groups of society although sometimes consulted are not able to influence the final choices made.

Last but not least, looking towards the future and given the imminent hike in urban population; for inclusive growth to be sustainable, it is expected that green growth strategies be emphasized. While green growth is in principle distribution neutral – pursuing green growth will benefit the marginalized sectors the most since they are the most vulnerable at the present the negative externalities of business-as-usual (BAU) growth strategies. As of now, Manila Bay green spaces (also important from a health and flood management perspectives) are very limited. In NCR, the current total for open spaces (all types) is 25.28 sq.km. or about 4% of the total land area. This includes the 33-hectare La Mesa Watershed (which is part of the 2,700-hectare La Mesa Watershed), the Ninoy Aquino Parks and Wildlife Center (80 ha.), the Marikina River Park (220 ha.), Rizal Park (58 ha.), and the Arroceros Forest Park (2.2 ha). Meanwhile, in 2016, the country enacted Republic Act (RA) 10771 or the Philippine Green Jobs Act (PGJA), as part of its commitment to the Paris Agreement. Green jobs are now recognized and defined as "any form of employment in any economic sector that contributes to the quality of the environment". These green jobs are required to be decent, in that they are productive, workers' rights are respected, income is fair, workplace security as well as social protection for families are provided, and that social dialogue is promoted. The law provides fiscal and non-fiscal incentives to businesses that create green jobs. Such developments are geared towards growth that is inclusive, in a sense that economic incentives are present for enterprises that endeavour in activities that protect the environment, provide sustainable jobs for people, and potentially reduce society's vulnerability to natural disasters.

2 Policy context: International, National and Regional Policy Objectives and Legal Framework

Under the Constitutional provisions on the economy (Article XII), “(t)he goals of the national economy are a more equitable distribution of opportunities, income, and wealth; a sustained increase in the amount of goods and services produced by the nation for the benefit of the people; and an expanding productivity as the key to raising the quality of life for all, especially the underprivileged” (Sec 1). Furthermore, “(t)he use of property bears a social function, and all economic agents shall contribute to the common good. Individuals and private groups, including corporations, cooperatives, and similar collective organizations, shall have the right to own, establish, and operate economic enterprises, subject to the duty of the State to promote distributive justice and to intervene when the common good so demands” (Sec. 6). This is reiterated in the Article on social justice (Article XIII) that states, “(t)he Congress shall give highest priority to the enactment of measures that protect and enhance the right of all the people to human dignity, reduce social, economic, and political inequalities, and remove cultural inequities by equitably diffusing wealth and political power for the common good” (Sec. 1).

Inclusive growth is driven more by the administration’s priority policies and programs than by legislation. The government’s priority is to first address poverty. The Department of Social Welfare and Development implements a number of programs on poverty alleviation. The **Pantawid Pamilyang Pilipino Program (4Ps)** is a conditional cash transfer scheme where more than 4.4 million poor households receive cash grants in exchange for responsibilities to keep mothers and infants healthy and for school-age minors to attend school. The known as the **Kapit-Bisig Laban sa Kahirapan-Comprehensive and Integrated Delivery of Social Services (Kalahi-CIDSS)** uses the community-driven development (CDD) approach to help communities in poor municipalities identify challenges around reducing poverty and make informed decisions on a range of locally identified development initiatives. Communities, civil society and local governments become empowered to achieve improved access to services and to participate in more inclusive local planning, budgeting, and implementation. The **Sustainable Livelihood Program (SLP)** is a capability building program for poor, vulnerable and marginalized communities by developing skills that enhances employment opportunities or providing training for micro-enterprise development.

2.1 Laws and relevant implementing rules and regulations

The **Social Reform and Poverty Alleviation Act (RA 8425)** seeks to reduce “absolute poverty” (below the food threshold level) and “relative poverty” (gap between the rich and the poor). The law created the multi-sectoral National Anti-Poverty Commission that ensures coordinated implementation of all national and local social reform and poverty alleviation programs. The flagship programs and target sectors include:

- farmers and landless rural workers – agricultural development;
- fisherfolk – fisheries and aquatic resources conservation, management and development;
- indigenous peoples and indigenous communities – respect, protection and management of the ancestral domains;
- workers in the informal sector – workers’ welfare and protection;
- urban poor – socialized housing; and
- members of other disadvantaged groups such as women, children, youth, persons with disabilities, the elderly, and victims of disasters and calamities – the Comprehensive and Integrated Delivery of Social Services (CIDSS)

The law also created a People’s Development Trust Fund intended to support microfinance initiatives and supported by other programs for credit and guarantee.

In addition to the social reform law, there are laws recognizing the role of women in development, granting benefits and privileges to persons with disabilities and senior citizens. Aside from laws that integrate marginalized sectors, there are laws integrating environmental awareness in education, and protecting cultural heritage that are more broadly intended to improve the quality of life of the people beyond poverty alleviation.

Table 1. Laws relevant to Inclusive Growth

Law (Republic Act, Presidential Decree, etc)	Relevant rules and regulations (Agency, Year Issued)
Spatial Planning	
Local Government Code (RA 7160)	<ul style="list-style-type: none"> ▪ EO 72 - Preparation and Implementation of CLUP of LGUs (OP, 1993) ▪ MC 54 - Guidelines for LGU reclassification of agricultural lands for non-agricultural uses (OP, 1993) ▪ EO 124 - Establishing priorities and procedures in evaluating areas proposed for land conversion in regional agri-industrial centers/regional industrial centers, tourism development areas and sites for socialized housing (OP, 1993)
Special Sectors	
Social Reform and Poverty Alleviation Act (1997) (RA 8425)	<ul style="list-style-type: none"> ▪ IRR for RA 8425 (NAPC, 1998); AO 1 - revised IRR (NAPC, 2001)
Expanding Positions Reserved for PWDs (2012) (RA 10524)	<ul style="list-style-type: none"> ▪ IRR for RA 10524 (NCDA, 201_)
Expanding the Benefits and Privileges of PWDs (2015) (RA 7277)	<ul style="list-style-type: none"> ▪ IRR for RA 10754 (NCDA, 2016)
Magna Carta for Persons with Disability (RA 7277)	<ul style="list-style-type: none"> ▪ IRR for RA 7277 (NCDA, ___)

Other relevant laws are the following:

- Women in Development and Nation Building Act (1992)
- Environmental Awareness and Education Act (2008)
- Expanded Senior Citizens Act (2010)

2.2 National, regional and local (Manila Bay) development goals, plans and policies

Table 2. List of Existing Development Plans, Policies, Frameworks, Targets relevant to Inclusive Growth

Development Plans, Policies, Frameworks, Targets	Agency/Office Responsible
The Philippine Constitution	
Ambisyon2040	<ul style="list-style-type: none"> ▪ National Government Agencies (NGAs)
Philippine Development Plan	<ul style="list-style-type: none"> ▪ National Economic Development Authority (NEDA)
Clean Air Act (RA 8749)	<ul style="list-style-type: none"> ▪ Department of Environment and Natural Resources (DENR)
Clean Water Act (RA 9275)	<ul style="list-style-type: none"> ▪ Department of Environment and Natural Resources (DENR) ▪ Water Districts
Local Government Code (RA 7160)	<ul style="list-style-type: none"> ▪ Local Government Units (LGUs)
Regional Development Plans	<ul style="list-style-type: none"> ▪ Regional Development Councils ▪ National Economic Development Authority (Regional Offices)
Comprehensive Development Plans	<ul style="list-style-type: none"> ▪ Provincial LGUs
Provincial Physical Framework Plans	<ul style="list-style-type: none"> ▪ Provincial LGUs
Comprehensive Land Use Plans (CLUPs)	<ul style="list-style-type: none"> ▪ Local Government Units (LGUs)
Annual Investment Plans (AIP)	<ul style="list-style-type: none"> ▪ Local Government Units (LGUs)
Japan-Philippines	<ul style="list-style-type: none"> ▪
National Laws/Policies on Economic and Industrial Zones	<ul style="list-style-type: none"> ▪ National Government Agencies (NGAs) ▪ Local Government Units (LGUs)

Development Plans, Policies, Frameworks, Targets	Agency/Office Responsible
National Building Code of the Philippines (RA 6541)	<ul style="list-style-type: none"> ▪ Department of Public Works and Highways (DPWH) ▪ Local Government Units (LGUs)

Under the common national vision, AmBisyon Natin 2040, economic growth must be relevant, inclusive and sustainable, with per capita income increasing by at least three-fold that translates to improvement in the overall quality of life of majority of Filipinos. In order to make economic growth broad-based across sectors and regions government is set to increase opportunities for the poor to participate in the growth process while shielding them against the negative impacts of economic and political instabilities, as well as natural and man-made calamities. The vision is for poverty to be eradicated by 2040, if not earlier.

