



Republic of the Philippines  
PROVINCE OF CAVITE  
City of Bacoor

OFFICE OF THE SANGGUNIANG PANLUNGSOD

COMMITTEE ON ENVIRONMENT AND NATURAL RESOURCES

**COMMITTEE REPORT**

NO. ENR 018-S-2024

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Subject: *AN ORDINANCE ENACTING THE BACOR CITY ENVIRONMENTAL CODE.  
(PCO 2023-143 dated November 29, 2023).*

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During the 75<sup>th</sup> Regular Session dated 22<sup>nd</sup> day of January 2024 of the 5<sup>th</sup> Sangguniang Panlungsod of the City of Bacoor, Cavite, the Committee on Environment and Natural Resources Chairman Hon. Levy M. Tela, informed the council that no documents was submitted for reference and consideration of the committee.

This Code's main goal is to offer a complete set of rules, regulations, and mechanisms that support environmentally sound growth, preservation, and enhancement while safeguarding the welfare of current and future generations of Bacoor residents.

The CENRO must review and assess the proposed ordinance for the city environmental code. They are requesting to complete the proposal until second quarter of the year 2024.

**RECOMMENDATION:**

In view of the foregoing, the Committee respectfully recommends that the proposed ordinance mentioned above be **TEMPORARY ARCHIVED**.

OFFICE OF THE  
SANGGUNIANG PANLUNGSOD  
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BACOR CITY, CAVITE



Republic of the Philippines  
PROVINCE OF CAVITE  
City of Bacoor

OFFICE OF THE SANGGUNIANG PANLUNGSOD

**WE HEREBY CERTIFY** that the contents of the foregoing report are true and correct.

Signed this 29th day of January 2024 at the City of Bacoor, Cavite.

**COMMITTEE ON ENVIRONMENT AND NATURAL RESOURCES**

COUN. LEVY M. TELA  
Chairman

COUN. REYNALDO M. FABIAN  
Vice Chairman

COUN. REYNALDO D. PALABRICA  
Member

COUN. ADRIELITO G. GAWARAN  
Member



Republic of the Philippines  
PROVINCE OF CAVITE  
City of Bacoor

OFFICE OF THE SANGGUNIANG PANLUNGSOD

COMMITTEE ON ENVIRONMENT AND NATURAL RESOURCES

EXCERPT FROM THE MINUTES OF THE 75<sup>th</sup> REGULAR SESSION

NO. ENR 018-S-2024

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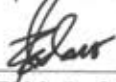
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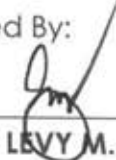
The Regular Session started at 10:00 AM. The Presiding Officer Hon. Reynaldo Palabrica, President Pro Tempore, referred the subject matter to Hon. Levy M. Tela, Chairman on Committee on Environment and Natural Resources.

Hon. Levy M. Tela stated that the Mr. Rolando Vocalan OIC- CENRO was requesting for additional time to finalize the proposed ordinance and to elaborate on the aforementioned Code.

Prepared By:

  
\_\_\_\_\_  
**ELENA B. SOMBRANO**  
Clerk

Attested By:

  
\_\_\_\_\_  
**COUN. LEVY M. TELA**  
Chairman



CITY GOVERNMENT OF BACOOR  
**CENRO**  
CITY ENVIRONMENT & NATURAL RESOURCES OFFICE



November 24, 2023

**ATTY. KHALID A. ATEGA JR.**  
Sangguniang Panlungsod Secretary  
City Government of Bacoor

Dear Atty. Atega,

Good day!

Based on the review of our Bacoor Environment Code the undersigned would like to submit our comments. Kindly call our attention if there are statements that need to elaborate.

Thank you very much.

Very truly yours,

  
**ROLANDO R. VOCALAN**  
OIC, CENRO  
City Government of Bacoor



**ARTICLE III  
CITY ENVIRONMENTAL IMPACT ASSESSMENT SYSTEM (CEIAS)**

**Findings**

- Based on Article III entitled City Environmental Impact Assessment System (CEIAS) that the City of Bacoor will have its own system in securing CECC and CENRO will undergo a thorough evaluation and assessment based on the application and undertaking submitted by different entities.
- CEIAS has a good intention for the protection of environment in the City of Bacoor. However, the DENR – EMB has the mandate to implement Philippine Environmental Impact Statement System (PEISS). PD 1586 designates DENR-EMB and DENR Regional Office as the implementing agency.

**Suggestions:**

- Since the issuance of ECC and CNC is in the level of EMB-DENR we suggest that the City should not issue CECC anymore, for the reason that there will be a duplication of work between the City Government of Bacoor and the National Government. Likewise, the responsibility of local government units over projects covered by the Philippine Environmental Impact Statement System (PEISS) through CENRO is to provide the necessary guidelines in securing ECC and CNC and other environmental permits from the EMB-DENR.
- Based on DENR Administrative Order No. 30 series of 2003 cited that an inter-agency Memorandum of agreement entered into in 1992 by 29 Government agencies the ECC was agreed to be a pre – requisite of all other subsequent government approvals. The DENR is seeking our assistance in addressing these concern and encouraging the commitment of business owners to comply with the existing environmental laws.
- The responsibility of CENRO is to monitor the environmental compliance of different entities after securing the environmental permits and clearances from the national agencies and local government units.
- It should be noted that no business permit be issued to business owners if they are not equipped with proper environmental permits and clearances from EMB-DENR.
- Therefore since the Environmental Code contains basic regulations supplemented with ordinances and administrative provisions that define the regulations. Instead of having the CEIAS, we can proposed an Executive Order to include guidelines in securing environmental permit before the construction of the project and prior to the application of permit and licenses during the awareness campaign of CENRO.

**ARTICLE IV  
SOLID WASTE MANAGEMENT**

**Findings and suggestions:**

- The Title of Article IV should be Solid Waste Management since recycling is under the SWM Program



- The Approved Ten Year Solid Waste Management Plan of the City must be incorporated in the Environmental Code because this serve as our bible in implementing Solid Waste Management Programs in the City of Bacoor
- Landfills, Recycling, Organic Waste are all program of Solid Waste Management
- Policies and regulations implemented in Bacoor City Management of Solid Waste
- Toxic Substances and Hazardous and Nuclear Wastes Control Act of 1990 – connected to SWM Program  
Current Practice  
Policies and regulations implemented in Bacoor in terms of Hazardous Waste Management
- Extended Producer Responsibility – Connected to SWM Program  
Current Practices pertaining EPR  
Role of Stakeholders  
Adoption of EPR in City Level in terms of Policies regulation and Management  
Junkshop
- Construction and Demolition of Waste – Other Term “Proper Handling of Hazardous waste and Residual Waste Management”

#### **CHAPTER 1. Introduction**

#### **CHAPTER 2. Current Solid Waste Condition of the City of Bacoor**

- Institutional Arrangement
- Waste Characteristics
- Legal Institutional Framework
- Plan Strategy
- SWM System
- Implementation Strategy
- Institutional Aspects
- Social and environmental aspects
- Financial Aspect
- Plan Implementation

#### **A. Materials Recovery Facility and Composting**

##### **1. Materials Recovery Facility Establishment and Operation**

- **Materials Recovery Facility (MRF)** – includes a solid waste transfer station or sorting station, drop-off center, a composting facility, and a recycling facility.
- **MRF Concepts and Requirements**  
Planning, Design, Construction, System and Operations, Monitoring and Sustainability
- **MRF Requirements per IRR of RA 9003**

##### **2. Composting Management of Biodegradable Waste**

- Overall strategy for managing of Biodegradable Waste

**B. Toxic Substances and Hazardous and Nuclear Wastes Control Act of 1990**

**1. Special Waste**

- Plan for storage, collection, treatment, disposal and other appropriate technologies for any special wastes
- Estimated quantities of special wastes to be generated in the future.

**2. Health Care Waste**

- Plan for treatment and disposal
- Estimated quantities of special wastes to be generated in the future.

**C. Landfills**

- Disposal Facility – The LGU of Bacoor hired the services of a private garbage contractor for the disposal of garbage and other waste material within the territorial jurisdiction of the City. The Private contractor agrees to strictly comply with all the specific provisions provided under the Clean Air Act, the Clean Water Act, Ecological Solid Waste Management Act Other known as RA 9003 and other City Environmental laws in the conduct of its operations.
- Majority of Bacoor's current land use consists of Residential use. The coastal areas are located in the northern portion adjacent to Metro Manila. The Bacoor Reclamation and Development projects are now on-going.
- Due to the geographical location of the City of Bacoor, establishment of Sanitary Landfill is not feasible and this will not meet requirements for sanitary landfills.

**D. Extended Producer Responsibility**

- RA 11898 An Act institutionalizing the Extended Producer Responsibility on Plastic packaging waste, amending for this purpose Republic Act 9003 otherwise known as the Ecological Solid Waste Management Act of 2000

**ARTICLE V  
WATER QUALITY MANAGEMENT**

**Findings and Suggestion:**

- Current Practices and accomplished undertaking, River Warriors
- Programs on Manila Bay Conservation, Rehabilitation and Preservation Program
- Water Quality Management Area based  
Inclusion of Drainage Master Plan  
Bacoor Sanitation Code  
Adoption of RA 9275

NWRB Rules and Regulation adoption  
Water Quality Management Plan  
Irrigation  
Policies, regulation and Management in terms of Water Quality  
Management

- Proposed Executive Order or ordinance in line with RA 9275

#### **ARTICLE VI AIR QUALITY MANAGEMENT**

Findings and Suggestion:

- Current Practices such as greenhouse gas accounting, tree inventory, tree planting, air quality monitoring
- Accomplished undertaking and on going programs in terms of Air Quality Management, ASBU Ordinance, Noise Pollution
- Open burning
- Adoption of Clean Air Act
- Implementation of green building ordinance/ Solar
- Developer
- Policies and regulations in terms of Air Quality Program
- Management in terms of Air Quality Management

#### **ARTICLE VII**

**Carbon Sequestration** – Adoption of National Law

**Biodiversity and Conservation** – Management, Policies Rules and Regulation

#### **ARTICLE XII**

**Smart Bacoor Renewability Research Center** – Environmental Management and Sustainable Development Research Center

#### **ARTICLE XIII**

Bacoor Environmental Management and Sustainable Development Summit

#### **ARTICLE XIV**

Final Provision



DRAFT (10/13/2023)

PROPOSED CITY ORDINANCE NO. \_\_\_\_  
Series of 2023

AN ORDINANCE APPROVING THE "REVISED ENVIRONMENT CODE OF THE CITY OF BACOR", IMPOSING PENALTIES FOR VIOLATIONS HEREOF, AND ESTABLISHING VARIOUS PROGRAMS, PLANS, AND PROJECTS THAT PROMOTES ENVIRONMENTAL PROTECTION.

Authored by:

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Sponsored by:

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## ARTICLE I. INTRODUCTION

**Section 1. Title.** This ordinance shall be known as "*The Revised Environment Code of the City of Bacoor*". It shall be referred to henceforth in this Ordinance as the "Code"

**Section 2. Purpose.** The primary purpose of this Code is to provide a comprehensive set of policies, regulations, and mechanisms aimed at promoting sustainable development, environmental preservation, and enhancement, ensuring the well-being of present and future generations of Bacoor residents.

**Section 3. Scope.** This Code covers the following:

- A) With respect to geographic areas, this Code covers all lands, waters, and air within the territorial jurisdiction of Bacoor, including marine ecosystems, riverbanks, wetlands, forests, and urban areas.
- B) With respect to sectors, this Code covers all public and private enterprises, non-governmental organizations (NGOs), and all residents of Bacoor.
- C) With respect to projects, this Code covers all projects of the City Government of Bacoor and all projects and partnerships in which the City Government of Bacoor is a party.

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**Section 4. Legal Basis.** This Code was formulated and shall be interpreted and implemented in consonance with the following:

- A) Article XII of the 1987 Constitution, with emphasis on Section 1 thereof, which enshrines the principle that the utilization of natural resources must be for the benefit of humankind.
- B) Section 16, Article II of the 1987 Constitution, insofar as it establishes the right to a healthy and balanced ecology.
- C) The Supreme Court Case of *Oposa v. Factoran* (G.R. No. 101083 July 30, 1993), insofar as it affirms the principle of intergenerational equity.
- D) The Philippine Environmental Code of 1977 (Pres. Decree No. 1152), in its entirety, but with particular emphasis on the parameters for determining the adverse impacts of projects on the environment.
- E) The Environmental Impact Statement System (Pres. Decree No. 1586).
- F) Presidential Proclamation No. 2146 (1981) insofar as it defines when an industry may be considered an environmentally critical project or an environmentally critical area.
- G) The Revised Procedural Manual for the Philippines Environmental Impact Statement System (PEISS), which shall be applied in a suppletory manner to the City Environmental Impact Assessment System outlined in Article III of this Code.
- H) Republic Act No. 7160 or the Local Government Code of 1991, especially with respect to Sections 26 and 27, which requires the national government and national agencies to conduct meaningful consultations with local government

- units (LGUs) and acquire the approval of the Sanggunian concerned prior to the implementation of a project
- I) The Philippine Disaster Risk Reduction Management Act of 2012 (Republic Act No. 10121);
  - J) The Climate Change Act of 2009 (Republic Act No. 9729).
  - K) Presidential Decree No. 1084 (1977), Executive Order No. 525 (1979), and Executive Order No. 380 (2004), which establish the Philippine Reclamation Authority and govern the reclamation of lands.
  - L) The Civil Code of the Philippines, especially in relation to its provisions on nuisance and easement, especially Article 638 thereof, which refers to waterways.
  - M) The Ecological Solid Waste Management Act of 2003 (Republic Act No. 9003).
  - N) The Philippine Mining Act of 1995 (Republic Act No. 7942).
  - O) People's Small Scale Mining Act of 1991 (Republic Act No. 7076).
  - P) The Fisheries Code (Republic Act No. 8550, as amended by Republic Act No. 10654).
  - Q) The Clean Air Act of 1999 (Republic Act No. 8749).
  - R) The Philippine Clean Water Act of 2004 (Republic Act No. 9275).
  - S) Marine Pollution Decree of 1976 (Presidential Decree No. 979).
  - T) The Toxic Substances and Hazardous Nuclear Wastes Act (Republic Act No. 6969).
  - U) Philippine Green Jobs Act of 2016 (Republic Act No. 10771).
  - V) The Forestry Code (Presidential Decree No. 705); and
  - W) Any other applicable Philippine environmental laws not enumerated herein, whether in force at the time of the Effectivity of this Code or passed later.

## ARTICLE II. RULES OF INTERPRETATION AND DECLARATION OF PRINCIPLES

**Section 1. Rules of Interpretation.** In interpreting this Code, the following general rules must be followed:

- A) **Literal Interpretation (Plain Meaning Rule):** The words of a statute or ordinance should be given their ordinary and usual meaning, and interpreted in their grammatical and natural sense, unless such interpretation leads to an absurdity or inconsistency.
- B) **Intent of the Sanggunian:** Where the literal interpretation is ambiguous or unclear, the intent behind the legislation as enunciated in Article 1, Section 2 and in the following Sections of this Article should be considered.
- C) **Harmonious Construction:** All parts of this Code should be read together and harmonized to avoid any conflict or inconsistency between them.
- D) **Specific Over General:** Where a specific provision and a general provision conflict, the specific provision typically takes precedence, as it is deemed as an exception to the general rule.

- E) **Presumption Against Injustice or Absurdity:** Laws and ordinances should not be interpreted in a manner that leads to unjust, absurd, or unreasonable outcomes.
- F) **Construing Penal Provisions Strictly:** Provisions that prescribe penalties or sanctions should be interpreted strictly against the government and liberally in favor of the accused.
- G) **Proviso Interpretation:** A *proviso*, usually denoted by words or phrases such as "provided" or "provided, further" and the like, is generally understood to limit the preceding part of the Code or to qualify some aspect of it, rather than introducing a new provision.
- H) **Principles:** Where the Code is ambiguous or allows for multiple interpretations, the interpretation to be adopted should be one that best maximizes the principles outlined in the following Sections of this Article.

**Section 2. The Precautionary Principle** -The City recognizes the essentiality of anticipating and preventing environmental harm. When activities have the potential to cause harm to human health or the environment, precautionary measures should be taken, even if some cause-and-effect relationships are not yet scientifically proven.

**Section 3. Sustainable Development.** The City upholds that development initiatives must balance economic, social, and environmental needs, ensuring that the actions of today do not compromise the capacities of future generations. Economic growth shall be pursued in tandem with environmental protection and societal well-being.

**Section 4. Intergenerational Equity** - The City commits to ensuring that the needs of the present generation are met without compromising the ability of future generations to meet their own needs. Natural and cultural resources shall be preserved and passed on as a legacy to succeeding generations.

**Section 5. Participation and Engagement** - The City believes in the active engagement of its citizens in environmental decision-making. Every resident has a stake in, and a right to, a healthy environment. Their insights and expertise shall be integrated into planning, implementation, and evaluation processes related to this Code, its implementing Rules and Regulations, and all pertinent official orders and executive policies.

**Section 6. The Polluter Pays Principle** - Polluters are responsible for the environmental harm they cause and shall bear the costs of preventing, controlling, and remedying environmental damage. The City promotes the accountability of every individual and enterprise in their environmental footprint.

**Section 7. Environmental Justice** - Every citizen, irrespective of their economic or social status, has the right to a healthy environment. The City is committed to ensuring that environmental benefits and burdens are distributed equitably among all its residents, and no community bears an unfair share of environmental pollution.

**Section 8. Ecosystem Integrity** - The City will strive to maintain the health, vitality, and resilience of ecosystems, recognizing their intrinsic value and the broader benefits they provide to human well-being. Policies shall prioritize the conservation and restoration of these critical systems.

**Section 9. Biodiversity Conservation** - The rich diversity of life forms in Bacoor – its flora, fauna, and ecological systems – is a testament to nature's splendor. The City is dedicated to the conservation of this biodiversity, ensuring that species and habitats are protected and preserved.

**Section 10. Circular Economy** - The City shall develop a circular economic model, where resources are utilized efficiently, waste is minimized, and materials are recycled and repurposed. Such an economy promotes sustainability by designing out waste and pollution, keeping products and materials in use, and regenerating natural systems.

**Section 11. Equity and Access** - All citizens shall have fair and equitable access to environmental resources, services, and decision-making processes. The City recognizes that the environment is a shared resource and shall ensure its equitable distribution and utilization.

**Section 12. Capacity Building** - To foster a deep understanding and appreciation for the environment, the City shall invest in educational and training programs. These initiatives will empower individuals, communities, and institutions with the knowledge and skills necessary to advocate for, and implement, sustainable practices.

**Section 13. Adaptive Management** - The City acknowledges the dynamic nature of environmental challenges and emphasizes the need for flexibility in its management approaches. Policies and actions shall be periodically reviewed and adjusted based on feedback, experience, and evolving circumstances, ensuring a continuous learning process and improvement in our environmental strategies.

**Section 14. Risk Management and Mitigation** - The City commits to a proactive stance on potential environmental risks and geological hazards. Comprehensive assessments will be conducted to identify, evaluate, and address potential threats. Through informed decision-making, the City shall implement strategies that minimize harmful impacts, ensuring the safety and well-being of its residents and ecosystems.

**Section 15. Resilience and Robustness** - Understanding the increasing frequency and intensity of environmental shocks, the City places a premium on resilience. Policies and strategies shall be crafted to bolster the ability of communities, ecosystems, and infrastructures to absorb disturbances, adapt, and recover, ensuring sustained functionality and vitality in the face of challenges.

**Section 16. Transboundary Environmental Effects** - The City of Bacoor recognizes its role in the larger ecological fabric. Actions and policies will be undertaken with a keen awareness of potential impacts beyond our borders. Collaborative efforts with neighboring Cities shall be pursued, ensuring shared responsibility and cooperative solutions to environmental challenges that transcend territorial limits.

**Section 17. Carbon Neutral Commitment** – The City of Bacoor recognizes that it is a part of the global community and that it shares in the responsibility to bring about a carbon neutral Philippines. To achieve this, the City Government shall, through its implementation of this Code, strive to carry out projects and programs that will create a balance between the amount of carbon being emitted by every person or by every human activity within the City and the amount of carbon that the City and its immediate environs are absorbing from atmosphere.

**Section 18. Authority to Enter into Agreements** - For this purpose, the City Mayor is authorized to enter into Agreements with other local government units and duly accredited non-governmental organizations (NGOs) for projects that aim to implement this Code. *Provided:* that the said NGOs – if based within the Philippines – must be duly accredited by the Sangguniang Pantungso of Bacoor pursuant to the City's accreditation ordinance and policies; *provided, further:* that there are funds available for the implementation of the said Agreements, *provided, lastly:* that the said Agreements must not be contrary to law or to the provisions of this Code.

### ARTICLE III. CITY ENVIRONMENTAL IMPACT ASSESSMENT SYSTEM (CEIAS)

**Section 1. Definition of Environmental Impact Assessment** - An Environmental Impact Assessment (EIA) is a process that involves predicting, identifying, and evaluating the likely impacts of a project, including its cumulative impacts, on the environment. These evaluations must include the construction, commissioning, operation and abandonment of a project. It also includes designing appropriate preventive, mitigating and enhancement measures addressing these consequences to protect the environment and the community's welfare.

For this purpose, the word "environment" must be broadly interpreted to include the physical, biological, and social effects of a project or undertaking. Likewise, an "impact" is to be understood as a change in the baseline condition or the existing environmental situation that is caused by the activity.

**Section 2. Coverage** - The CEIAS applies to all covered entities aiming to conduct undertakings that are either considered as Environmentally Critical Projects in Bacoor (ECPBs) or located within Environmentally Critical Areas in Bacoor (ECABs).

**Section 3. Authority of the City Mayor** - The City Mayor, upon recommendation from the City Environment and Natural Resources Office (CENRO), holds the power to declare the existence of ECPBs and determine the specific locations of ECABs within the jurisdiction of Bacoor.

#### **Section 4. Definition and Requisites for ECPBs and ECABs -**

A) **Environmentally Critical Projects in Bacoor (ECPBs)** refer to projects that have high potential to cause significant negative impacts to the environment due to their nature, scale, or location. These include, but are not limited to:

- a) Heavy industries, such as:



- i) Non-ferrous metal industries
    - ii) Iron and steel mills
    - iii) Petroleum and petro-chemical industries including oil and gas
    - iv) Smelting plants
  - b) Resource Extractive Industries, such as:
    - i) Mining and quarrying projects
    - ii) Forestry projects
    - iii) Fishery projects
  - c) Infrastructure projects.
- B) ***Environmentally Critical Areas in Bacoor (ECABs)*** are areas within the City that are environmentally sensitive. These can include, but are not limited to, wetlands, protected habitats, mangrove swamps, or areas prone to natural disasters. These include, but are not limited to:
  - a) City parks, watershed reserves, wildlife preserves and sanctuaries;
  - b) Areas set aside for tourism;
  - c) Habitats of endangered or threatened species of flora and fauna;
  - d) Areas of unique historic, archaeological, or scientific interests;
  - e) Disaster-prone areas, such as those frequently visited by natural calamities or other geologic hazards;
  - f) Areas with critical slopes;
  - g) Prime agricultural lands;
  - h) Recharged areas of aquifers;
  - i) Water bodies that are either tapped for domestic purposes, or within the controlled or protected areas already enumerated above, or are supporting wildlife and/or fishery activities;
  - j) Mangrove areas; and
  - k) Coral reef.
- C) Other projects and areas not enumerated above may also be declared ECPBs and ECABs by the City Mayor upon recommendation by the CENRO, where such recommendation is based on sufficient scientific assessments, public consultations, and expert recommendations.

**Section 5. Requirement for City Environmental Compliance Certificate (CECC) -** Any covered entity wishing to undertake an ECPB or any project located within an ECAB must first secure a City Environmental Compliance Certificate (CECC) as proof of having undergone and passed the requisite EIA process.

**Section 6. Requirements to Secure a CECC-** Entities must fulfill the following requirements to secure a CECC:

- A) Submission of a comprehensive EIA report, sufficiently detailing:
1. The project being proposed and the Development Objective for its proposal. For the purpose of this Section, a Development Objective pertains to the reasons why the project is intended to be undertaken.
  2. The baseline condition of the area in the absence of the project or activity, which shall include discussions on the following components, if relevant:
    - i. **Water:** in terms of quantity, quality, reliability, and accessibility;
    - ii. **Soil:** in terms of erosion, crop productivity, fallow periods, salinity, nutrient concentrations, and the like;
    - iii. **Fauna:** in terms of populations or habitat;
    - iv. **Environmental health:** in terms of disease vectors, pathogens, and the like;
    - v. **Flora:** in terms of composition and density of the natural vegetation, as well as their productivity and key species; and
    - vi. **Human impact:** in terms of the number of houses or buildings near the area, the proximity of the project to various infrastructures such as schools, roads and bridges, and the like.
  3. The predicted impacts on all the aforementioned components of the baseline condition; and
  4. The proposed mitigation measures, and a comprehensive monitoring plan.
- B) Proof that consultations with subject matter experts were conducted by the applicant with respect to the formulation of the EIA report's baseline condition, monitoring plan, and mitigation measures.
- C) Proof of consultation with leaders of the affected communities with respect to the formulation of the EIA report's baseline condition, monitoring plan, and mitigation measures.
- D) An undertaking to restore or rehabilitate the environment should any unintended damage occur.

- E) Payment of the necessary processing fees.
- F) Other requirements as prescribed by the CENRO.

**Section 7. Penalties for Non-compliance** - Any entity that initiates or continues with a project classified as an ECPB or located in an ECAB without the necessary CECC will be subject to:

- A) An immediate halt of operations to be implemented by the CENRO in coordination with other units and departments under the Office of the City Mayor, with the Philippine National Police, and with various national agencies as may be necessary until the required CECC is obtained.
- B) A fine of **Five Thousand Pesos (Php 5,000.00)** for every violation or non-compliant activity performed by the entity.
- C) Civil liability for any environmental damage caused to the City due to the non-compliance, including the costs for rehabilitation and remediation.
- D) **Imprisonment for a period between three (3) months to one (1) year** for any person who refuses to comply with a lawful order of the CENRO or of any unit and/or department under the Office of the City Mayor in the course of implementing this Article.

**Section 8. Penalties for Material Misrepresentations in the Application** - Any entity or person that/who misrepresents material facts in any of the requirements for the issuance of a CECC will be subject to:

- A) An immediate cancellation of the CECC.
- B) A fine of **Five Thousand Pesos (Php 5,000.00)** for every misrepresentation.

Additionally, the penalty of imprisonment of **three (3) months to one (1) year** shall be imposed upon individuals who were responsible for the misrepresentations, whether they are employees, executives, or directors of the entity or experts who made false findings with respect to the formulation of the EIA report.