Under the PDP, the Philippines is targeted to be a middle-income country by 2022 with at least \$5000 per capita income, from \$3550 in 2015. Poverty will be reduced the 21.6% in 2015 to 14% in 2022, towards the vision of totally eradicating poverty by 2040. Unemployment will be brought down from 5.5% to 3-5%. Filipinos will have greater motivation for innovation, driven by higher education, skills-building and better health programs. In order for growth to be more equitable, there will be more opportunities for sub-sectors and economic groups that used to lag behind, like small farmers and fisherfolk and MSMEs.

The period under the current PDP will be the “golden age of infrastructure,” where infrastructure spending will be at least 5% of GDP. However, infrastructure development will be balanced by ensuring ecological integrity, and a clean and healthy environment.

The PDP recognizes the value of cultural awareness in economic development. Culture is regarded as an important pillar for achieving inclusive, sustainable, and human-centered development. It should be built into policy-formulation and in the design of development interventions. Otherwise, “failure to acknowledge the significance of culture in shaping our society may lead to cultural fragmentation, perceived distrust toward fellow Filipinos, parochialism, perpetuation of historical injustices, and inability to collaborate for nation building.”

2.3 Relevant international agreements and conventions (e.g. UN Sustainable Development Goals)

The table below lists the SDG targets and indicators relevant to inclusive growth, which the Philippines will pursue and report on.

Table 3. Sustainable Development Goal Targets and Indicators related to Inclusive Growth

SDG Targets	Indicators
By 2030, ensure that all men and women, in particular the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technology and financial services, including microfinance	<ul style="list-style-type: none"> ▪ Proportion of population living in households with access to basic services ▪ Proportion of total adult population with secure tenure rights to land, with legally recognized documentation and who perceive their rights to land as secure, by sex and by type of tenure
By 2030, achieve universal and equitable access to safe and affordable drinking water for all	<ul style="list-style-type: none"> ▪ Proportion of population using safely managed drinking water services
By 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations	<ul style="list-style-type: none"> ▪ Proportion of population using safely managed sanitation services, including a hand-washing facility with soap and water
Support and strengthen the participation of local communities in improving water and sanitation management	<ul style="list-style-type: none"> ▪ Proportion of local administrative units with established and operational policies and procedures for participation of local communities in water and sanitation management
Achieve higher levels of economic productivity through diversification, technological upgrading and innovation, including through a focus on high-value added and labour-intensive sectors	<ul style="list-style-type: none"> ▪ Annual growth rate of real GDP per employed person
Promote development-oriented policies that support productive activities, decent job creation, entrepreneurship, creativity and innovation, and encourage the formalization and growth of micro-, small-	<ul style="list-style-type: none"> ▪ Proportion of informal employment in non-agriculture employment, by sex

SDG Targets	Indicators
and medium-sized enterprises, including through access to financial services	
By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value	<ul style="list-style-type: none"> ▪ Average hourly earnings of female and male employees, by occupation, age and persons with disabilities ▪ Unemployment rate, by sex, age and persons with disabilities
By 2020, substantially reduce the proportion of youth not in employment, education or training	<ul style="list-style-type: none"> ▪ Proportion of youth (aged 15-24 years) not in education, employment or training
Take immediate and effective measures to eradicate forced labour, end modern slavery and human trafficking and secure the prohibition and elimination of the worst forms of child labour, including recruitment and use of child soldiers, and by 2025 end child labour in all its forms	<ul style="list-style-type: none"> ▪ Proportion and number of children aged 5-17 years engaged in child labour, by sex and age
Protect labour rights and promote safe and secure working environments for all workers, including migrant workers, in particular women migrants, and those in precarious employment	<ul style="list-style-type: none"> ▪ Frequency rates of fatal and non-fatal occupational injuries, by sex and migrant status ▪ Level of national compliance of labour rights (freedom of association and collective bargaining) based on International Labour Organization (ILO) textual sources and national legislation, by sex and migrant status
By 2030, devise and implement policies to promote sustainable tourism that creates jobs and promotes local culture and products	<ul style="list-style-type: none"> ▪ Tourism direct GDP as a proportion of total GDP and in growth rate ▪ Proportion of jobs in sustainable tourism industries out of total tourism jobs
Strengthen the capacity of domestic financial institutions to encourage and expand access to banking, insurance and financial services for all	<ul style="list-style-type: none"> ▪ Number of commercial bank branches per 100,000 adults and (b) number of automated teller machines (ATMs) per 100,000 adults ▪ Proportion of adults (15 years and older) with an account at a bank or other financial institution or with a mobile-money-service provider
Promote inclusive and sustainable industrialization and, by 2030, significantly raise industry's share of employment and gross domestic product, in line with national circumstances, and double its share in least developed countries	<ul style="list-style-type: none"> ▪ Manufacturing value added as a proportion of GDP and per capita ▪ Manufacturing employment as a proportion of total employment
Increase the access of small-scale industrial and other enterprises, particularly in developing countries, to financial services, including affordable credit, and their integration into value chains and markets	<ul style="list-style-type: none"> ▪ Proportion of small-scale industries in total industry value added ▪ Proportion of small-scale industries with a loan or line of credit
By 2030, ensure access for all to adequate, safe and affordable housing and basic services and upgrade slums	<ul style="list-style-type: none"> ▪ Proportion of urban population living in slums, informal settlements or inadequate housing
By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons	<ul style="list-style-type: none"> ▪ Proportion of population that has convenient access to public transport, by sex, age and persons with disabilities
By 2030, enhance inclusive and sustainable urbanization and capacity for participatory, integrated and sustainable human settlement planning and management in all countries	<ul style="list-style-type: none"> ▪ Ratio of land consumption rate to population growth rate 11.3.2 Proportion of cities with a direct participation structure of civil society in urban planning and management that operate regularly and democratically
Strengthen efforts to protect and safeguard the world's cultural and natural heritage	<ul style="list-style-type: none"> ▪ Total expenditure (public and private) capita spent on the preservation, protection and conservation of all cultural and natural

SDG Targets	Indicators
	heritage, by type of heritage (cultural, natural, mixed and World Heritage Centre designation), level of government (national, regional and local/municipal), type of expenditure (operating expenditure/investment) and type of private funding (donations in kind, private non-profit sector and sponsorship)
Support positive economic, social and environmental links between urban, peri-urban and rural areas by strengthening national and regional development planning	<ul style="list-style-type: none"> Proportion of population living in cities that implement urban and regional development plans integrating population projections and resource needs, by size of city
By 2020, substantially increase the number of cities and human settlements adopting and implementing integrated policies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change, resilience to disasters, and develop and implement, in line with the Sendai Framework for Disaster Risk Reduction 2015-2030, holistic disaster risk management at all levels	<ul style="list-style-type: none"> Number of countries that adopt and implement national disaster risk reduction strategies in line with the Sendai Framework for Disaster Risk Reduction 2015-2030 Proportion of local governments that adopt and implement local disaster risk reduction strategies in line with national disaster risk reduction strategies
Provide access for small-scale artisanal fishers to marine resources and markets	<ul style="list-style-type: none"> Progress by countries in the degree of application of a legal/regulatory/policy/institutional framework which recognizes and protects access rights for small-scale fisheries
Ensure responsive, inclusive, participatory and representative decision-making at all levels	<ul style="list-style-type: none"> Proportions of positions (by sex, age, persons with disabilities and population groups) in public institutions (national and local legislatures, public service, and judiciary) compared to national distributions Proportion of population who believe decision-making is inclusive and responsive, by sex, age, disability and population group
Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries	<ul style="list-style-type: none"> Number of deaths, missing persons and directly affected persons attributed to disasters per 100,000 population Number of countries that adopt and implement national disaster risk reduction strategies in line with the Sendai Framework for Disaster Risk Reduction 2015-2030 Proportion of local governments that adopt and implement local disaster risk reduction strategies in line with national disaster risk reduction strategies

2.4 Inventory of stakeholders

Table 4. List of National Government Agencies

Organizations	Vulnerable Groups
National Government Agencies; Government-Owned and Controlled Corporations; Government Financial Institutions; Non-Governmental Organizations (NGOs)/Civil Society Organizations (CSOs); State Universities and Colleges (SUCs); and Local Government Units.	People with Disability Women and Children Senior Citizens Agriculture/Fisheries Sector People living in high-risk areas Informal Settlers

3 Targets and indicators

3.1 Long list of targets and indicators

Table 5. Long list of targets.