**Section 9. Processing of Application** - The City Environment and Natural Resources Office (CENRO) shall undertake the following systematic process to review and evaluate applications for the City Environmental Compliance Certificate (CECC):

- A) **Initial Assessment:** Upon receipt of a complete CECC application, the CENRO shall conduct a preliminary review to determine the completeness and accuracy of the submitted documents. If discrepancies or missing documents are identified, the applicant will be notified within five (5) working days to rectify the issues.
- B) **Technical Evaluation:** A multidisciplinary team - comprised of duly authorized and trained personnel of other departments and units under the Office of the City Mayor and formed upon the written request of the CENRO to the City

Mayor - shall evaluate the EIA and other technical documents provided by the applicant. This includes:

- 1) Assessing potential environmental impacts and risks.
  - 2) Verifying the adequacy of proposed mitigation measures.
  - 3) Ensuring the alignment of the project with city-wide environmental and development goals and standards.
- C) **Inter-agency Coordination:** For projects requiring additional approvals or evaluations, CENRO shall liaise with relevant city departments and external agencies to ensure holistic project assessments.
- D) **Site Inspection:** CENRO representatives shall conduct site inspections to validate on-ground conditions against the details presented in the EIA and to identify potential unreported environmental challenges.
- E) **Evaluation Report:** Post-assessment, the multidisciplinary team shall prepare a comprehensive evaluation report, highlighting their findings, concerns, and recommendations. This report shall be made accessible to the applicant within the periods prescribed under Republic Act No. 9485 (the "Anti-Red Tape Act of 2007") as amended by Republic Act No. 11032 (the "Ease of Doing Business and Efficient Government Service Delivery Act of 2018"). At the minimum, the evaluation report shall:
- 1) Identify potential impacts of the project;
  - 2) Determine which potential impacts are likely to happen and quantify these impacts to the best extent possible;
  - 3) Judge the significance of the potential impact, taking into consideration the effectivity of the proposed mitigation measures provided by the applicant; and
  - 4) Recommend whether the CECC shall be granted.
- F) **Decision:** Based on the technical evaluation, public consultation outcomes, inter-agency feedback, and site inspection findings, CENRO shall:
- 1) Grant the CECC with specific conditions, or
  - 2) Deny the CECC, providing clear reasons for denial, or
  - 3) Request additional information or revisions to the submitted EIA or project proposal.
- G) **Categorization:** If the CENRO grants the CECC, it shall determine and state in its decision whether the project is a low-impact project, a medium-impact project, or a high-impact project.

- H) **Notification:** The applicant shall be formally notified of CENRO's decision within one hundred and twenty (120) working days from the submission of the complete application, unless otherwise specified due to the project's complexity.
- I) **Payment of Land Use Fees:** If the applicant is granted a CECC, the applicant must pay the necessary land use fees immediately before beginning its projects and at the beginning of every year for the duration of the project.
- J) **Post-Approval Monitoring:** If the CECC is granted, CENRO shall monitor the project's compliance with the conditions set in the CECC and relevant environmental standards, performing regular inspections and audits as necessary.
- K) **Feedback Mechanism:** CENRO shall maintain an open channel of communication with the applicant and other stakeholders, encouraging feedback and suggestions to continually improve the CECC application and review process.

**Section 10. Grounds for Denial of Application -** The following are grounds for the denial of the application for CECC:

- A) **Incomplete Documentation:** Failure to submit all required documents, including the comprehensive EIA report, proof of public consultations, and environmental management plan.
- B) **Significant Negative Environmental Impact:** The proposed project or undertaking demonstrates clear and irremediable potential to cause significant negative impacts on the environment that cannot be effectively mitigated or compensated for.
- C) **Insufficient Mitigation Measures:** The proposed mitigation strategies and plans in the EIA are deemed inadequate to address the anticipated environmental impacts.
- D) **Inadequate Public Consultation:** Absence of meaningful engagement with affected communities and stakeholders or failure to adequately consider and integrate their feedback.
- E) **Conflict with Local Zoning and Land Use Policies:** The proposed project is inconsistent with existing zoning ordinances and policies, land use plans, or other relevant policies set by the City of Bacoor.
- F) **History of Non-compliance:** The applying entity has a history of environmental violations or non-compliance with earlier CECC requirements or conditions.
- G) **Inadequate Financial Capability:** Failure to provide proof of financial capability to undertake and complete the necessary environmental protection, mitigation, and rehabilitation measures.

- H) **Potential Social Conflicts:** The project could lead to displacement of local communities, potential conflicts over resource use, or other socio-economic issues without adequate plans for resolution.
- I) **Threat to Public Health:** The project poses direct or potential threats to public health and safety.
- J) **Failure to Comply with Other Local or National Regulations:** The project does not meet other relevant city, regional, or national environmental, safety, or health standards or regulations.
- K) **Negative Impact on Cultural or Historical Sites:** The project threatens sites of cultural, historical, or archaeological importance, and no adequate measures are in place to protect or restore them.
- L) **Others:** Any other grounds deemed relevant by the CENRO not explicitly listed above, but which compromise the principles of environmental protection, sustainability, public safety, the general welfare of the residents of the City of Bacoor, or the principles laid out in Article II of this Code.

All denials of application must be communicated to the applicant in writing, stating the grounds for said denial, within the period mandated by law.

**Section 11. Appeals Process** - Entities denied a CECC under Section 10 may appeal the decision to the City Mayor within 30 days of knowledge of the denial. The appeal should be based on the following grounds:

- A) **Procedural Error:** The applicant believes that there was an error in the procedure or handling of their application that significantly affected the decision.
- B) **New or Overlooked Information:** The applicant has new evidence or information that was not considered in the initial review and which might have a significant effect on the decision.
- C) **Disproportionate Decision:** The applicant believes the denial was disproportionate given the presented evidence and facts, suggesting that the decision was not based on a fair or balanced assessment.
- D) **Bias or Conflict of Interest:** The applicant has reason to believe that the CENRO, or a member of the review committee, or a member of the multi-disciplinary team had a personal or financial bias or conflict of interest that affected the decision-making process.
- E) **Disregard of Expert Opinions:** Significant expert opinions or findings supporting the application were disregarded or not adequately considered in the decision-making process.

- F) **Excessive Stringency:** The criteria applied to the project were excessively stringent or unreasonable compared to the norms or standards typically applied to similar projects.

The City Mayor's decision on the appeal shall be final with respect to that application. The applicant may submit another application for the same project, *provided that*:

- A) They address and rectify all the grounds of denial from the previous application.
- B) They provide updated documentation reflecting any changes or new information.
- C) A period of six months has elapsed since the date of the final decision on the initial application, ensuring adequate time for reassessment and ensuring changes have been implemented.

**Section 12. Land Use Fees** -All entities that receive approval for Environmentally Critical Projects in Bacoor (ECPBs) or those in Environmentally Critical Areas in Bacoor (ECABs) are subject to Land Use Fees, which are intended to offset environmental impacts and contribute to the Bacoor Environment Fund. The following Rules govern the imposition of Land Use Fees:

- A) **Fee Structure:** Fees shall take on a tiered fee structure. Low-Impact projects shall have a land use fee of not more than Ten Thousand Pesos (PHP 10,000.00), Medium-Impact Projects shall have a land use fee of not more than Twenty Five Thousand Pesos (PHP 25,000.00), and High-Impact Projects shall have a land use fee of not more than Fifty Thousand Pesos (PHP 50,000.00).
- B) **Determination of Fees:** In determining the exact amount of Land Use Fees to be paid by the applicant, the following factors must be considered:
  - a) **Environmental Impact:** The fee should be high enough to effectively deter projects that have significant negative impacts on the environment, yet not so high as to be prohibitive for projects that are otherwise beneficial or necessary.
  - b) **Local Economic Conditions:** The fee should be set at a level that is reasonable given the economic conditions in the community, to avoid stifling economic development.
  - c) **Administrative Costs:** The fee should cover the administrative costs associated with reviewing applications, monitoring compliance, and any other associated costs.
- C) **Payment Schedule:** Fees are due upon the issuance of a City Environmental Compliance Certificate (CECC) and must be paid in full before construction or operation commences. A staggered payment plan may be considered for large-scale projects, subject to approval by the City Council.

Commented [2]: Please assess the fees with respect to whether it is commensurate with the cost of regulation, processing, licensing, etc.



D) **Use of Funds:** Revenues generated from these Land Use Fees will be allocated exclusively to the Bacoor Environment Fund and used in accordance with its stipulated purposes.

E) **Exemptions:** Certain projects may be eligible for fee reductions or exemptions, particularly those that can demonstrate significant positive environmental impact, or projects undertaken by non-profit organizations for the benefit of the community. Such exemptions shall be granted at the discretion of the City Mayor, following review and recommendation by CENRO.

F) **Non-compliance:** Failure to pay the Land Use Fees in accordance with the schedule and amount stipulated shall result in penalties as specified in the CECC Article, including the possible revocation of the CECC.

**Section 13. Periodic Review** - Every five (5) years, the CENRO will review and, if necessary, revise the list of ECPBs and ECABs to ensure that it remains up to date with the current environmental context and scientific understanding and submit the same to the City Mayor for approval.

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## ARTICLE IV. WASTE MANAGEMENT AND RECYCLING

### CHAPTER 1. Introduction

**Section 1. Purposes** - The objectives of this Article, in alignment with the City's broader vision for environmental sustainability, are as follows:

- A) **Achieving a Zero Waste City:** To implement and rigorously enforce measures that ensure effective waste collection, disposal, and recycling, such that the City progressively reduces its trash footprint, ultimately approaching a state of near-zero waste production.
- B) **Advancing a Circular Economy:** To champion practices that prevent waste by reintroducing materials back into the production cycle, fostering a system where products, materials, and resources are continually reused, refurbished, and recycled, thereby minimizing waste generation and resource extraction.
- C) **Reducing Landfill Dependency:** To actively promote waste reduction, separation at source, and recycling, with the overarching aim to substantially decrease our reliance on landfills, which have environmental and public health implications. This will not only preserve our land but will also help in curbing the emission of greenhouse gases from decomposing waste.

**Section 2. Definition of Terms** – *(to be inserted when final draft is ready)*

**Section 3. Covered Entities** - This Article applies to:

- A) Residential Establishments: All single-family homes, multi-family residences, apartments, dormitories, and other residential facilities situated within the jurisdiction of Bacoor.
- B) Commercial Establishments: All stores, shops, markets, offices, restaurants, hotels, malls, and other commercial venues operating within the City.
- C) Industrial Entities: Factories, warehouses, and other industrial facilities that produce, store, or handle goods and products in Bacoor.
- D) Educational Institutions: All schools, colleges, universities, training centers, and other educational establishments, both public and private.
- E) Healthcare Facilities: Hospitals, clinics, nursing homes, and other medical establishments providing healthcare services.
- F) Public Spaces and Facilities: Parks, playgrounds, sports complexes, community centers, public markets, bus stops, and other spaces accessible and available for public use.
- G) Government Offices and Establishments: All departments, bureaus, offices, and other entities operating under the City Government of Bacoor, including Barangay centers and local government units.
- H) Agricultural Entities: Farms, fisheries, poultry, and other entities engaged in agricultural and aquaculture operations.
- I) Construction Sites: All sites where construction, demolition, or renovation is taking place, irrespective of the scale of the project.
- J) Events and Gatherings: Any public or private event, gathering, or function that generates waste, including but not limited to festivals, shows, exhibitions, conferences, and ceremonies.
- K) All other entities residing or doing business in the City of Bacoor.

## CHAPTER 2. Waste Segregation

**Section 4. Purpose of Waste Segregation** - In keeping with the vision of a sustainable and eco-responsible Bacoor City and in alignment with globally recognized waste management best practices, the purposes of waste segregation are set forth as follows:

- A) Environmental Protection: Proper segregation reduces the risk of toxic waste mixtures, subsequently limiting the potential harm to our soil, air, and water.
- B) Resource Conservation: Through separating recyclable materials from non-recyclable ones, we ensure that resources are aptly reused or repurposed, conserving our planet's finite resources.
- C) Efficient Waste Processing: Segregated waste allows for a more streamlined processing, be it composting, recycling, or other forms of treatment, leading to reduced costs and time consumption.
- D) Safety of Workers: Those who handle our waste, from collection to treatment, are better protected when waste is effectively segregated, reducing their exposure to hazardous or unsanitary materials.
- E) Economic Value: Properly segregated waste, especially recyclables, can be turned into new products, creating a cycle of consumption and production that can benefit local industries and the economy.

- F) **Reduction in Landfill Dependency:** By segregating at the source, we can significantly reduce the amount of waste sent to landfills, prolonging their lifespan and mitigating environmental impacts.
- G) **Public Health Preservation:** By ensuring hazardous waste does not mix with general waste, we diminish the risks of diseases and infections that can spread through contaminated waste.
- H) **Community Engagement and Education:** Embracing waste segregation fosters a sense of community responsibility and offers educational opportunities about sustainable living for both the young and old.

**Section 5. Basic Principles of Waste Segregation** - In the commitment to upholding an effective waste management strategy that mirrors international best practices, Bacoor City establishes the following fundamental principles of waste segregation:

- A) **Source Segregation:** Waste shall be separated at its origin, typically at the household or business premises where it is generated, to ensure purity and to simplify further processing.
- B) **Three-Bin System:** At a minimum, three distinct bins or containers shall be utilized: one for biodegradable or organic waste, another for recyclables, and a third for non-recyclable or residual waste.
- C) **Proper Labeling:** Containers and bins utilized for waste segregation shall be adequately labeled, colored, or marked to prevent confusion and to promote ease of use for all residents and entities.
- D) **Safe Handling:** Waste, especially hazardous types, shall be handled, stored, and transported in such a way that ensures the safety of handlers, the public, and the environment.
- E) **Regular Education:** Continuous community awareness and education campaigns shall be carried out to ensure that every resident and business entity is informed of the importance and methods of proper waste segregation.
- F) **Community Participation:** Waste segregation is a collective responsibility. Every individual, household, institution, and business in Bacoor City plays a pivotal role in ensuring its success.
- G) **Reduce, Reuse, Recycle:** The prioritization of reducing waste generation, reusing items where possible, and recycling materials forms the backbone of waste segregation and management.
- H) **Environmental Responsibility:** Every step in the segregation process shall consider the environmental impact, ensuring that the methods employed are sustainable and eco-friendly.

**Section 6. Categories of Waste** - For the purposes of waste segregation and management, waste generated within the jurisdiction of Bacoor City shall be categorized as follows:

- A) **Biodegradable Waste:** This refers to any organic material that can be broken down in a reasonable amount of time. Examples include but are not limited to food scraps, yard waste, paper, and certain types of textiles.

- B) **Recyclable Waste:** These are materials that can be processed and converted into new products. Common recyclables include plastic bottles, aluminum cans, paper, cardboard, certain types of glass, and many metals.
- C) **Special or Hazardous Waste:** These are wastes that can pose substantial or potential threats to public health or the environment. Examples are paints, chemicals, batteries, fluorescent lights, medical waste, and some household products labeled as hazardous.
- D) **E-waste:** Electronic waste encompasses discarded electrical or electronic devices, and specific components of these devices.
- E) **Sanitary Waste:** This category includes waste originating from the bathroom, such as used tissues, menstrual hygiene products, diapers, and so on.
- F) **Construction and Demolition Waste:** As the name implies, this pertains to waste from construction and demolition activities, including materials like concrete, bricks, drywall, and lumber.
- G) **Agricultural Waste:** Waste generated from agricultural operations including manure, crop residues, and other farm-related wastes.

**Section 7. Waste Segregation at Source** - All households, businesses, institutions, and other entities operating within Bacoor City are mandated to segregate waste at the source of generation. In public areas, waste segregation may be limited to the placing of color-coded bins for biodegradable and non-biodegradable/recyclable waste. Entities that produce hazardous, sanitary, agricultural, and construction waste shall not deposit said waste in public areas. Persons that violate this provision shall be liable for a fine of One Thousand Pesos (PHP 1,000.00) for the first offense, and Five Thousand Pesos (PHP 5,000.00) for all succeeding offenses. If the violating entity is a juridical person, the officers of said juridical entity may be held liable upon conviction to pay a fine of P5,000.00 for every instance that the foregoing provision was violated.

**Section 8. Color-Coded Bins** - To aid in the segregation of waste at source, color-coded bins shall be employed for easy identification of waste categories in all commercial, industrial, and institutional areas/establishments including government buildings within the City of Bacoor. The manager, supervisor, or the City Administrator in the case of public buildings being operated by the City Government shall be meted a fine of P2,000.00 for every day that this provision was violated after a Notice of Violation was served upon them by the CENRO.

**Section 9. Proper Labeling and Signage** - To further facilitate waste segregation and ensure clarity, each color-coded bin must be labeled clearly with:

- A) The category of waste it is intended for.
- B) A brief list of common items that fall under that category.
- C) An image or icon that represents the category (optional but recommended)

Public collection points, businesses, and institutions must also display clear and legible signage that educates and reminds the public and employees about proper waste segregation practices. Signages should also emphasize the importance of segregation at source and its role in promoting a sustainable environment for Bacoor City. The manager, supervisor, or the City Administrator in the case of public buildings being

operated by the City Government shall be meted a fine of P2,000.00 for every day that this provision was violated after a Notice of Violation was served upon them by the CENRO

**Section 10. Storage and Handling** - All entities operating within Bacoor City—households, businesses, institutions, and the like—are hereby mandated to follow the prescribed procedures for the proper storage and handling of segregated waste:

- A) **Safe Containers:** Waste should be stored in durable and washable containers that are resistant to corrosion, water, pests, and do not absorb liquids. Containers should be equipped with tight-fitting lids.
- B) **Cleanliness and Sanitation:** Waste storage areas must be regularly cleaned and disinfected to prevent odor, pests, and potential health hazards. Regular maintenance and cleaning of these areas are crucial to ensure the safety and health of the community.
- C) **Separate Storage:** Each waste category, as previously defined, shall have a designated storage space. Mixing different categories compromises the quality of recyclables and undermines the purpose of segregation.
- D) **Handling Precautions:** When handling waste, especially non-biodegradable and hazardous waste, it is essential to wear appropriate protective gear such as gloves to prevent direct contact.
- E) **Location:** Storage areas should be strategically located to ensure easy access for waste collectors while minimizing disruptions to regular operations or daily activities. It is equally crucial to avoid storing waste near sources of water, food, or in areas of high human traffic.
- F) **Duration:** To reduce the risk of contaminants, odors, and pests, stored waste, especially biodegradable waste, should not be kept on-site for prolonged periods. Establishments and residences are encouraged to schedule regular waste collection or disposal at least weekly.
- G) **Reduce, Reuse, Refine:** In line with promoting sustainable waste management, entities are encouraged to not only segregate but also to reduce the amount of waste they generate by reusing materials and refining processes. This approach ensures that materials circulate within productive systems for as long as possible, minimizing waste and maximizing value.
- H) **Special Handling for Specific Waste:** Certain types of waste, such as hazardous or sanitary waste, require special handling procedures. These should be stored separately, clearly labeled, and handled with extra precautions.

**Section 11. Collection Schedules** - The City Government of Bacoor, in coordination with its relevant departments and units, shall establish and regularly review waste collection schedules tailored to the needs and circumstances of different areas within the city. Once established, the collection schedules will be published through various official city channels, including but not limited to the city's official website, public bulletin boards, and community centers. The City shall also engage with local barangay units to disseminate this information effectively to all residents.

Recognizing the diverse needs of different areas and establishments within Bacoor, the City reserves the right to adjust collection schedules based on:

- A) Seasonal variations in waste volume.
- B) Special events or public holidays.
- C) Emergent situations such as natural disasters or public health concerns.
- D) Feedback and input from the community.
- E) Special Collection: Apart from the regular collection schedules, entities that produce significant or specialized waste types—such as large commercial establishments or hospitals—may coordinate with the City to arrange special collection times or methods suited to their specific needs.

Household waste should not be brought out on the street except on the schedule of collection as announced by the Barangay or homeowners' association having jurisdiction over a particular area. The owner or lessor of the residence that violated this provision shall be meted a fine of P2,000.00 for every day that this provision was violated after a Notice of Violation was served upon them by the CENRO.

**Section 12. Hazardous Waste** - Hazardous waste refers to any waste which, by reason of its chemical activity or toxic, explosive, corrosive, or other characteristics, causes danger or is likely to cause danger to public health, safety, or the environment, whether alone or when coming in contact with other wastes. Entities producing hazardous waste are mandated to segregate it at source, ensuring it doesn't mix with non-hazardous waste streams. Hazardous waste shall be stored in secure, leak-proof containers that are appropriately labeled and kept in designated storage areas away from public access.

Transport of hazardous waste shall only be undertaken by entities equipped and licensed to handle such materials. During transportation, hazardous waste shall be contained in suitable packaging to prevent leaks and exposure.

Hazardous waste should be treated using approved methods to minimize harm to health and the environment. Ideally, these treatment processes should recover and recycle components of the waste wherever possible, aligning with the principles of the circular economy. Residual waste from treatment, which cannot be recycled or recovered, shall be disposed of in designated facilities approved for hazardous waste handling.

The owner, lessor, manager, or supervisor of the residence or establishment that violated this provision shall be meted a fine of P2,000.00 for every day that this provision was violated after a Notice of Violation was served upon them by the CENRO.

### CHAPTER 3. Landfills

**Section 13. Purpose of Landfill Management-** The overarching intent of landfill management within Bacoor City is multifaceted:

- A) **Environmental Protection:** Landfills, when managed judiciously, serve as a controlled environment wherein waste is isolated from the surroundings. This isolation prevents contaminants from compromising the quality of our air, soil, and water, thus safeguarding the health of both our environment and our community members.
- B) **Resource Conservation:** Recognizing the intrinsic value of materials, even in their discarded state, landfill management endeavors to reclaim and reintroduce valuable resources back into the production cycle. This not only reduces the strain on natural resources but also decreases the need for new landfills, preserving our land for future generations.
- C) **Operational Efficiency:** By instituting streamlined operations, our city can ensure that landfills function efficiently, maximizing their operational lifespan. This efficiency minimizes costs, both economic and environmental, and reduces the frequency of seeking new landfill sites.
- D) **Community Well-being:** While landfills are a necessity, they shouldn't compromise the quality of life for our residents. Through meticulous management, we aim to minimize nuisances like odor, pests, and noise, ensuring that landfills remain good neighbors to our communities.
- E) **Forward-thinking Legacy:** With an eye on the future, effective landfill management practices lay the foundation for potential site restorations, where closed landfills can be repurposed for green spaces, recreational areas, or other community benefits.

**Section 14. Site Selection Criteria -** The criteria set forth below ensure that every potential landfill site aligns with the City's environmental, social, and operational imperatives:

- A) **Environmental Compatibility:** Potential sites should not be situated in ecologically sensitive areas, such as wetlands, floodplains, or habitats of endangered species. Such locations pose both an environmental risk and are inimical to our city's conservation efforts.
- B) **Hydrogeological Suitability:** The geological attributes of the prospective site are crucial. Areas with a low water table and impermeable soil or rock layers are preferred to prevent potential leachate from polluting groundwater sources.
- C) **Proximity to Waste Generation Points:** The site should be reasonably accessible from major waste generation points. This minimizes the carbon footprint associated with waste transport, leading to reduced greenhouse gas emissions.
- D) **Buffer from Residential and Commercial Zones:** To minimize disruption to Bacoor's residents and businesses, potential sites must have an adequate buffer zone, ensuring that nuisances such as noise, odor, and sight are kept at bay.
- E) **Infrastructure Adequacy:** Roads leading to the site should be sturdy and well-maintained to handle the frequent vehicular movements. Additionally, the site should have, or be capable of developing, necessary utilities and facilities for efficient landfill operation.



- F) **Future Land Use and Development Plans:** The site's selection should be forward-looking, factoring in the city's future development trajectory. Areas earmarked for urban growth, agricultural expansion, or other significant developments should typically be avoided.
- G) **Community Feedback and Acceptance:** Engaging with the local community and stakeholders to gather feedback is paramount. Their insights, concerns, and acceptance play a pivotal role in the site's final selection.
- H) **Restoration Potential:** Sites that offer the potential for future restoration or repurposing are preferred. Once a landfill reaches its capacity, there exists an opportunity to rejuvenate the space for community use, be it parks, recreational areas, or other green spaces.
- I) **Operational Flexibility:** The terrain and size of the site should accommodate efficient waste deposition, management, and potential expansions. This ensures the site's utility over a longer duration, reducing the frequency of new site identifications.
- J) **Economic Feasibility:** While not compromising on environmental and social factors, the cost of acquiring, developing, and managing the site should be within the city's budgetary provisions.

**Section 15. Landfill Design Standards** - To achieve a balance of functionality, sustainability, and community welfare, the following standards should be followed in choosing a landfill site where the City's waste shall be dumped:

- A) **Integrated Waste Management:** The landfill should have a holistic waste management system, prioritizing waste reduction and recycling, thereby optimizing the volume and types of waste entering the landfill.
- B) **Leachate Management:** The landfill should feature a multi-layered liner system made from impermeable materials to prevent the escape of leachate into the environment. Additionally, efficient leachate collection and treatment systems must be in place to safeguard groundwater sources.
- C) **Gas Collection and Control:** As waste decomposes, it produces landfill gas, a mix of methane and carbon dioxide. The landfill should be implementing gas collection systems to minimize greenhouse gas emissions and explore opportunities to convert these gases into energy before it can be used by the City for waste disposal.
- D) **Stormwater Management:** The landfill must be properly designed so as to prevent rainwater from entering waste cells, which can increase leachate volume. Rainwater run-off should be effectively channeled away from waste areas using drainage systems.
- E) **Waste Compaction:** The landfill to be used by the City should utilize state-of-the-art equipment to compact waste efficiently. By maximizing the density of waste, we extend the operational life of the landfill and optimize land use.
- F) **Cover Systems:** Daily and final cover systems should be employed. While daily covers minimize odor, pests, and litter, the final cover system, applied once a landfill cell is closed, ensures environmental protection and facilitates site restoration.

- G) **Monitoring Systems:** The landfill should install real-time monitoring systems to regularly assess the landfill's performance in terms of gas emissions, leachate production, and structural stability.
- H) **Access Control:** Landfills should feature robust access control measures, including fencing, security personnel, and surveillance, ensuring only authorized entry and safeguarding against illegal dumping.
- I) **Buffer Zones:** Maintain adequate green buffer zones around the landfill. These not only act as visual screens and noise barriers but also serve as habitats, promoting local biodiversity.
- J) **Rehabilitation and Aftercare:** Every landfill design must incorporate post-closure care plans. Whether it's transforming the closed landfill into a green space, recreational facility, or any other community resource, the goal is to give back to Bacoor City.

**Section 16. Waste Acceptance and Rejection -** The following shall govern the acceptance and rejection of waste in landfills in the City of Bacoor:

- A) **Acceptance Criteria:**
  - a) **General Waste:** Everyday waste from households, businesses, and institutions, excluding hazardous, sanitary, agricultural, and construction waste, is generally accepted, subject to the landfill's current capacity and operating conditions.
  - b) **Recyclable Materials:** Only recyclables that cannot be processed or repurposed elsewhere in the city's waste management system are to be accepted.
  - c) **Specialized Waste:** Specific types of waste, like agricultural or construction-related, may be accepted if the landfill is equipped with the requisite processing facilities and such waste meets pre-defined standards.
- B) **Rejection Criteria:**
  - a) **Hazardous Waste:** Any waste that poses substantial or potential threats to public health or the environment, including flammable, toxic, or corrosive materials, shall be outrightly rejected.
  - b) **Unsorted Waste:** Waste that has not been segregated at source, posing a challenge to effective landfill management and resource extraction, will be declined.
  - c) **Bulk Waste:** Large items that have not been disassembled or downsized, making them unsuitable for efficient landfill operations, will be turned away.
  - d) **Electronics:** E-waste or electronic items, given their resource value and potential harm if improperly disposed, shall not be accepted. These must be channeled to appropriate recycling facilities.
  - e) **Materials with High Resource Value:** Any waste that can be more sustainably processed, refurbished, or recycled outside the landfill shall be rejected to ensure optimal resource utilization.
- C) **Process for Rejection:**

- a) **Notification:** Upon the rejection of any waste, the entity responsible for the delivery will be immediately informed, detailing the reasons for non-acceptance.
- b) **Alternative Disposal Guidance:** Entities whose waste has been rejected will be provided with guidance on alternative, appropriate methods or locations for disposal, recycling, or repurposing.