INCLUSIVE GROWTH
Quality of Life (for all groups, yet zooming into the poorest groups)
<ul style="list-style-type: none"> ▪ Purchasing Power Index ▪ Safety Index ▪ Health Care Index ▪ Climate Index ▪ Cost of Living Index ▪ Property Price to Income Ratio ▪ Traffic Commute Time Index* ▪ Average Commute Cost * ▪ Pollution Index ▪ Access to modern electricity (also reliability of electricity) ▪ Access to safe water ▪ Access to sanitation ▪ Average green area / inhabitant (open spaces*2)
Equity in job and income opportunities
<ul style="list-style-type: none"> ▪ Poverty incidence in the plan area (especially within the agricultural & fishers sector) ▪ Unemployment rate according to gender ▪ Number of SMME's ▪ Contribution of agriculture to regional GDP ▪ % of agriculture area within total plan area ▪ Land conversion rate from Agriculture to other uses ▪ Job conversion rate - shifting from agriculture to other jobs ▪ Proportion of ISF households (related to secure tenure, which is handled in ISF theme)
Green growth in Economy
<ul style="list-style-type: none"> ▪ % of MB (regional) GDP generated by green activities ▪ Ratio of green jobs to overall jobs
Net economic growth
<ul style="list-style-type: none"> ▪ GDP (regional) ▪ Proportion of informal/underground economy ▪ Internet infrastructure quality ▪ Population density

3.2 Short list of targets and indicators

Table 6. Short list of targets.

INCLUSIVE GROWTH
Equitable improvement in the quality of life in MBA to reduce adverse environmental impact in the Manila Bay
<ul style="list-style-type: none"> ▪ Percentage of families/ population below poverty thresholds ▪ Employment rate by gender ▪ Income growth of the lower 30% of the population

4 Problem Analysis

4.1 Description of Present Situation

4.1.1 Regional Economic Growth Trend

The MBSDMP study area consists of the whole NCR, and most of Regions 3 (Central Luzon) and Region 4A (CALABARZON). Figure 1.2 presents the gross regional domestic product (GRDP) in constant 2000 prices of the three regions in the last three years, in comparison to the country's GDP.

Consistent growth was posted from 2015 to 2017, with NCR leading at Php2.77 trillion in 2015 to Php3.16 trillion in 2017. Region 4A comes in second with Php1.30 trillion in 2015 to Php1.456 trillion in 2017. Region 3, which is also known as the country's rice granary contributed Php704 billion in 2015 which grew to Php844 billion in 2017. Among the three regions, Region 3 has the fastest economic growth rate at 9.3% in 2017.

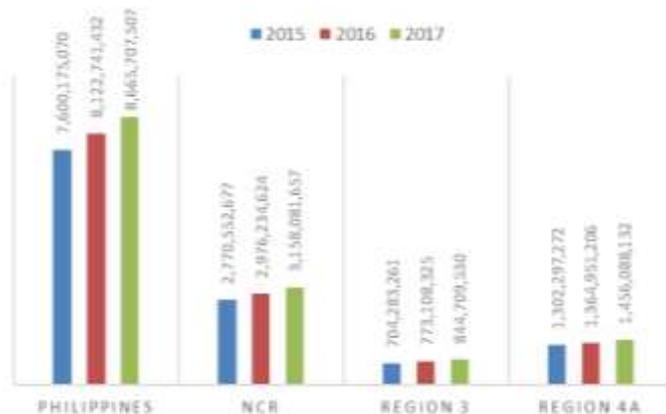


Figure 3. GRDP, 2015-2017 in Php'000, at Constant Prices. Source: PSA, Regional Reports (NEDA RO3, NEDA 4A), Study Team.

NCR consistently has accounted for the largest share of the country's GDP at 36.4% in 2017, and has the highest per capita GRDP at Php244,253 in 2017, which is nearly three times the national average. The three-year compound annual growth rate (CAGR) of NCR's GRDP is 4.46%. The NCR is often depicted as overcrowded, with booming business districts in Makati and Pasig, and impoverished communities in the fringes. High-rise buildings continue to be built in expensive commercial areas, while makeshift communities continue to expand to house multiple families in informal settlements. The traffic condition is the worst in the country, where daily home to work commute could take over an hour for an average distance of 7kms. Flooding is likewise frequent in many areas in NCR mostly due to solid waste management problems, and the perennial need for drainage, transport and sanitation infrastructure development as increasing population puts more pressure on the present systems in place. To adapt to these issues, households allocate more of its limited budget to transportation, health, housing repairs and construction, rent, and spending on utilities.

Despite these, the PSA believes that NCR will continue to influence the national economy in the future with the sheer size of its contribution. Any major shock in the capital will have a significant bearing on the country as a whole, as was stressed during a press briefing in April 2018.

Region 3 positions itself as a natural magnet from congested NCR, with prospects for more aggressive growth due to its geographic advantage, and present infrastructure in place. Region 3 is home to the nearest international gateway to the capital with Clark International Airport in Pampanga continuously expanding and improving its operations to accommodate a constantly increasing demand for air transport. Over the last four years, the regional economy has been growing at a CAGR of 6%. In 2017, it posted the 3rd highest in the country at 9.3%. Industry is the main contributor to its GRDP, accounting 46%, while services accounted for 39%.

Out of the 74 manufacturing economic zones in the country, 35 or 47% is located in Region 4A according to the Philippine Economic Zone Authority (PEZA). Because of this, the region has been the second biggest contributor to the national economy at 17% of the GDP. The industry sector is a major influencer of the regional economy, accounting for 62% of the GRDP in the last five years. The CAGR of the GRDP was calculated to be 4.46%, with the 2017 growth rate posting 6.7%.

4.1.2 Performance of the Local Economy

In 1991, the country adopted the ground breaking Local Government Code (RA 7160), which, among others, authorized and encouraged LGUs to create revenues within its legal bounds, to fund its own economic development, and ease the burden of the national government. Nearly three decades later, dependence on the internal revenue allotments (IRA) have remained high. The IRA is an intergovernmental fiscal transfer (IFT) that allows LGUs to carry out functions that are decentralized to them. Data from the Bureau of Local Government Finance (BLGF) shows that IRA has historically been increasing compared with the LGUs' own-source revenues or locally generated income. The mandated 40% allocation from the internal revenue tax collections of the national government is the primary source of this increase.

Every year, the Bureau of Internal Revenue (BIR) improves its collections, and LGUs are assured of getting their share. Among LGUs within the study area, almost 80% heavily relied on this allotment from 2015 to 2017 (Figure 4). One reason for this, as offered by Gilberto Llanto in 2012 of the Philippine Institute for Development Studies (PIDS) and former NEDA Deputy Director General, is that while there are a number of good taxes, the revenue base of LGUs is small, especially the low-income class LGUs. Benjamin Diokno, the present administration's Secretary of Budget and Management, gives a more candid opinion that the way the IRA is structured, LGUs have been given an incentive to be "lazy" in collecting taxes.

In the first annual policy forum of the Philippine Center for Economic Development (PCED) Institute of Public Economics and Regulation (PIPER) in 2012, Diokno stressed that the decentralization fostering autonomy, which is the intent of the LG Code, has bred fiscal dependence. Studies by Rosario Manasan in 1995, 2004, 2007 also found fundamental issues on the IRA distribution formula, in that it fails to equalize the wide disparities of the local tax base among the provinces in tge country. Also, it has a disincentive effect on the tax effort of LGUs. She recommended a reformulation of the IRA so as to provide incentives for local tax effort.

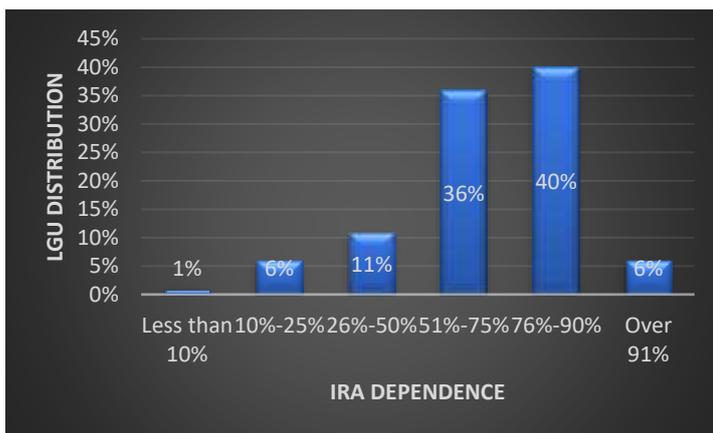


Figure 4. IRA Dependence of LGUs, 2015-2017 (in Php '000)

LGUs can generate its own revenues through tax and non-tax revenues as provided by law. While some have exhibited innovative ways in which they can create income to fund their own projects, a significant number still need to break away from the common practice and historical trend of local economies' dependence on the IRA since the enactment of RA 7160 or the "Local Government Code of 1991". By increasing own source income, LGUs can boost local economic growth. Good performing projects as public markets and slaughterhouse which are supposed to be self-liquidating should be able to fund for their operations. This way, the LGUs' incomes can be distributed among its many other important sectors that are non-income generating but are nonetheless essential in the local economy such as education, health, general welfare, flood control, waste management and processing.

The Local Government Code (LGC) provides the legal framework for LGU financing. It allows LGUs to use funds from its share in the national transfers and local taxes; source funds from the private sector through guarantee agreements, joint venture, municipal bonds, build-operate-transfer and its different variants, and borrowings; and access official development assistance (ODA) facilities.

Most big cities source funds for infrastructure projects from bank borrowings while there are those, which have done public-private partnership. Smaller cities and municipalities source mainly from national transfers or internal revenue allotments (IRA) representing 40% of the total national taxes collected three years earlier by the national government including collections of the Bureau of Customs. The LGUs are mandated to set aside not less than 20% of IRA for local government projects as development fund.

For climate change adaptation/mitigation and disaster risk reduction and management related projects, there are two very specific funds that are mandated by Congress to be made available to local governments: (1) People's Survival Fund (PSF) - Republic Act No. 10174, an Act establishing the people's survival fund to provide long-term finance streams to enable the government to effectively address the problem of Climate Change, amending for the purpose Republic Act No. 9729, Otherwise known as the "Climate Change Act of 2009"; and (2) Local Disaster Risk Reduction and Management Fund (LDRRMF) - R.A. No. 10121, Philippines Disaster Risk Reduction and Management Act of 2010. The Act mandates that not less than five percent (5%) of the estimated revenue from regular sources shall be set aside as the LDRRMF to support disaster risk management activities such as, but not limited to, pre-disaster preparedness programs including training, purchasing life-saving rescue equipment, supplies and medicines, for post-disaster activities, and for the payment of premiums on calamity insurance. The LDRRMF shall cover 30% allocation for quick response, and 70% for disaster prevention, preparedness, response, rehabilitation, and recovery.

Local governments may also impose environmental or green taxes. These are taxes on economic activities that negatively impact the environment (e.g. pollution), collected for interventions that result in a direct positive environmental impact. The proceeds can be directly invested in sustainable projects. This is being levied by some LGUs for users of tourism or resort facilities.

4.1.3 Population and Poverty

Metro Manila is characterized by a daytime population, 25% higher during the day than during the night. This creates much higher demand of transport and other public services during the day and peak times. There are no official surveys conducted to capture daytime population. The swelling of the Metro Manila population during the day is due to the influx of workers and students from the neighbouring provinces of Cavite, Laguna, Rizal, Bulacan, and Pampanga, all within the MB basin area. The PSA just recently launched the National Migration Survey, which should provide important statistics regarding movement of people across regions and across countries.

The trend is that population growth will continue, at least for the next 10 years and if there are no limits to immigration or no policies on residencies; as all the opportunities are concentrated in Manila. A large number of people, especially young people, come to Manila to their relatives for studies and work. This has been the trends for many years, even though there have been plans such as the DENR program and the program of other governments agencies that provided opportunities of work outside of Manila.

According to the PSA, the per capita poverty threshold in 2015 for the Manila Bay area ranged from Php 10,958 in Laguna to Php 12,517 in NCR while the national poverty threshold stood at Php 9,969 monthly. All provinces within the Manila Bay area registered poverty thresholds higher than the national average, except for Laguna, which is slightly lower than the national average. Cavite registered the highest threshold followed by NCR and Bataan.

Table 7. Poverty Threshold, Philippines and Manila Bay Area: 2006, 2009, 2012, 2015

Provinces	Poverty Threshold (Pesos)			
	2015	2012	2009	2006
Philippines	10,969	9,385	8,448	6,703
NCR	12,517	10,084	9,456	7,718
Rizal	12,014	10,225	9,300	7,356
Cavite	12,835	9,808	8,200	6,576
Laguna	10,958	9,863	8,631	6,758
Batangas	10,874	9,895	8,604	6,823
Quezon	10,330	8,949	7,945	6,293
Bulacan	11,062	9,878	9,012	7,204
Pampanga	11,233	9,620	8,420	6,850
Tarlac	11,328	9,557	8,622	6,910
Nueva Ecija	11,644	10,662	9,925	7,908
Bataan	12,208	9,374	8,707	6,874

Provinces	Poverty Threshold (Pesos)			
	2015	2012	2009	2006
Nueva Viscaya	11,112	9,283	8,365	6,802

Source: Philippine Statistics Authority

Manila Bay area has a much lower poverty incidence (9.9%), but highest in population. It is important to assess whether this trend is going to continue, and if so, how do poor households in the Manila Bay area compare with their counterparts in other regions in terms of spending patterns? Or, more importantly, in terms of welfare?

The national poverty incidence of 21.1 in 2015 was much higher than those in the Manila Bay area except for Nueva Ecija. The lowest incidence was registered in NCR 2nd and 4th districts (3.8).

Poverty incidence in the Manila Bay area has generally increased from 2006 to 2015, except for Bulacan (6.8 in 2006 to 5.9% in 2015), Nueva Ecija (26.3 to 24.6%), and Bataan (9.4 to 7.8%).

Table 8. Poverty Incidence among Families, Philippines and Manila Bay Area: 2006, 2009, 2012, 2015

Provinces	Poverty Incidence among Families			
	2015	2012	2009	2006
Philippines	21.1	22.3	22.9	23.4
NCR	4.5	3.8	3.7	2.8
NCR 1st District	4.8	3.8	4.4	2.7
NCR 2nd District	3.8	3.1	3.2	2.8
NCR 3rd District	6.4	4.9	6.5	3.2
NCR 4th District	3.8	3.8	2.1	2.4
Rizal	7.4	7.6	9.5	5.5
Cavite	8.3	4.1	3.8	2.9
Laguna	5.9	6.3	7.4	5.8
Batangas	11.2	19.4	14.1	13.3
Quezon	22.3	22.6	22.8	27.4
Bulacan	5.9	6.7	7.5	6.8
Pampanga	5.2	6.4	5.9	3.3
Tarlac	21.1	14	15.5	20.7
Nueva Ecija	24.6	23.0	27.0	26.3
Bataan	7.8	7.3	5.5	9.4
Nueva Vizcaya	15.8	17.0	11.6	12.4

Source: Philippine Statistics Authority

Table 9. Labor Force Participation, Employment, Unemployment and Underemployment Rates, by Region: January 2016, 2017, 2018

Region	2015	2016	2017	Jan 2018
Philippines				
Household Population 15 Years Old and Over	64,936	68,125	69,896	70,897
Labor Force	41,345	43,361	42,800	44,075
Employed	38,741	40,998	40,335	41,755
Underemployed	7,180	7,478	6,506	7,498