**Section 17. Landfill Operation Protocols** - The following protocols shall be observed in the operation of landfill sites in the City of Bacoor.

- A) **Pre-Operational Phase:**
  - a) **Site Assessment:** Before operations commence daily, a thorough assessment of the landfill site shall be conducted to ensure structural integrity, safety, and readiness for waste acceptance.
  - b) **Equipment Check:** All machinery and equipment, including compactors, bulldozers, and cover equipment, shall undergo daily checks to ensure proper functionality.
- B) **Waste Reception:**
  - a) **Inspection at Entry:** Waste transport vehicles arriving at the landfill shall be inspected to ensure conformity with waste acceptance criteria.
  - b) **Weighing:** Upon passing inspection, each vehicle shall be weighed to record the volume of waste being deposited.
- C) **Waste Placement:**
  - a) **Layering:** Waste shall be spread in layers not exceeding a specified height, ensuring efficient compaction and aeration.
  - b) **Compaction:** After layering, waste shall be compacted to reduce its volume, making optimal use of the landfill space.
  - c) **Covering:** At the end of each operational day, compacted waste shall be covered with soil or other approved materials to minimize odor, prevent pest infestation, and facilitate subsequent waste placement.
- D) **Resource Extraction:**
  - a) **Identification:** Designated teams shall continuously identify areas within the landfill that hold significant potential for resource extraction, considering both the type and age of waste.
  - b) **Extraction Process:** Using specialized equipment and methods, valuable materials such as metals, glass, and certain plastics shall be extracted for reuse or recycling.
  - c) **Resource Processing:** Extracted materials shall be processed, cleaned, and sorted before reintroduction into the production cycle.
- E) **Environmental Controls:**
  - a) **Leachate Management:** Systems must be installed to collect and treat leachate, preventing groundwater contamination.
  - b) **Gas Management:** Methane and other gases produced during decomposition shall be captured and, where feasible, converted into energy or flared safely.
  - c) **Erosion Control:** Measures to prevent soil erosion, including terracing and vegetation planting, shall be employed.

- d) **Dust and Odor Control:** Regularly sprinkle water or employ other approved methods to minimize dust. Odor neutralizing agents may be used as required.
- F) **Health and Safety Protocols:**
  - a) **Protective Gear:** All staff operating within the landfill site shall be equipped with protective gear, including masks, gloves, and safety vests.
  - b) **Emergency Procedures:** Clearly defined emergency response procedures shall be in place for scenarios such as fires, equipment malfunctions, or hazardous waste spills.
  - c) **Regular Training:** Staff shall undergo regular training to keep them updated on safety procedures and operational best practices.
- G) **Data Management and Reporting:**
  - a) **Record Keeping:** Maintain detailed records of waste received, resources extracted, and any operational incidents.
  - b) **Periodic Reporting:** Generate periodic reports detailing landfill operations, resource recovery, and any challenges faced, ensuring transparency and accountability.
- H) **Post-Operational Protocols:**
  - a) **Site Rehabilitation:** Once a landfill reaches its capacity, it shall be rehabilitated, with possibilities including the creation of recreational green spaces, forestation, or other community-beneficial projects.
  - b) **Monitoring:** Post-closure, the site shall be continuously monitored for environmental parameters like gas emission and groundwater quality to ensure ongoing safety.

**Section 18. Environment Monitoring and Control** - To ensure that the City's landfills operate with the utmost respect for our surroundings, minimizing harm and maximizing potential, the following shall be placed at each landfill site:

- A) **Air Quality Monitoring:**
  - a) **Sampling Stations:** Establish fixed air sampling stations around the landfill perimeter and at strategic points within the site.
  - b) **Pollutant Tracking:** Regularly measure for pollutants such as methane, carbon dioxide, and volatile organic compounds to ensure they remain within acceptable levels.
  - c) **Odor Detection:** Employ sensors to detect and quantify odorous compounds, taking corrective action when levels exceed set thresholds.
- B) **Water Quality Monitoring:**
  - a) **Groundwater Surveillance:** Install groundwater monitoring wells at varying depths and locations to regularly assess water quality, particularly checking for potential leachate infiltration.
  - b) **Surface Water Analysis:** Regularly sample surface water sources adjacent to the landfill site for potential contaminants, ensuring they meet established water quality standards.
- C) **Soil Health Assessment:**

- a) **Soil Sampling:** Periodically extract soil samples from different landfill zones to check for the presence of contaminants and assess overall soil health.
  - b) **Leachate Breakout Monitoring:** Implement systems to detect any leachate seepages, ensuring rapid containment and treatment.
  - c) **Leachate Collection:** Ensure efficient collection of leachate using dedicated drainage systems, preventing groundwater contamination.
  - d) **Treatment:** Subject the collected leachate to appropriate treatment processes before discharge, adhering to local and international water quality standards.
- D) **Waste Composition and Volume:**
- a) **Waste Audits:** Conduct regular waste audits to understand the composition of waste being deposited, assisting in resource extraction strategies and ensuring conformity with waste acceptance criteria.
  - b) **Volume Measurements:** Keep track of daily waste volumes to monitor landfill capacity and project future space requirements.
- E) **Biological Monitoring:**
- a) **Biodiversity Checks:** Regularly assess flora and fauna populations in and around the landfill, ensuring operations aren't adversely impacting local ecosystems.
  - b) **Pest Control:** Implement pest control measures, while ensuring they don't harm non-target species or the broader environment.
- F) **Data Management and Review:**
- a) **Centralized Database:** Create a centralized database for all environmental data collected, ensuring easy access and analysis.
  - b) **Periodic Review:** Organize monthly review meetings to assess the data, identify trends, and adapt operational protocols if required.

**Section 19. Health and Safety Protocols** - In line with the City's dedication to sustainable growth and urban mining principles, the health and safety of all individuals working at, visiting, or residing near landfill sites remain paramount. To ensure the same, the following protocols shall be implemented in all landfill sites in the City of Bacoor:

- A) **Personal Protective Equipment (PPE):**
- a) **Mandatory Use:** All staff working within the landfill site must wear appropriate PPE, including but not limited to safety helmets, high-visibility vests, safety boots, gloves, and protective eyewear.
  - b) **Training:** Workers must receive training on the correct use, maintenance, and storage of PPE.
  - c) **Replacement:** Regular checks and timely replacement of worn-out or damaged PPE.
- B) **Hygiene and Sanitation:**
- a) **Facilities:** Adequate sanitation facilities, including washrooms and handwashing stations equipped with antibacterial solutions, must be available and maintained.

- b) **Waste Handling:** Workers involved in direct waste handling must be provided with facilities to shower and change clothing before exiting the site.
  - c) **Sanitation Facilities:**
    - i) **Restrooms:** Adequate, well-maintained restrooms equipped with handwashing stations at strategic locations within the landfill site.
    - ii) **Shower Facilities:** Workers must have access to shower facilities to cleanse themselves post their shifts.
    - iii) **Clean Water Supply:** Ensure uninterrupted supply of clean water for drinking and cleaning purposes.
  - d) **Hand Hygiene:**
    - i) **Hand Sanitizers:** Placement of hand sanitizing stations at various points, especially at the entrance and exit.
    - ii) **Regular Intervals:** Workers are advised to sanitize their hands at regular intervals, especially after handling waste and before consuming food or beverages.
  - e) **Food and Beverage Consumption:**
    - i) **Designated Areas:** Allocate specific areas for the consumption of food and beverages away from waste handling zones.
    - ii) **Cleanliness:** Regular cleaning and sanitizing of these areas to prevent contamination.
  - f) **Waste Management at Facilities:**
    - i) **Regular Cleanup:** Ensure regular cleanup of restrooms, food areas, and other facilities.
    - ii) **Disposal:** Properly dispose of waste generated in the hygiene and sanitation facilities, ensuring it doesn't improperly mix with the landfill waste. If the waste generated are deemed acceptable under Section 16 of this Article, the waste generated shall be processed in the landfill accordingly.
- C) Hazard Communication:**
- a) **Training:** Regular training sessions on the potential hazards present in the landfill, including chemical, biological, and physical risks.
  - b) **Signage:** Clear and visible signs indicating potential hazards, restricted areas, and safety instructions.
- D) Machinery and Vehicle Safety:**
- a) **Operator Training:** Only trained and certified operators should handle heavy machinery and vehicles.
  - b) **Maintenance:** Regular maintenance checks and timely repairs of all equipment to ensure safe operations.
- E) Emergency Response Plans:**
- a) **Preparedness:** The City shall establish a detailed emergency response plan, addressing scenarios like fires, chemical spills, or other unforeseen events.
  - b) **Training Drills:** Conduct periodic emergency response drills to ensure staff are familiar with protocols and evacuation routes.
- F) Occupational Health Monitoring:**

- a) **Regular Check-ups:** Workers must undergo regular health check-ups, focusing on potential health risks associated with landfill operations.
  - b) **Vaccination:** Provide necessary vaccinations for workers against potential biological hazards.
- G) **Air Quality and Respiratory Protection:**
- a) **Dust and Gas Monitoring:** Continuous monitoring of air quality, especially for dust and harmful gases, ensuring levels stay within safe limits.
  - b) **Respiratory PPE:** In zones where dust or gas concentrations might exceed safe levels, the use of respiratory protective equipment, such as masks or respirators, is mandatory.
- H) **Public Safety:**
- a) **Restricted Access:** Limit public access to operational areas of the landfill, directing visitors to designated safe zones.
  - b) **Awareness Campaigns:** Hold community awareness campaigns on the potential risks associated with unauthorized landfill entry.
- I) **Reporting Mechanisms:**
- a) **Incident Reporting**
    - i) **Incident Logs:** Any event that results in injury, illness, damage to health, or an endangers safety must be reported. The operator of the landfill shall maintain a detailed log of any health or safety incidents occurring at the landfill, analyzing trends to inform future safety improvements.
    - ii) **Database Creation:** the landfill operator shall develop a centralized incident reporting database to facilitate the storage, retrieval, and analysis of reported incidents.
  - b) **Concerns and Observations:**
    - i) **Feedback Channels:** Set up dedicated channels (like helplines, online portals, or physical suggestion boxes) for workers, contractors, and the public to voice concerns or provide feedback on safety matters.
    - ii) **Acknowledgment:** All submitted concerns and observations must be acknowledged within 48 hours of receipt, and the operator will provide feedback on any actionable items within five working days from the receipt of the concerns or observations.

**Section 20. Landfill Capacity and Lifespan Management** - To ensure optimal utilization of landfill space, while prioritizing sustainability and minimal environmental impact, the following protocols concerning the management of landfill capacity and its effective lifespan shall be observed:

- A) **Capacity Assessment:**
- a) **Initial Evaluation:** Prior to a landfill's operation, a thorough assessment to ascertain its total capacity, in terms of volume and weight, will be undertaken. This shall include factors like geological structure, ground stability, and intended landfill design.

- b) **Regular Monitoring:** Periodic assessments will be conducted to determine the remaining capacity of the landfill, with considerations for compaction and settlement rates.
- B) Extension Strategies:**
- a) **Vertical Expansion:** Where permissible and safe, vertical expansion of a landfill will be considered to maximize its capacity without extending the spatial footprint.
  - b) **Horizontal Expansion:** Before any horizontal extension, detailed impact studies will be conducted, ensuring minimal disruption to the surrounding ecosystem and communities.
- C) Waste Reduction and Diversion:**
- a) **Resource Recovery:** Emphasis on extracting valuable resources, such as metals and certain plastics, from the waste before disposal, in alignment with the principles of urban mining.
  - b) **Composting and Biogas Production:** Encourage organic waste processing to produce compost and biogas, further reducing the volume directed towards landfills.
  - c) **Material Recovery Facilities (MRFs):** Establishing and efficiently operating these facilities to segregate recyclable materials from the waste stream, minimizing landfill input.
    - i) **Establishment:** The City shall identify and designate suitable locations for the construction and operation of Material Recovery Facilities.
    - ii) **Operational Efficiency:** The City shall ensure that these MRFs are equipped with state-of-the-art machinery and technologies designed for the efficient segregation of recyclable materials. Regular maintenance and upgrades shall be mandated to ensure continued efficiency and adherence to evolving waste segregation standards.
    - iii) **Training and Employment:** The City shall invest in the training of personnel to proficiently operate and manage these facilities, ensuring both the conservation of resources and the creation of job opportunities for residents.
    - iv) **Waste Stream Management:** The City shall implement measures to direct the majority of its waste towards MRFs before any disposal process, ensuring that recyclable materials are adequately recovered and redirected from the landfill stream.
    - v) **Quality Control:** Rigorous quality checks shall be performed to ascertain the purity and quality of segregated materials, ensuring they are fit for recycling or repurposing.
- D) Compaction Techniques:**
- a) **Machinery:** Utilize modern machinery designed for efficient compaction, ensuring more waste can be stored within a smaller space.
  - b) **Layering Method:** Use alternating layers of waste and cover soil to enhance stability and optimize space.
- E) Monitoring Settlement Rates:**



- a) **Continuous Observation:** Implement advanced sensor technology to continuously monitor the rate at which waste settles, aiding in predicting the landfill's lifespan accurately.
- b) **Mitigation Measures:** Should the settlement rate accelerate, actions such as enhanced compaction or waste diversion will be considered.
- F) **Reclamation and Repurposing:**
  - a) **Post-Closure Use:** Once a landfill reaches its end of life, the City will assess its potential for repurposing, possibly as a green space, recreational area, or renewable energy site, aligning with the principles of the circular economy.
  - b) **Continuous Monitoring:** Even after closure and reclamation, the site will be continuously monitored for any potential environmental or health risks.