Region	2015	2016	2017	Jan 2018
Unemployed	2,602	2,363	2,441	2,320
Not in Labor Force	23,591	24,950	27,096	26,822
Labor Force Participation Rate (%)	63.7	63.4	61.2	62.2
Employment Rate (%)	93.7	94.5	94.3	94.7
Underemployment Rate (%)	18.5	18.3	16.1	18.0
Unemployment Rate (%)	6.3	5.5	5.7	5.3
National Capital Region				
Household Population 15 Years Old and Over	8,251	8,919	9,088	9,142
Labor Force	5,193	5,613	5,552	5,542
Employed	4,752	5,239	5,141	5,108
Underemployed	474	458	479	368
Unemployed	441	374	411	434
Not in Labor Force	3,058	3,306	3,536	3,600
Labor Force Participation Rate (%)	62.9	62.9	61.1	60.6
Employment Rate (%)	91.5	93.3	92.6	92.2
Underemployment Rate (%)	10.0	8.7	9.3	7.2
Unemployment Rate (%)	8.5	6.7	7.4	7.8
Region III. Central Luzon				
Household Population 15 Years Old and Over	7,282	7,555	7,753	7,853
Labor Force	4,476	4,693	4,548	4,769
Employed	4,126	4,383	4,247	4,511
Underemployed	555	706	485	517
Unemployed	350	310	302	257
Not in Labor Force	2,806	2,862	3,204	3,084
Labor Force Participation Rate (%)	61.5	62.1	58.7	60.7
Employment Rate (%)	92.2	93.4	93.4	94.6
Underemployment Rate (%)	13.5	16.1	11.4	11.5
Unemployment Rate (%)	7.8	6.6	6.6	5.4
Region IV-A. CALABARZON				
Household Population 15 Years Old and Over	8,576	9,539	9,787	9,973
Labor Force	5,528	6,125	6,235	6,276
Employed	5,085	5,687	5,800	5,852
Underemployed	925	887	810	764
Unemployed	444	438	435	423
Not in Labor Force	3,048	3,413	3,552	3,698
Labor Force Participation Rate (%)	64.5	64.2	63.7	62.9
Employment Rate (%)	92.0	92.8	93.0	93.3
Underemployment Rate (%)	18.2	15.6	14.0	13.1
Unemployment Rate (%)	8.0	7.2	7.0	6.7

4.1.4 Underground Economy or the Informal Sector

A 2002 World Bank study estimated the size of informal sector or the underground economy in 104 countries. Georgia topped the list with 67.3% of the GDP, while Canada is at the bottom with 3%. In the study, the Philippines was 22nd on the list with an estimated 43% of the total economy. With the MB area influencing 63% of the total GDP, it is possible that underground economy is as much as 27%.

Excluding illegal goods and services such as drugs and smuggled items, the informal sector consists of businesses engaged in selling goods and services, the transactions of which are deliberately hidden from government accounts to avoid payment of taxes and compliance with related regulations. In other words, these are businesses that do not support government programs through taxes and other fees. However, the underground business serves a purpose. It has supported the unemployed and the poor, and contributes vibrantly to consumer spending, which, in turn boosts the economy. This lifeline is important in a way that it provides food for the penniless, various odd jobs that serve as (temporary) employment for people to support their own needs.

4.1.5 Public Investment Programs

The Public Investment Program (PIP) 2017-2022 identifies the rolling list of priority programs and projects (PAPs) to be implemented by national government agencies (NGAs), government-owned and controlled corporations (GOCCs), government financial institutions (GFIs), and other national government offices and instrumentalities within the medium term. These projects are deemed to contribute to the achievement of the societal goal and targets in the Philippine Development Plan (PDP) 2017-2022 and responsive to the outcomes and outputs in its accompanying Results Matrices (RM).

The Omnibus Investment Code being implemented by the Department of Trade and Industry-Board of Investment (DTI-BOI) provide a comprehensive set of incentives for local and foreign enterprises engaged in public services, specifically activities considered as priority for national development.

The Philippines has robust experience on PPPs. The government has engaged the private sector in the last 30 years in various sectors such as transport, power, water, education, property development, information technology, among others. Continued keen interest in government projects by the private sector has been observed in the numerous unsolicited proposals submitted to various agencies of government including local governments in support of the current administration's "Build Build Build" program. As evidence of the country's long experience in PPPs, the Philippine government in recent years has awarded projects with estimated project cost of over PhP200 billion under the Amended BOT Law (RA 7718), the NEDA JV Guidelines and BCDA JV Guidelines. These projects were able to source funding from local and foreign banks with ease.

Despite a few unwanted experiences in PPP concession contracts such as the NAIA-3 Concession Agreement, the long ongoing arbitration of the MRT3 Build-Lease-Transfer (BLT) Agreement¹, the ongoing arbitration on water concessions in relation to tariff issues and contracts, including the legal framework governing these projects, in most cases, PPP programs have minimized risk for government. The market risk is absorbed in full by the private sector.

Under all of these investment programs, immediate benefits such as employment generation are expected. Jobs propel the economy through a more vibrant consumer spending. But long-term effects of these big-ticket projects must aim to contribute to inclusive growth. How projects will be evaluated by the government and then designed and operated by the private sector will be critical and must be well-guided by a strategic plan for Manila Bay.

4.1.6 Transport

The Greater Capital Region (GCR), comprising of NCR, and parts of Region 3 and 4A --- or the MB area, remains to be the lifeblood of the whole country, where major economic activities: trade, education, finance, government, employment and industries are located. Within such a limited space, accelerated and unbridled urbanization has led to construction of mixed-use high-rise educational, commercial and residential spaces. Worsened by decades of infrastructure backlog, lack of quality infrastructure, and inconsistency in the implementation of master plans, the traffic situation causes the public to contend with arduous daily commute through pedestrian-unfriendly and unsafe streets.

¹ The arbitration proceedings in Singapore involving the MRT Dev.Corp's development-rights payment (DRP) obligations amounting to P2.3 billion pesos remains to be resolved. Pending this payment, DOTr refused to issue access and work permits to MRTDC in the MRT-3 system. In August 2018, the Court of Appeals affirmed the ruling to bar MRTDC from exercising advertising and commercial leasing rights at the MRT-3 system pending the arbitration results.

A city's transportation system is a key and effective reallocator of spaces for economic and social activities. Land use and transport systems feed into each other, meaning a change in transport systems brings about a change in land use and likewise, a change in land use brings about a change in transport systems.

The Ambisyon Natin 2040 survey indicate that Filipinos desire the freedom to go where they want, and that Filipinos dream of owning at least one vehicle. If we look at other economies' experiences, underlying the desire of being free to go anywhere is more achievable with cheaper and more convenient public mass transport system. Jim Miara said, "Traffic congestion has increased so much in virtually every metropolitan area that two-hour commutes now are routine. Attempts to alleviate the problem by constructing more highways almost always have led to more sprawl and, eventually, more congestion." Vehicles need fuel and parking spaces, both of which will impact on the car owners' net disposable income. Likewise, they will also impact the environment.

Evidently, unbridled urbanization, increasing car dependence, uncontrolled increase of informal settlers, influx of jobseekers from the provinces, and economic growth all contribute to unmet demand and inadequate supply of efficient transport in the study area.

4.1.7 Energy

Around 4,854 MW (32% of Luzon's installed capacity of 15,128 MW, 2015 data) is in the Manila Bay Area. Almost 11% of the power plants is in Bataan (coal, gas, biomass and solar); 8.24% in Laguna (geothermal and hydro), 4.72 % are in Rizal (oil, wind, biomass).

The Luzon grid has a total of 18,224.2 MW (as of 31 August 2017) of committed power projects, plus a battery of 230 MW (Table 10). Coal is 48.1% of the indicative power projects, followed by hydro at 17.2%, natural gas at 15.5%, solar at 8.9%, wind 7%, 2.5% oil-based and the rest are biomass and geothermal. A total of around 6,511 MW of committed projects in the Luzon grid is targeted for commercial operation from January 2018 to December 2022, 20% of which (around 1,327 MW) are in the Manila Bay project area.

The Department of Energy (DOE) is guided by the eight energy sector strategic directions : ensure energy security; expand energy access; promote a low carbon future; strengthen collaboration among all government agencies involved in energy; implement, monitor, integrate sectoral and technological roadmaps and action plans; advocate for the passage of the Department's legislative agenda; strengthen consumer welfare and protection; and foster stronger international relations and partnerships.

To realize the strategic directions, roadmaps have been developed to identify specific targets and clear action plans per energy subsector. For the planning period 2017 to 2040, some of the specific targets are as follows: increase renewable energy installed capacity to at least 20,000 MW; implement biofuels blending as mandated by the "Biofuels Act of 2006" or RA 9367; increase the country's indigenous fossil fuel reserves and production; ensure quality, reliable, affordable and secure supply; expanding electricity access; and ensuring a transparent and fair playing field in the power industry. The sector also aims for total access to electricity across the country, from 90% in 2017 to 100% by 2022 of households accessible to the grid, and 100% household electrification in off grid areas by 2040.

Table 10. Power Projects, in MW rated Capacity, as of August 31, 2017.

Power Projects	Indicative Power Projects		Committed Power Projects		
	MW	%	MW	%	
Luzon	Coal	8,760	48%	3,240	78%
	Biomass	114	1%	51	1%
	Natural Gas	2,816	15%	650	16%
	Oil	450	2%	46	1%
	Solar	1,618	9%	104	3%
	Geothermal	50	0%	43	1%
	Hydro	3,141	17%	8	0%
	Wind	1,275	7%	4,142	100%
	Subtotal	18,224	100%	8,284	200%
Visayas	Coal	900	24%	135	33%
	Biomass	15	0%	179	44%
	Natural Gas	138	4%		0%
	Oil	87	2%	8	2%
	Solar	540	15%	6	1%
	Geothermal	40	1%	50	12%

	Hydro	694	19%	31	8%
	Wind	1,268	34%		0%
	Subtotal	3,681	100%	408	100%
Mindanao	Coal	1,243	48%	1,090	85%
	Biomass	89	3%	12	1%
	Natural Gas		0%		0%
	Oil	45	2%	30	2%
	Solar	410	16%		0%
	Geothermal	30	1%		0%
	Hydro	750	29%	157	12%
	Wind		0%		0%
	Subtotal	2,568	100%	1,289	100%
Philippines	Coal	10,903	45%	4,465	45%
	Biomass	218	1%	241	2%
	Natural Gas	2,954	12%	650	7%
	Oil	582	2%	84	1%
	Solar	2,567	10%	110	1%
	Geothermal	120	0%	93	1%
	Hydro	4,585	19%	196	2%
	Wind	2,543	10%	4,142	41%
	Subtotal	24,473	100%	9,981	100%

Source: Philippine Energy Plan (2017-2040)

4.1.8 Agriculture and Fisheries

Most of the Manila Bay area is utilized for agriculture, specifically the Pampanga river basin and Cavite watershed (Table 11). These agricultural areas throughout the four watersheds are mostly utilized for crops, while fishpond areas are relatively higher in Pampanga and Pasig river basin. Agricultural areas in MBA is estimated at 0.9 million hectares planted to crops such as rice, corn, coconut, mango, sugarcane, and other crops such as banana, ampalaya, eggplant, onion, squash, stringbeans, tomato, watermelon, cassava, mongo, pineapple and cashew. Agricultural areas in Region III, specifically the Provinces of Tarlac, Pampanga, and Nueva Ecija, are mostly planted to rice. For provinces within Region IV-A, most agricultural areas are planted to coconut, specifically in the provinces of Cavite and Laguna (Figure 4). Data on crops planted to agricultural in the provinces of Bulacan, Rizal and Metro Manila may need further verification and updating (DENR-MBCO, 2015).

Table 11. Land Use of Manila Bay Area by Watershed (2011).

Description	Pampanga		Bataan		Pasig		Cavite		TOTAL	
	Ha	%	Ha	%	Ha	%	Ha	%	Ha	%
Agricultural	562,774	47	40,564	29	77,661	22	136,750	58	817,749	42
Grassland/shrubland	232,854	20	56,873	40	101,066	28	12,724	5	403,517	21
Forest/woodland	163,340	14	36,555	26	3,238	1	14,987	6	218,120	11
Wetland	44,060	4	2,652	2	17,811	5	2,098	1	66,621	3
Miscellaneous	189,432	16	4,805	3	157,357	44	69,184	29	420,778	22
TOTAL	1,192,460	100	141,449	100	357,133	100	235,744	100	1,926,786	100

One of the major issues in the sector is agricultural land conversion. In the province of Cavite, the downward trend in agricultural areas were noted from years 2012 to 2016. Generally, the decrease was attributed to the conversion of these lands to residential/subdivision development and industrial areas, other areas are categorized as forest, and Network of Protected Areas and Agro-Industrial Development (NPAAD) and some areas are no longer cultivated and were used for other purposes (Province of Cavite SEP, 2016). The irrational land use conversion of prime irrigated and irrigable areas, as well as prime agricultural land may have been addressed if there is a national land use policy.

Agricultural lands are also susceptible to flooding. Six out of eight provinces in the MBA are included in the top 20 provinces susceptible to floods, as identified by DENR-MGB. Among the provinces identified are Pampanga (1st), Nueva Ecija (2nd), Tarlac (4th), Bulacan (6th), Metro Manila (7th), and Bataan (16th). Agricultural lands are also

susceptible to sedimentation. Agricultural activities cause pollutant loading to Manila Bay as well as soil degradation. But more than the decreasing land area being devoted to agriculture, the low productivity appears to be caused by the government's fragmented approach to truly modernize the sector.

Manila Bay is the oldest traditional fishing ground of the country and one of the most heavily exploited (Silvestre et al. 1987; Alino, n.d.). The deep embayment, shallow and muddy nature of the bay combined with a strategic economic location has made the area suitable for both capture fisheries and aquaculture. Located close to the largest population center of the country, fishing effort through the years has significantly intensified in the bay. This intensified fishing effort is reflected in the increasing number of fishermen and boats per kilometer of coastline in the bay. In 1987, there were only 70 fishermen per kilometer of coastline in Manila Bay. This increased to 253 in 1993 to 11,025 in 2017 (PEMSEA and MBEMPTWG-RRR 2004). Following this trend is a similar increase in the number of boats per kilometer of coastline from only 74 in 1980 to 3,659 in 2017 (PEMSEA and MBEMPTWG-RRR 2004). Fish corrals have also proliferated in the shallow sections of the bay, usually in deep embayment along mudflats and estuaries.

The total GDP contribution of this sector for 2015, 2016 and 2017 was computed at 1.5% (PhP 193,777,981), 1.3% (PhP 185,190,512) and 1.2% (PhP 197,228,010) respectively (Philippine Statistics Authority 2017). In the same years, the Manila Bay Area (MBA) contributed a quarter of the fishing industry's total GDP (Table 12) once again placing the region as one of the foremost fishing grounds in the country. Furthermore, the contribution of Manila Bay to the national fishery GDP showed an increasing trend from 2015 to 2017, which contrast to the trend observed at the national level.

Table 12. Contribution (in %) of the Fishery Sector of the Three Regions to the National Fishery Sector GDP from 2015-2017 (Based on Current Prices).

	2015	2016	2017
NCR	0.04	0.05	0.04
Region III	13.00	13.44	14.29
Region IV-A	11.02	11.21	11.17
MBA	24.06	24.70	25.50

Despite the increasing trend in fisheries production, majority of the fishermen and their dependents remain poor and marginalized. Although considered as a low capital undertaking, fishing has become more difficult with the increasing number of fishermen matched with declining fish population and shifts in fish catch composition from high quality, expensive species to low quality, and relatively cheaper species.

Aside from this problem of overfishing, extensive habitat destruction, severe pollution, water quality degradation, and increased susceptibility of coastal settlements to increasing frequencies of climate extremes reduces overall community resilience by exacerbating poverty and aggravating settlement problems of local fishermen. These stressors further marginalize the poor, particularly the fishermen and informal settlers of the bay, alienating them to the inclusive growth targeted by the government. It is important to remember that sustainable fishery is an important strategy to alleviate poverty in coastal communities of the country, including Manila Bay. Strategies to increase fish population coupled with the implementation of sustainable fishery practices, remains central to achieving inclusive growth in the Manila Bay region.

4.1.9 Spatial Planning

Each region in the country has a regional development plan. For the Manila Bay area, NEDA has regional development plans for the Calabarzon and Central Luzon regions, while the MMDA prepared a development plan for the National Capital Region (NCR), which is the Metro Manila Greenprint 2030. In terms of spatial planning, NEDA formulated the National Physical Framework Plan (2016-2045), wherein the National Spatial Strategy is the core strategy. Each municipality and city in the country prepares a local comprehensive land use plan (CLUP), consistent with the NPPF, that is the basis for enacting local zoning ordinances. The HLURB reviews and approves the CLUPs of all local governments. The national spatial strategy is intended to set the direction for future growth; it aims to decongest NCR and direct growth to regional and sub-regional centers connected for efficiency and to equalize economic growth opportunities.