**Section 21. Closure and Post Closure Management-** When it becomes necessary to close a landfill site, the following procedure shall be followed:

- A) **Closure Notification:** The operator shall notify the City Government at least one year before the intended closure of a landfill site, detailing the reasons and providing a closure plan for approval.
- B) **Closure Plan:** The operator shall develop a comprehensive closure plan that addresses environmental, health, and safety concerns. This plan must be approved by the City Government prior to any closure activities.
- C) **Site Rehabilitation:** The operator shall rehabilitate the site by ensuring proper sealing of waste, installing an effective leachate and gas management system, and setting up soil and vegetative covers to stabilize the area.
- D) **Monitoring Infrastructure:** The City Government shall mandate the installation of monitoring systems that track landfill gas emissions, ground and surface water quality, and other environmental factors. These systems shall be integrated with the City's smart technology network for remote monitoring and reporting.
- E) **Post-Closure Access Restrictions:** The operator shall secure the site against unauthorized access for a specified post-closure period, using physical barriers and signage that details the potential hazards.
- F) **Long-Term Care:** Covered entities shall be responsible for the long-term care and monitoring of the closed landfill site for a minimum period specified by international standards or as deemed appropriate by the City Government, ensuring environmental safety and adherence to regulations.
- G) **Resource Recovery:** In line with the principles of urban mining, the City Government shall evaluate opportunities for resource recovery from closed sites, ensuring that potential extraction operations do not compromise environmental safety.
- H) **Post-Closure Land Use:** The City Government shall coordinate with stakeholders to determine potential sustainable land uses for closed landfill sites, such as green spaces, recreational parks, or renewable energy installations. Any proposed use shall align with the City's broader vision of a circular economy.

- I) **Contingency Planning:** The operator shall provide a contingency plan addressing potential post-closure incidents, detailing immediate actions, communication strategies, and emergency resources to mitigate any adverse impacts.

**Section 22. Leachate Management** - Leachate is a liquid that accumulates in landfills and is composed of a mixture of rainwater, organic matter, and hazardous substance. They can contaminate soil, groundwater, and surface water. The following shall be observed and established to prevent leachate contamination:

- A) **Mandated Collection Systems:** The City Government shall require all landfill operators to install and maintain an effective leachate collection system. This system shall be engineered to capture and convey leachate, preventing its uncontrolled release into the environment.
- B) **Leachate Treatment Standards:** Prior to any discharge, all leachate must be treated to meet the stringent standards determined by the City's environmental and health authorities. The City Government shall ensure these standards align with international best practices and are consistently updated.
- C) **Routine Monitoring and Reporting:** The landfill operator shall consistently monitor the volume and quality of leachate. A comprehensive report shall be submitted to the City's relevant department on a quarterly basis, detailing the collected data.
- D) **Preventive Containment Infrastructure:** The City Government shall command that landfills be equipped with liners and barrier systems of high integrity to prevent leachate seepage into surrounding soils, groundwater, and surface waters.
- E) **Leachate Recirculation:** Where scientifically appropriate, and without compromising landfill stability, operators shall reintroduce treated leachate back into the landfill to expedite waste decomposition.
- F) **Swift Response to Anomalies:** In cases of unexpected leachate surges or system breakdowns, operators must act immediately, employing their emergency response measures. All such incidents and remedial actions taken shall be promptly documented and reported to the City's oversight bodies.
- G) **Biennial Infrastructure Evaluation:** The City Government shall require landfill operators to undergo a third-party review of their leachate management infrastructure every two years to confirm its efficiency and conformity to the established standards.

**Section 23. Landfill Gas Management and Utilization** - To more effectively and efficiently manage gas emissions, including greenhouse gases, the following are required at every landfill site:

- A) **Mandatory Gas Collection Systems:** The City Government shall mandate all landfill operators to establish and maintain a comprehensive landfill gas collection system. This system should effectively capture, control, and monitor landfill gas emissions.
- B) **Landfill Gas Composition Monitoring:** Operators shall routinely monitor and document the composition and volume of landfill gas, ensuring its

constituents—especially methane and carbon dioxide—are consistently identified and measured.

- C) **Gas Treatment and Control Measures:** Prior to any beneficial utilization or release, landfill gases must undergo treatments to remove impurities. The City Government shall specify clear standards for gas treatment based on international benchmarks.
- D) **Energy Recovery Initiatives:** Leveraging principles from the circular economy and smart cities, operators shall be encouraged to harness landfill gas for energy recovery, transforming it into electricity, heat, or green fuel whenever feasible.
- E) **Routine Emission Reports:** Landfill operators shall provide the City's designated department with quarterly reports detailing landfill gas volumes, compositions, recovery rates, and utilization outcomes.
- F) **Safety Protocols and Infrastructure:** All facilities engaged in landfill gas management must be equipped with safety measures like gas detection systems, explosion-proof equipment, and fire suppressants. The City Government shall periodically review and endorse these provisions.
- G) **Regular Infrastructure Inspections:** To ensure optimal functionality and safety, landfill gas management infrastructures shall undergo biennial evaluations by certified third-party assessors

**Section 24. Illegal Dumping** - All individuals, businesses, and institutions operating within the City of Bacoor are expressly prohibited from unlawfully discarding, discharging, or disposing of waste in places not designated for such purposes by the City Government. In addition, the following shall be implemented:

- A) **Surveillance and Monitoring:** The City Government shall deploy monitoring and surveillance measures, including but not limited to CCTV cameras and regular patrols, at known hotspots for illegal dumping activities.
- B) **Identification:** In cases where illegally dumped waste can be traced back to its origin, the responsible party shall be immediately notified and mandated to rectify the situation by arranging proper disposal.
- C) **Sanctions:** The penalties provided under Section 25 of this Chapter shall apply when, after 5 working days from notice, the responsible party has not properly disposed of the waste.
- D) **Reporting Mechanisms:** A straightforward and user-friendly reporting system shall be established, allowing citizens to report incidents of illegal dumping, complete with photographic or video evidence when possible.
- E) **Periodic and Random Waste Audits:** To curb illegal dumping, the City will perform random waste audits on businesses, especially those producing substantial amounts of waste, to ensure compliance with waste disposal regulations.
- F) **Database and Tracking:** A centralized database shall be maintained to track reported cases, actions taken, and perpetrators of illegal dumping, ensuring repeat offenders face escalating penalties.

**Section 25. Penalties** - Any person/s who violates the provisions in this Chapter, whether through acts of omissions, shall suffer the penalty of 1 year imprisonment and

a Five Thousand Peso (Php 5,000.00) fine for every instance that the foregoing provisions were violated. In addition, said person/s shall incur strict civil liability for the costs of reversing the negative environmental impacts caused by said acts or omissions. Following the precautionary principle, lack of conclusive scientific evidence that any particular instance of environmental damage was directly caused by said person/s shall preclude the court from finding the person/s liable.

In the case of employees who have violated the provisions of this chapter, he, she, or they shall be solidarily liable with their employers unless the employer is able to prove that it was not negligent in the hiring and supervision of the employees. In the case of juridical persons, its officers shall be held solidarily liable with the person/s who personally committed the offense

**Section 26. Contingency Planning** - The City Government shall formulate comprehensive contingency plans to address potential unforeseen disruptions, emergencies, or issues pertaining to landfill operations and waste management. As part of these contingency plans, the following should be incorporated:

- A) **Potential Scenarios Covered:** The contingency plans shall address, but not be limited to, the following scenarios: landfill fires, hazardous waste incidents, excessive leachate production, uncontrolled landfill gas emissions, breaches of containment barriers, extreme weather events, and large influxes of waste beyond expected volumes.
- B) **Regular Review and Updates:** The City Government shall review and, if necessary, update the contingency plans annually or following any major incident to ensure they remain relevant and effective.
- C) **Coordination with BDRRMO:** The City shall establish a collaborative framework with the Bacoor Disaster Risk Reduction & Management Office to ensure swift and coordinated responses during crises, leveraging each entity's unique resources and expertise.
- D) **Training and Simulation:** The City Government, in collaboration with landfill operators, shall conduct regular training sessions and simulations for City staff and other stakeholders, ensuring preparedness and familiarization with the established protocols.

**Section 27. Continuous Capacity Building** - The City Government shall institute regular training programs targeting landfill operators, waste management personnel, and related city staff. These programs shall be designed to keep them updated on emerging best practices, technological advancements, and sustainable waste management strategies in line with the principles of urban mining, smart cities, and the circular economy. In addition, the following shall also be implemented:

- A) **Engagement of Experts and Consultants:** The City shall engage experts, consultants, and industry leaders to provide insights, workshops, and hands-on training, ensuring that the City remains at the forefront of waste management innovation.
- B) **Partnerships with Academic Institutions:** Collaborations with local and international academic institutions shall be fostered to research, develop, and implement advanced waste management solutions. Such partnerships can

also pave the way for internship and apprenticeship opportunities, nurturing the next generation of environmental stewards.

- C) **Feedback Mechanism and Continuous Improvement:** A structured feedback mechanism shall be established to gauge the effectiveness of training programs and public campaigns. Feedback from participants, community leaders, and the general public will guide the iterative improvement of capacity-building initiatives.

**Commented [Cc4]:** Not Applicable. Conflict in Article 4 Chapter 1 Section 1 C

#### CHAPTER 4. Recycling

**Section 28. Purpose and Overview** - The purpose of this Chapter is to outline, guide, and strengthen the City of Bacoor's efforts in advancing recycling initiatives. As part of the City's broader vision, recycling is recognized as a paramount tool for driving sustainability, supporting the development of a smart city ecosystem, actualizing the principles of a circular economy, and ensuring long-term financial feasibility. Recycling not only alleviates the strain on our natural resources and reduces landfill waste but also paves the way for economic growth, job creation, and innovative opportunities in waste management. It plays an essential role in conserving energy, minimizing greenhouse gas emissions, and reducing the City's carbon footprint.

**Section 29. Definition of Recyclables** - For the purpose of this Chapter, recyclable materials shall include but are not limited to paper, cardboard, glass, plastics, metals, and other materials that the City may designate from time to time based on recycling market developments and technological advancements.

**Section 30. Collection and Transport of Recyclables** - In addition to Section 11 of this Article, the City Government shall establish a dedicated infrastructure for the collection of recyclables, ensuring that the collected materials remain uncontaminated and retain their value for efficient recycling.

**Section 31. Recycling Centers** - The City Government shall establish and maintain strategically located recycling centers throughout the city to facilitate the deposit, collection, sorting, and processing of recyclables. These centers shall be designed to accommodate different types of recyclables, including plastics, metals, glass, paper, and e-waste, ensuring separate and uncontaminated collection.

Recycling centers shall be integrated with the city's digital network, if any, offering real-time data on input-output, operational efficiency, and environmental impact metrics.

The City Government shall endeavor to secure partnerships with private sector entities in operating or enhancing recycling centers, tapping into their expertise, technological advancements, and best practices.

The City shall establish linkages with manufacturers, producers, and downstream recyclers to ensure that processed materials from recycling centers find their way back into the production cycle, fulfilling the circular economy vision.

**Section 31A. Material Recovery Protocols** - The following protocol shall be followed for the recovery of materials from recyclables:

- A) **Preliminary Sorting:** At source, entities are mandated to segregate recyclables based on their type and cleanliness pursuant to Section 7 of this Article.
- B) **Collection and Transfer:** Recyclables collected should be transferred to recycling centers or Material Recovery Facilities (MRFs) in designated containers, ensuring no cross-contamination with other types of waste during transportation. The City Government shall initiate the establishment of said recycling centers or MRFs.
- C) **Processing at Centers:** Upon reaching recycling centers or MRFs, recyclables shall undergo advanced sorting using manual labor and machinery where required. Advanced sorting processes, such as air classifiers, optical sorters, or magnets, may be used to refine and isolate specific materials, ensuring a higher purity level.
- D) **Storage:** Post-sorting, materials should be stored in clean, dedicated spaces or containers to prevent contamination before processing or transport to downstream recyclers. Storage spaces shall be designed to protect materials from environmental factors, ensuring their quality remains intact.
- E) **Downstream Processing:** The City Government and/or the operator/s of Recycling Centers shall ensure that recyclables, once sorted and stored, are transferred to facilities that can process them into usable raw materials or new products. Regular audits of these facilities will ensure the recyclables' end value is maximized, in alignment with the principles of the circular economy.
- F) **Quality Assurance and Monitoring:** Protocols shall be in place to test the quality of sorted and processed recyclables regularly. These protocols will ensure that recyclables maintain their intrinsic value and meet the standards required by downstream manufacturers or processors.

**Section 32. Junkshop and Junk Dealers Responsibilities over End-of-Life Vehicles** - In addition to the responsibilities of junkshop operators and junk dealers under City Ordinance No. 2014-004, junk dealers and junkshop operators also have the responsibility to segregating, processing, and preparing materials from End-of-Life Vehicles (ELVs) for urban mining. To wit:

- A) **Definition:** End-of-Life Vehicles (ELVs) refer to motor vehicles that have reached the end of their usable life, whether due to age, wear and tear, damage, or any other reason that renders them non-functional or beyond economical repair.
- B) **Responsibilities of Junk dealers, junkshops, and junkshop operators:** ELVs procured by junk dealers shall be methodically dismantled to extract reusable parts. All reusable components shall be inventoried, tested, and refurbished as necessary, before resale or reintroduction into the market

**Section 33. Public Private Partnerships –**

- A) **Definition:** A Public-Private Partnership (PPP) refers to a collaborative agreement between the City Government and private sector entities with the aim of financing, designing, implementing, and operating services and facilities traditionally provided by the public sector.
- B) **Promotion of PPPs:** The City Government shall actively encourage and promote partnerships with the private sector to enhance the City's recycling infrastructure, technology, and services.
- C) **Proposal Evaluation:** Proposals for PPPs shall be evaluated based on their alignment with the City's recycling goals, their feasibility, sustainability, social impact, and their alignment with the principles of the circular economy. The City shall prioritize proposals that demonstrate a clear understanding of community needs, employ advanced recycling technologies, and offer sustainable and long-term solutions.