The HLURB planning process applies to the entire ridge to reef planning area, specifically encompassing the primary MBSDMP study area, where the settlements and LGU centers (the built environment) are sited between two types of natural environments (upland and sea). In the case of the NCR itself and large portions of Bulacan Province to its

immediate north, the same have been generally characterized as huge floodplains, which are perennially (if not perpetually) subjected to flash-flooding and inundation, exacerbated of course by over-development at the landside portions (i.e. the sites of settlements and LGU centers), most commonly manifested by over-building, over-paving, the massive/ continuing illegal reclamation of inland waterways (that unlawfully convert the mandated legal easements into private property) and related practices that are actually covered by a plethora of development controls (DCs), the implementation and enforcement of which leaves so much to be desired.

Some of the concerns are rapid urban growth, increasing unemployment and limited economic growth, lack of urban basic services, ineffective urban planning and land management, and vulnerability of the urban poor. Other issues that are worth-noting within the planning area are: lack of open spaces, land use inefficiency, over-building, over-paving and flooding.

4.1.10 Smart City Development and the Adoption of ASEAN Smart Cities Network (ASCN) Framework

An emerging global trend that can significantly enhance capabilities is the development of Smart Cities. Smart City Development involves the use of Information and Communications Technology (ICT) to better inform decisions with regard to city development which in turn leads to improved quality of life of citizens, particularly those in urban areas. Noting that the NCR is primarily urban, Smart City Development can greatly benefit the region and its surrounding areas (i.e., Regions III and IV-A).

On the Regional Front, it may be noted that the ASEAN recently adopted the ASCN framework. The ASCN is a platform which helps ASEAN Member State (AMS) gain from the technical and financial capabilities for Smart City Development.

4.2 System analysis: Drivers and Outcomes of Inequitable Growth

To understand what it will take to achieve inclusive growth in the MBA, an analysis of the drivers and outcomes of inequitable growth that now prevail is conducted and encapsulated in Figure 3. Inequitable growth apparently is driven mainly by the governing policies specifically on where public and private investments on infrastructure and land development are made. Concentration of investments in a limited region tends to direct the movement of people and resources towards it that creates problems such as environmental degradation, poverty and human insecurity. These problems usually have the heaviest impacts on the already poverty stricken and highly vulnerable poor sectors. However, looking at some key policies including the PDP, the NFPP and the NSS, the spirit of inclusive growth is palpable with the intent to disperse development in growth centers outside Greater Metro Manila Area (GMMA) to spread out development opportunities. It is in the execution of these policies where departure from the real intention to make economic growth equitable originates. Limitations in financial and technical assets as well as the lack of political will by the LGUs and NGAs, are the common considered reasons why good policies are not properly implemented.

Natural drivers most specifically climate change and natural disasters such as floods and typhoons undermine the ability of the poor sectors including the ISFs in capturing development opportunities to improve their quality of life. Natural drivers also compromise the stability of ecosystems and derail the delivery of vital ecosystem services to those in most need for livelihood opportunities be it in agriculture, fishery and business, and for protection against calamities. Natural disasters exacerbate environmental and ecological degradation including water pollution caused by excessively high population concentration in GMMA and the coastal areas. This is further aggravated by the inadequate enforcement of regulatory laws on land use and development, and waste management among others.

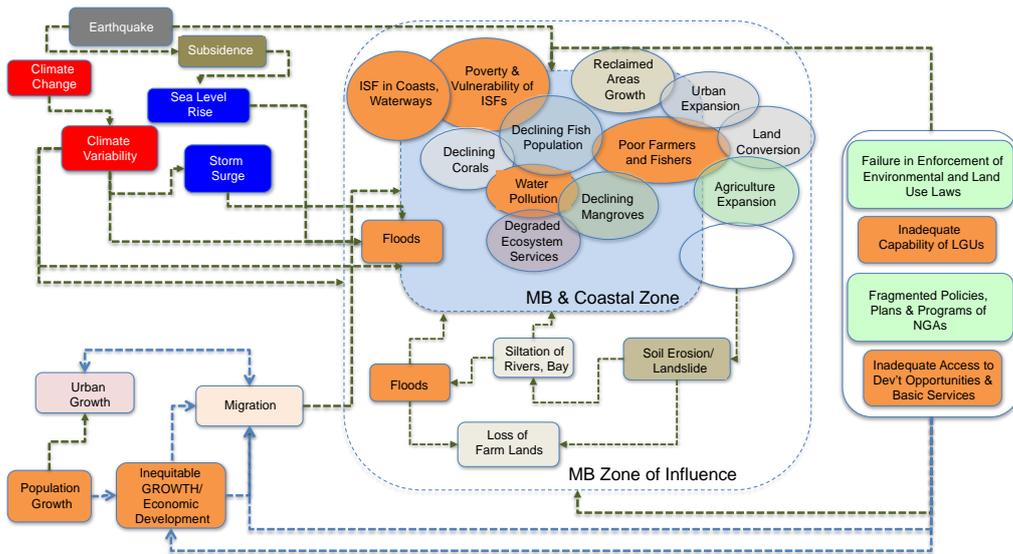


Figure 5. Drivers and Outcomes of Inequitable Economic Growth in the MBA.

5 Scenarios

During the strategy building phase, scenarios of what may be the plausible future conditions will be developed using historical analogues from available historical datasets and modelling as may be appropriate and needed. The aim is to be able to estimate the variations of the business as usual future from the desired future state of the Manila Bay. This section provides some of the statistics currently available for the proposed set of indicators to gauge at any given future time the progress in reducing the gap between the current state and the desired state of Manila Bay (Table 13). These proposed indicators will be subject to expanded discussions of the study team and iterative interactions with various stakeholder groups during the initial stages of the strategy building to agree on the final sets of indicators. To the extent possible uncertainties about the future state shall be quantified otherwise the expert judgments of the study team and key stakeholders shall be consulted so that decisions during the strategy building can be appropriately informed.

5.1 Base Case and Gap Analysis

The base case and gap analysis will be conducted for the proposed indicators under the inclusive growth focal theme in the ensuing strategy building phase. At this initial stage, it is important to briefly look into how the country has embraced the concept of inclusive growth, in the last three administrations that would provide a basic historical perspective.

The Arroyo administration (2001-2010) placed its focus in the process of decentralization and countryside development. Under the Strong Republic slogan, linking the islands across the country by establishing nautical highways and other transport corridors provided support to mobility of goods and services. Stringent fiscal reforms, albeit unpopular at the time, were also put in place that delivered the country barely scathed through the 2008 global economic crisis.

The previous Aquino administration's PDP 2011-2016 had a whole chapter that included inclusive growth goals; under which instruments such as the "cash transfers" were made part of. The focus was on the reduction of poverty.

Benefitting from the strong fiscal reforms in the Arroyo Administration, and the renewed trust in government in the Aquino Administration, the Philippines has gradually transformed to one of Asia's best-performing economies.

Meanwhile the current administration has its focus on security and peace, and the idea to invest more on infrastructure making use of public funds; aiming at important tax reforms with inclusive growth at its core: the Tax Reform for Acceleration and Inclusion or the TRAIN law.

The tax reform agenda is aimed at accelerating economic growth at a pace that would matter and ensures that gains are enjoyed by all Filipinos irrespective of economic class, through funding big ticket infrastructure projects. Under the Build, Build, Build program, immediate benefits such as employment during the construction phase for many Filipinos typically belonging in the low-income tiers are expected. Jobs provide financial resources to the households allowing them to spend on consumer goods and services, with in turn encourages businesses to produce more, thereby benefitting the non-poor. A more vibrant consumer spending expands the economy where everyone benefits. The challenge is to determine what could be the impact of these investments to the overall welfare in the long run.

Table 13. Base case conditions of selected indicators for tracking inclusive growth in the MB planning area.

INCLUSIVE GROWTH	2015	2022	2030	2100
1. Quality of Life (for all groups, yet zooming into the poorest groups)				
Property Price to Income Ratio				
Traffic Commute Time Index*				
Average Commute Cost *				
Pollution Index				
Access to modern electricity (also reliability of electricity)				
Access to safe water	85.50% (Phil)	95.16%		
Access to sanitation	94.10% (Phil)	97.46%		
Average green area / inhabitant (open spaces*2)				
2. Equity in job and income opportunities				
Poverty incidence in the plan area (specially within the agricultural & fishers sector)	9.9%			
Unemployment rate according to gender	8.1% (all)			

INCLUSIVE GROWTH	2015	2022	2030	2100
Number of SMME's				
Contribution of agriculture to regional GDP	4%			
% of agriculture area within total plan area				
Land conversion rate from Agriculture to other uses				
Job conversion rate - shifting from agriculture to other jobs				
Proportion of ISF households (related to secure tenure, which is handled in ISF theme)				
<hr/>				
3. Green growth in Economy				
% of MB (regional) GDP generated by green activities				
Ratio of green jobs to overall jobs				
<hr/>				
4. Economic growth				
GDP (*compound annual growth rate from 2009 data)	6.04%	5.8%	4.9%	2.4%
Proportion of informal/underground economy ²	<u>27%^[1]</u>			
Internet infrastructure quality				
Population density (per sq.km.)	1,563	1,768	2,007	4,099

² 2002 WB estimate

6 Summarizing and Concluding Problem Statement

Inclusive growth is an all-encompassing theme. It looks into growth and development through the lens with both losers and gainers in mind and is income-neutral.

The Manila Bay area is home to one-third of the country's total population, and it is also a main driver of economic growth. This underscores the fact that policies, natural environments, economy, and other such factors with direct impacts on the general populace of the Manila Bay study area can potentially have significant effects on the rest of the population of Luzon, and the entire country.

Careful regional economic planning will be imperative to sustain the income contributions of these regions to the country. While stronger economic performance in other regions is warranted for a more robust countryside development that contribute to the overall economy, it is important that investments in the productive sectors in the MBSDMP regions be strategic to ensure that the growth momentum is sustained.

How then can inclusive growth be achieved? For example, what is the vision about agriculture? Metro Manila is not per se the "food bowl", so a decreasing percent of contribution to GDP is not necessarily bad news; it could mean that people are shifting to other sectors. But Region 3 and Region 4A are major contributors to agricultural output. And how is the welfare of the remaining people employed in the agricultural sector? When people shift from agriculture to other more productive sectors happen, must a corresponding decrease in agricultural productivity take place? Or, can public spending be realigned to target investment on technologies and facilities that can result to the increase in productivity even despite the decreasing land area devoted to the sector in the planning area? How about in the fisheries sector? Food security is surely an important concern in inclusive growth.

The Build, Build, Build program seems to consider mostly transport investments that does not always translate into more inclusive development. Meanwhile investments in infrastructure for waste management and wastewater treatment management seem to be limited within the BBB program, while these are expected to have a much higher impact on inclusive growth as defined within the master plan and operationalized in the scorecard presented here.

Whether an infrastructure investment will result in inclusive growth depends to a great degree on the design of the project and the implementation arrangements and procurement strategy opted for.

6.1 Relationships to Other Focal Themes

A diagram to understand the link of one focal theme to another, through smart indicators was created during a 2-day workshop of the study team (Figure 6). In essence, the diagram illustrates the potential impacts of an intervention in one sector to the other sectors. All are connected and contribute to an overall metric for inclusive growth, which in this sample diagram created was the poverty incidence.

6.1.1 Linkage to Upgrading Informal Settlements

The Bay is a multiple use water body used for navigation, recreation and fisheries. Many fishing communities who live along the shorelines of the Bay are among those who live below the poverty line. A substantial number are also informal settlers. They largely depend on the productivity of the bay for their livelihood and for their own nutrition. This can be through artisanal fishing or through aquaculture like the culture of mussels.

The pollution of the Bay has led to the reduction in the productivity of the Bay. The catch per level of effort has been declining meaning less income for the fisherfolks. This reduces their capability to have food on the table, send their children to school, have access to healthcare and other social services and generally improve the quality of their lives. At the same time, communities living along the shores of Manila Bay, many of whom are informal settlers are at risk to health problems due to polluted bay waters. These issues are central to the theme of Inclusive Growth.

6.1.2 Linkage to Ecosystem Protection

The most vulnerable groups in the study area depend on the sea and water quality that results to great degree from ecosystem protection. Agricultural productivity, which includes the fisheries subsector, is highly vulnerable to the quality of the environment. As the country has been adopting the ridge-to-reef concept of environmental protection, it is important to note that the most vulnerable and marginalized communities are those that directly work on the earth or on the waters. Development projects that target ecosystem protection directly impacts on the most vulnerable groups in the society, and therefore addresses concerns on the inclusivity of development. Moreover, environmental protection encourages another vibrant sector, which is tourism. Tourism appeals to income classes.

6.1.3 Linkage to Water Quality Improvement

Access to safe water and sanitation are two important targets for inclusive growth. Health impacts of contaminated drinking water, and water for other domestic uses put pressure on the household budgets. Medication and hospitalization not only affect the purse, but also the overall well-being. As humans depend on water for survival, its quality is essential in attaining overall welfare.

6.1.4 Linkage to CCA and DRR

The most marginalized groups in society typically take residence in areas that make them the most vulnerable to the impacts of climate change. The resilience of the poor, including financial resilience, should be included in the DRR focal theme. Discussion of alternatives measures (such as revision of building codes, etc.) to enrich the design of houses, facilities, and projects must be undertaken in the context of ensuring inclusive growth. Programs that are put in place must not leave the poor behind.

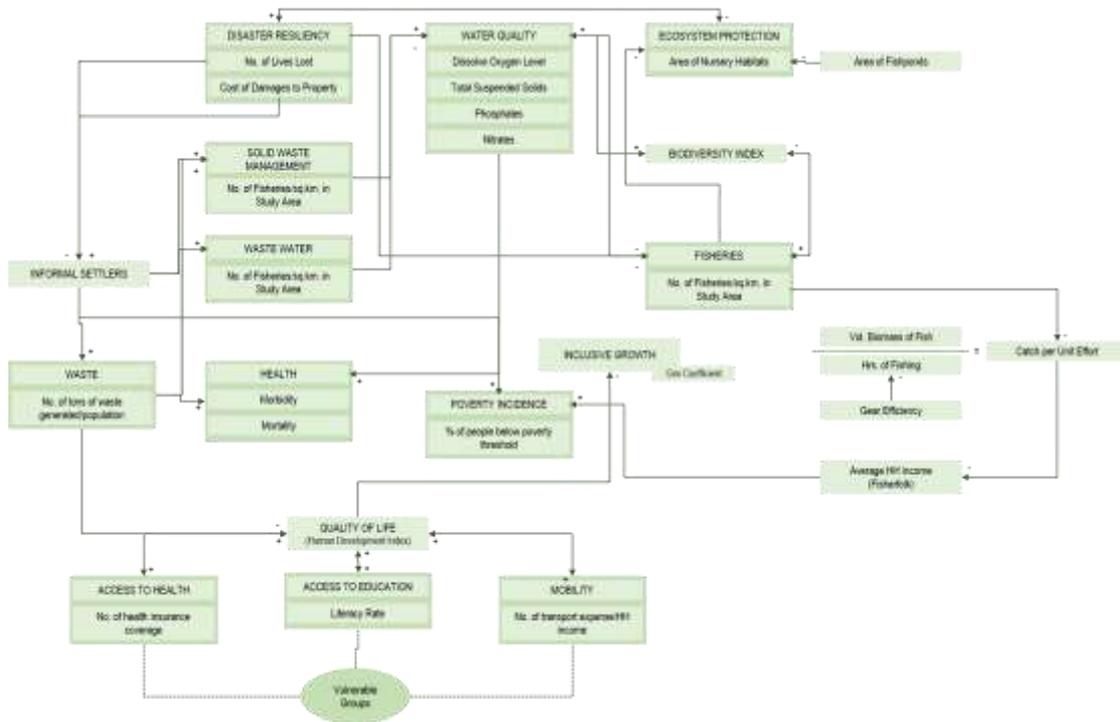


Figure 6. Relevance of Inclusive Growth to Other Focal Themes.