**Section 34. Upcycling and Creative Reuse** – Upcycling, also known as creative reuse, involves the process of transforming discarded items or waste materials into new products of better quality or environmental value. The City shall promote upcycling in the following ways: *(Annual budget from what office?)*

- A) **Promotion through educational campaigns:** Educational campaigns and workshops focusing on the benefits and methods of upcycling shall be initiated to raise public awareness and participation.
- B) **Upcycling Awards:** The City Government shall establish an "Upcycling Award" to recognize outstanding upcycling initiatives on an annual basis.
- C) **Upcycling Hubs:** The City shall establish or support the establishment of community upcycling hubs where residents can access tools, materials, and guidance to upcycle waste items.
- D) **Collaborations with Educational Institutions:** Schools and educational institutions within the City shall be encouraged to integrate upcycling and creative reuse projects into their curriculum. The City Government will work in tandem with these institutions to provide resources and expertise for these initiatives.
- E) **Upcycling fairs:** Special events, such as upcycling fairs or exhibitions, shall be organized to support artisans and businesses involved in upcycling.
- F) **Adopting Most Innovative Upcycling Products:** The City Government shall actively seek, research, and adopt innovative upcycling solutions that have demonstrated environmental, social, and economic benefits. This will include, but not be limited to, projects that transform everyday waste materials into functional products or energy sources, such as the Solar Plastic Bottle Lamps inspired by the "Liter of Light" initiative.
  - a) **Pilot programs:** Where the above criteria are met, the City will allocate resources to initiate pilot programs that test and validate the feasibility, scalability, and impact of innovative upcycling products. Successful pilots can then be integrated into broader city-wide initiatives.
  - b) **Collaboration with Innovators:** Innovators, entrepreneurs, and organizations pioneering groundbreaking upcycling solutions shall be invited to collaborate with the City, bringing their expertise to benefit the

community at large. Such collaboration might include knowledge-sharing sessions, workshops, and public installations.

**Section 35. Integration with Circular Economy** – The City Government shall adopt a holistic approach to recycling, ensuring that all practices align with the principles of a circular economy. This approach recognizes that waste can be a valuable resource and focuses on extracting the maximum value from products while in use, then recovering and regenerating products and materials at the end of each service life.

All entities operating within the City, from households to businesses, shall be encouraged to optimize the lifespan of products and materials through repair, refurbishment, and remanufacturing before considering disposal.

#### CHAPTER 5 Organic Waste

**Section 36. Organic Waste Reduction and Source Segregation** – The City Government recognizes the environmental and economic implications of organic waste generation and commits to fostering a proactive approach in its management in the following manner:

- A) **Reduction at Source:** All entities, including households, businesses, institutions, and public facilities, shall endeavor to reduce the generation of organic waste at its source. This may be achieved through practices such as mindful purchasing, reducing food waste, and promoting home composting where feasible.
- B) **Segregation Obligation:** It shall be mandatory for all entities to segregate organic waste from other waste streams at the source of generation. Organic waste bins or receptacles should be distinct and clearly labeled to prevent contamination.

**Section 37. Organic Waste Recycling Programs for Large Volume Producers** - Large volume organic waste producers, including but not limited to restaurants, hotels, markets, and food processors, play a pivotal role in the City's waste management ecosystem. The following programs are therefore required for all covered entities:

- A) **Mandatory Recycling Program:** Entities generating significant quantities of organic waste are mandated to establish and maintain robust organic waste recycling programs.
- B) **Guidelines and Standards:** The City's Environment and Natural Resources Office (CENRO) shall develop and periodically review guidelines and best practices for the establishment, operation, and maintenance of organic waste recycling programs for large producers.

Failure to implement Organic Waste Recycling Programs pursuant to the CENRO's guidelines will merit a fine of Three Thousand Pesos (Php 3,000.00)



Suggestion only.

1<sup>st</sup> Offense Php 3,000

2<sup>nd</sup> Offense Php 4,000

3<sup>rd</sup> Offense Php 5,000

4<sup>th</sup> Offense Recommendation for suspension or revocation of business permit.

**Section 38. Biogas and Energy Recovery from Organic Waste** - The City Government shall commission studies to assess the feasibility and benefits of setting up biogas plants and other organic waste-to-energy facilities within its jurisdiction.

Based on the outcomes of the feasibility studies, the City Government shall pursue the establishment of facilities in partnership with the Department of Energy that convert organic waste to energy, prioritizing areas with high organic waste generation.

The City shall explore partnerships with the private sector, research institutions, and potential investors to finance, develop, and manage these facilities.

Energy generated from organic waste shall be integrated into the City's energy grid, utilized in public facilities, or distributed to areas in need, ensuring that the benefits of waste-to-energy solutions are widely experienced within the community.

**Section 39. Organic Waste in Aquaculture and Livestock Feed** – Organic waste has potential value in supporting sustainable aquaculture and livestock industries. Properly processed and treated organic waste can become a resource that supports food production and reduces the need for synthetic inputs. Thus, the City Government shall encourage the sustainable integration of organic waste in aquaculture and livestock feed in the following manner:

- A) Feasibility and Safety Assessment: Before integrating organic waste into aquaculture and livestock feed, a comprehensive assessment shall be conducted to ensure the feasibility and safety of such practices. This will ensure that the organic waste utilized does not pose health risks to the aquatic life, livestock, or, subsequently, to the consumers.
- B) Processing Standards: The City Government, in conjunction with relevant agencies, shall establish stringent standards for the treatment, processing, and utilization of organic waste in aquaculture and livestock feed.
- C) Partnerships with Agriculture Sector: The City shall foster partnerships with local farmers, fisherfolk, and agribusinesses to promote the use of quality processed organic waste products in their operations, ensuring both economic and environmental benefits.
- D) Monitoring and Quality Control: Regular monitoring shall be undertaken by relevant authorities to ensure that the organic waste used in feed meets the necessary safety and quality benchmarks.

**Section 40. Promotion and Education on Organic Waste Management** – The City Government shall launch comprehensive campaigns to raise awareness about the

benefits and methods of organic waste reduction, segregation, and recycling. These campaigns will utilize various media platforms to reach a diverse audience.

Additionally, workshops and training sessions shall be organized regularly for households, institutions, and businesses, focusing on practical methods to manage organic waste effectively.

## CHAPTER 6. Electronic Waste and Extended Producer Responsibility

**Section 41. E-waste Definition and Classification** – Electronic waste, commonly referred to as e-waste, encompasses discarded electrical or electronic devices, components, and materials. For the purpose of clarity, consistency, and effective management within the City, the following are deemed to be classified as e-waste:

- A) Large Household Appliances: This category includes large electronic items typically used in households such as washing machines, refrigerators, air conditioners, and ovens.
- B) Small Household Appliances: This encompasses smaller electronic items such as vacuum cleaners, toasters, coffee makers, and microwaves.
- C) Information Technology (IT) and Telecommunications Equipment: Items in this category include computers (desktops, laptops), printers, mobile phones, telephones, fax machines, and related accessories.
- D) Consumer Equipment: This category includes radios, televisions, digital cameras, audio equipment, and musical instruments.
- E) Lighting Equipment: Fluorescent lamps, high-intensity discharge lamps, LED lamps, and other equipment designed to produce light.
- F) Electrical and Electronic Tools: Any tools for use in households or businesses that require power to operate, excluding large stationary tools and appliances. This includes drills, saws, sewing machines, and lawnmowers.
- G) Toys, Leisure, and Sports Equipment: Electronic toys and games, computer gaming systems, electric trains or car racing sets, and other personal leisure items.
- H) Monitoring and Control Instruments: This category covers smoke detectors, heating regulators, thermostats, and other similar monitoring or control instruments.
- I) Automatic Dispensers: Electronic devices designed to release a set amount of substance, product, or item, including cash dispensers and vending machines.

**Section 42. E-waste Collection and Drop-off Points** – The City Government shall establish and manage dedicated e-waste collection points strategically located throughout the city to facilitate the easy and safe disposal of electronic waste by residents and businesses. These points shall be accessible, well-signposted, and equipped to handle the specific requirements of e-waste.

Commented [Cc5]: Implement HWGID

**Section 43. E-waste Processing and Recovery Facilities** – The City Government shall facilitate the establishment of licensed e-waste processing and recovery facilities



within its jurisdiction. The City Government shall maintain an updated registry of all licensed e-waste processing and recovery facilities. In establishing processing and recovery facilities, the following must be included:

- A) All facilities must be equipped with appropriate technology for dismantling, sorting, and safely processing various categories of e-waste.
- B) Measures shall be in place to prevent the release of hazardous substances during e-waste processing.
- C) E-waste facilities shall adopt methods and technologies aimed at maximizing the recovery of valuable materials, such as metals, plastics, and rare earth elements.
- D) The City Government shall promote research and partnerships to improve the efficiency of resource recovery from e-waste.
- E) Residues resulting from e-waste processing, which are not recoverable, must be treated and disposed of in an environmentally sound manner. The City Government shall provide guidelines for the safe disposal of such residues.
- F) E-waste processing facilities shall ensure the safety and well-being of all workers by providing necessary protective equipment, regular health check-ups, and training on safe handling of e-waste.
- G) Emergency response protocols shall be established and regularly updated to handle potential accidents or incidents at the facilities.

Commented [Cc6]: Level of TSD Facility.

**Section 44. Extended Producer Responsibility (EPR) –** Extended Producer Responsibility (EPR) is an environmental policy approach wherein the responsibility for the post-consumer phase of a product, including collection, recycling, and final disposal, is shifted back to the product's producer. Manufacturers, importers, and distributors of electronic goods are hereby mandated to establish take-back systems, and shoulder responsibilities related to the end-of-life management of their products.

Commented [Cc7]: Deeper understanding by attending EPR seminar and workshop are needed

**Section 45. Scope of EPR –** EPR shall be implemented with the following scope:

- A) **Products Covered:** EPR regulations shall apply to all products that can result in significant environmental impacts at the end of their life cycle, including but not limited to electronics, batteries, packaging materials, and certain hazardous goods.
- B) **Producers Defined:** For the purposes of EPR, a producer is any entity that designs, manufactures, sells, or imports products covered by the EPR framework within the City's jurisdiction.

**Section 46. Product Take-Back Systems –**

- A) **Mandatory Take-Back:** Producers under the EPR framework shall establish systems for the return of used or end-of-life products, ensuring that they are properly collected and treated.
- B) **Convenient Collection Points:** Producers, importers, and distributors shall set up accessible collection points in their respective offices for consumers to return their products easily. At the minimum, there must be collection points located at retail outlets and producers' designated service centers.

- C) Awareness Campaigns: Producers shall carry out public awareness campaigns to educate consumers about the importance of returning products for proper disposal and the available take-back systems.
- D) Transparent Record Keeping: Producers shall maintain records of the quantity and type of products returned, processed, and the end treatment given. This data shall be periodically reported to the City Government.
- E) Safe Disposal. Returned products shall be processed in a manner that prioritizes re-use, recycling, and recovery of materials. For products that cannot be recycled, environmentally sound disposal methods shall be used.

**Section 47. Penalties for Non-Compliance with EPR** – The following are prohibited and carry the corresponding penalties:

- A) Absence of Mandatory Take-Back System: Any producer, retailer, or distributor who fails to implement a mandatory take-back system as prescribed shall be fined the amount of Two Thousand Pesos for (Php 2,000.00) for the first offense. A subsequent violation shall attract a fine of Five Thousand Pesos (Php 5,000.00) and shall also lead to the suspension of their business permit for a period of One (1) Year.
- B) Lack of Convenient Collection Points: Any entity required to provide collection points but found lacking in providing such convenient locations for consumers, shall be fined an amount of Two Thousand Pesos (Php 2,000.00) for the first offense. Repeat offenses shall attract a fine of Five Thousand Pesos (Php 5,000.00), along with a mandatory review of the entity's waste management practices by CENRO.
- C) Concealment of Mandatory Take-Back System from Consumers: Entities found guilty of intentionally hiding or misrepresenting the existence of a mandatory take-back system to consumers shall be fined an amount not less than Five Thousand Pesos (Php 5,000.00). Subsequent violations shall lead to the suspension of the entity's business permit for Two (2) Years.
- D) Falsification of Records: Any entity found to be falsifying records related to e-waste management, take-back systems, or any other aspect covered under this Chapter shall be fined Five Thousand Pesos (Php 5,000.00) for every offense. The City shall also initiate the filing of criminal charges as applicable under the relevant penal laws.
- E) Non-compliance with CENRO Guidelines for Safe Disposal: Entities not adhering to the guidelines set forth by CENRO concerning safe disposal practices shall be fined an initial amount of Two Thousand Pesos (Php 2,000.00) for the first offense. Repeat offenses shall result in an escalated fine of Five Thousand Pesos (Php 5,000.00) and shall warrant a temporary suspension of operations until full compliance is achieved.

All fines collected under this section shall be directed towards the Bacoor Environment Fund.

**Section 48. Eco-Design and Green Production** – Producers are encouraged to integrate environmental considerations during the design phase of their products. This shall include:

- A) Designing products for longer life spans, reparability, reusability, and ease of recycling are to be prioritized.
- B) Reduction of hazardous substances and minimizing resource use in product designs are strongly recommended.
- C) Adoption of clean and energy-efficient production processes.
- D) Minimization of waste generation during the production phase and maximizing the use of recycled or sustainable materials.
- E) Implementing sustainable packaging practices that reduce waste and are easily recyclable.

**Section 49. Public Awareness and Education on E-waste Management** – The City Government shall actively educate and raise awareness among residents, businesses, and institutions about the environmental and health hazards of improper e-waste disposal and the benefits of responsible recycling and disposal. This may be through multimedia campaigns, including digital, print, and broadcast mediums; collaborative partnerships with local organizations, educational institutions, and businesses; Educational Workshops and Training Programs; and the provision of Online Information and Resources.

#### CHAPTER 8. Construction and Demolition Waste

**Section 50. Definition and Scope of Construction and Demolition Waste** - Construction and Demolition Waste (C&D Waste) refers to the waste material generated during the construction, remodeling, repair, and demolition of buildings, roads, bridges, and other structures. This waste includes:

- A) **Construction Waste:** Refers to any waste material resulting from the construction of new structures or facilities, including waste from site preparation, such as dredging materials, tree stumps, and rubble.
- B) **Demolition Waste:** Pertains to waste generated from the complete or partial demolition of existing structures, including waste from the dismantling of structural components and internal fittings.
- C) **Refurbishment Waste:** Denotes the waste produced from the remodeling or retrofitting of existing structures, including any material removed during the refurbishment process.
- D) **Roadwork Waste:** Encompasses waste resulting from the construction, repair, or demolition of roads, highways, bridges, tunnels, and railway tracks. This includes, but is not limited to, asphalt, tarmac, and excavated soil.
- E) **Site Clearance Waste:** Involves waste materials from clearing land for construction, including vegetation, soil, and debris.

**Section 51. Mandatory Waste Management Plans for Construction Sites** - Prior to initiating any construction, demolition, or remodeling activity that requires a City permit,

all contractors, developers, or relevant entities must submit a detailed **Impact Management Plan (IMP)** for review and approval by the City's Environmental and Natural Resources Office (CENRO). The following guidelines apply for the creation, submission, and processing of **IMPs**:

- A) The **IMP** shall detail strategies and methodologies for waste reduction, segregation, reuse, recycling, and proper disposal during the project's lifecycle.
- B) The **IMP** shall contain the following:
  - a) **Project Information**: Name, location, type, and size of the project, and expected start and completion dates.
  - b) **Waste Assessment**: Estimate of the types and volumes of C&D waste materials expected to be generated.
  - c) **Waste Reduction Strategies**: Techniques and methodologies that will be employed to minimize waste generation, including efficient materials procurement and optimized design techniques.
  - d) **Segregation Protocols**: Detailed methods for segregating waste at source, ensuring minimal contamination and promoting reuse and recycling.
  - e) **Storage and Collection**: Description of onsite storage solutions, including dedicated bins, chutes, and containers, and the frequency and method of waste collection.
  - f) **Disposal Protocols**: Identification of authorized disposal facilities for waste that cannot be recycled or reused, ensuring compliance with City guidelines.
  - g) **Recycling and Reuse Strategies**: Methods to be used for recycling or repurposing waste materials, including partnerships with recycling facilities and procedures for onsite reuse.
  - h) **Transportation**: Logistics detailing the transport of waste from the construction site to disposal, recycling, or storage facilities, ensuring minimized environmental impact.
  - i) **Monitoring and Reporting**: Systems in place for monitoring waste generation and management during the project's lifecycle, including periodic reports to CENRO.
- C) CENRO shall review submitted **IMPs** within 30 days of receipt. Incomplete or inadequate plans will be returned with comments for revision. Construction activities may not commence until the **IMP** receives CENRO's approval.
- D) Contractors shall strictly adhere to the approved **IMP** throughout the construction project. CENRO is authorized to conduct random onsite audits to ensure compliance with the **IMP** and to verify the accuracy of the reported data. Any deviations from the approved **IMP** must be justified and reported to CENRO in a timely manner.

**Section 52. Storage Requirements for Construction Materials** - All construction materials shall be stored in a manner that prevents their contamination, deterioration, or waste. Measures shall be taken to prevent the release or escape of materials due to factors such as precipitation, wind, weather, or human activity. Storage areas should be clearly demarcated, labeled, and segregated based on material type and intended use.



Hazardous materials, including flammable, corrosive, or toxic substances, shall be stored in accordance with City safety guidelines and in areas equipped with appropriate safety equipment. Any contractor, developer, or relevant entity found in violation of this paragraph shall be fined in the amount of Five Thousand Pesos (Php 5,000.00) and the construction activities shall be suspended until such time that these hazardous materials are properly stored.

**Section 53. Recycling and Reuse Protocols for Recovered Construction Materials** - It shall be the responsibility of contractors, developers, and other relevant entities to safely and sustainably reuse and recycle recoverable construction materials. The City's Environmental and Natural Resources Office (CENRO) shall formulate specific protocols for recycling and reusing various types of construction materials. This shall include, but shall not be limited to, the following minimum protocols:

A) Material-Specific Guidelines:

- a) Concrete and Masonry: These materials shall be crushed and can be repurposed as aggregate for road construction, erosion control, or base materials for new construction.
- b) Wood: Recovered timber shall be inspected for integrity, treated if necessary, and repurposed for new construction, furniture, or mulch.
- c) Metals: Metals, including steel, iron, and copper, shall be sent to appropriate recycling facilities for processing and reintroduction into the manufacturing chain.
- d) Glass: Recovered glass should be cleaned, processed, and used in the production of new glass products or as aggregate in construction.
- e) Asphalt: Reclaimed asphalt shall be processed and integrated into new pavement projects.
- f) Gypsum (Drywall): Recycled gypsum can be processed into new drywall or used as a soil amendment in agriculture.

B) Decontamination Processes:

- a) All recovered materials intended for recycling or reuse must undergo appropriate decontamination processes to ensure they are free of contaminants, harmful substances, or residues.
- b) CENRO shall outline standard decontamination processes for each material type and ensure strict adherence.

Commented [Cc8]: Should be included in IMP of entity subject for review and approval of CENRO

Non-compliance with CENRO guidelines for recycling and reusing construction materials shall be fined an initial amount of Two Thousand Pesos (Php 2,000.00) for the first offense. Repeat offenses shall result in an escalated fine of Five Thousand Pesos (Php 5,000.00).

**Section 54. Transportation and Handling of Construction and Demolition Waste**

- All entities involved in the transportation of C&D waste shall secure a transportation permit from the City's Environmental and Natural Resources Office (CENRO). The permit shall stipulate the approved routes, allowable hours for transportation, vehicle requirements, and any other conditions deemed necessary.

Entities found violating the transportation and handling guidelines will be fined an initial amount of Two Thousand Pesos (Php 2,000.00) for the first offense. Repeat offenses shall result in an escalated fine of Five Thousand Pesos (Php 5,000.00).

**Section 55. Material Recovery in Demolition** - Before any demolition permit is issued, the responsible entity shall conduct a comprehensive Material Recovery Assessment (MRA). The MRA will detail the types, quantities, and potential reuse or recycling options for materials present in the demolition site. Based on the MRA, a detailed Material Recovery Plan (MRP) shall be drafted, outlining the methods, equipment, and processes to be employed during the demolition to ensure optimal material recovery. All recovered materials shall be transported to designated MRFs, as established in Chapter 4, Section 31(b) of this Article where they will be further processed, stored, or prepared for sale or reuse.

The City Government, through the CENRO, Office of the Building Official, and City Engineering Office, reserves the right to inspect demolition sites and ensure compliance with MRPs. Failure to implement the MRP, without proper justification, merits a fine of Five Thousand Pesos (Php 5,000.00).

**Section 56. Use of Funds** - All fines collected under this Chapter shall be directed towards the Bacoor Environment Fund.

Commented [Cc9]: Redundant to RA 1586

#### CHAPTER 8. Miscellaneous

**Section 57. Processing of Bulk Waste** - "Bulk waste" refers to items that are too large to be accepted by regular waste collection practices due to their size, weight, or volume. All entities generating bulk waste, whether households, businesses, or institutions, are required to dismantle or break down bulk waste items to a manageable size or state suitable for collection by Private Hauler.

**Section 58. Non-Compliance with Bulk Waste Processing** - Entities found violating Section 57 of this Article shall be fined an initial amount of Two Thousand Pesos (Php 2,000.00) for the first offense. Repeat offenses shall result in an escalated fine of Five Thousand Pesos (Php 5,000.00).

**Section 59. Prohibition on Littering** - No person, business, or entity shall intentionally discard, drop, or dispose of litter in places other than designated receptacles or litter bins provided for that purpose.

This prohibition applies to all public spaces including, but not limited to, streets, sidewalks, parks, playgrounds, public buildings, waterways, and other areas open to the public.

For the purposes of this section, "litter" refers to any solid waste that is discarded, used, or consumed in a manner which is not in accordance with the City's waste



management policies, including any item discarded or left behind as a result of a public or private gathering.

Any person found in violation of this prohibition shall be penalized with a fine as follows: One Thousand Pesos (Php 1,000) for the first offense; Two Thousand and Five Hundred Pesos (Php 2,500) for the second offense; and Five Thousand Pesos (Php 5,000) for third and subsequent offenses.

**Section 60. Development and Promotion of Markets for Reclaimed Materials -** The City Government shall initiate efforts to identify potential markets and industries that can utilize reclaimed materials. Incentives, such as discounts on permit fees and use of social media channels, will be provided to businesses and industries that utilize reclaimed materials in their production processes.

#### ARTICLE V. Water Quality and Pollution Control

**Section 1. Operative Principles -** Water resources in the City shall be managed (a) for the primary purpose of meeting indefinitely the basic requirement for potable water of all residents of Bacoor and (b) for the secondary purpose of securing the availability of adequate supplies of water for the growing industrial, recreational and commercial development activities through water resources pricing in accordance with PD 1198, institution of local water pollution control legislation, and establishment of Bacoor Network of Watersheds. Further, it is hereby declared the policy of the ~~Municipal~~(City) government that water resources in the City shall be equitably distributed.

In addition, prioritizing the preservation of aquatic ecosystems and mitigating the effects of climate change will be integral in water resources management. All developments and activities shall strive for a minimal ecological footprint on water resources.

**Section 2. Water Resources Management Plan -** The City Environment and Natural Resources Officer (CENRO) shall, together with the, DENR, DPWH, ~~NWRB~~ and other national government line agencies, ~~local water districts~~ and private sector groups formulate a strategic management plan for efficient and sustainable utilization of water resources.

The formulated plan should incorporate new technological advancements and data-driven methods to monitor water consumption and contamination, ensuring adaptive and progressive management.

**Section 3. Protection of Public Water Infrastructures -** The CENRO shall identify the potential watersheds, inter-City waterworks and irrigation projects. It shall also ensure that engineering works and infrastructure projects within the City do not adversely impact on water quality and project accessibility.

The CENRO, in collaboration with relevant experts, shall identify and continually assess the integrity of watersheds, inter-municipality waterworks, and irrigation projects. These evaluations shall also consider the impacts of climate change and urbanization on water infrastructures.

**Section 4. Drainage Systems** - The CENRO shall recommend necessary measures to ensure that adequate City and barangay drainage systems are established and maintained to prevent the negative effects of all types of effluents on both surface and underground water quality. Upon the CENRO's recommendation, the Mayor shall provide assistance to barangays for the purpose of ensuring that solid or liquid wastes are properly disposed for the protection of water resources.

Commented [Cc10]: C/O CEO (drainage master plan)

Furthermore, it is mandatory for the drainage systems to have periodic quality checks and incorporate nature-based solutions like rain gardens and bio-swales to improve water quality and recharge groundwater.

**Section 5. Health and Sanitation Measures** - The CENRO shall study and recommend appropriate measures to improve environmental sanitation by expanding the use of sanitary toilets for waste disposal. Such studies must include, but not be limited to, possible direct investments in public health education and strict enforcement of the Plumbing Code and Sanitation Code.

The CENRO shall spearhead initiatives to not only study but also implement progressive sanitation practices, promote the adoption of decentralized wastewater treatment systems, and champion community-led approaches for water sanitation.

**Section 6. Water Usage and Classification** - The provisions of DENR Administrative Order No. 34, series of 1990, otherwise known as the "Revised Water Usage and Classification", and amendments thereto, are hereby adopted.

Commented [Cc11]: Sanitation code of Bacoor C/O CHO

**Section 7. Wastewater Treatment and Management** - Every industrial, commercial, and residential establishment in the Municipality City must have appropriate wastewater treatment systems in place. Regular monitoring and auditing of these systems will be conducted to ensure that they meet the set guidelines and standards. Suggestion only; fines and penalties for violators.

**Section 8. Rainwater Harvesting** - Promotion of rainwater harvesting techniques and the establishment of community-based rainwater storage systems will be made mandatory within sixty (60) days from the effectivity date of this ordinance to augment water supply and reduce stormwater runoff. Subdivision developers and homeowners' associations and School both public and private shall be required to install rainwater harvesting facilities within their project/community within the same period mentioned above. The CENRO shall will approve the design of the said facilities.

**Section 9. Water Quality Monitoring** - A continuous water quality monitoring system, using both manual methods and digital sensors, will be established by the CENRO.

This system will ensure that water sources are free from contaminants, and any deviations from the standard are promptly addressed.

**Commented [Cc12]:** Source of fund from national government

**Section 10. Riparian Zone Protection** - All water bodies within the City will have protected riparian zones, which will serve as buffer areas. These zones will be off-limits for any kind of construction and will be maintained to ensure they perform their ecological functions.

**Section 11. Prohibited Acts and Penalties** - The following acts related to water quality and pollution control are hereby declared prohibited within the jurisdiction of the City. Violation of any of the following provisions will result in fines as provided for in this section:

- A) **Illegal Discharge:** Discharging or allowing to discharge, either directly or indirectly, any hazardous chemicals, untreated wastewater, or pollutants into water bodies, stormwater drains, or any part of the City's water system. This carries a penalty of a fine of Five Thousand Pesos (Php 5,000.00).
- B) **Lack of Wastewater Treatment:** Operating an industrial or commercial establishment without an appropriate wastewater treatment system in place carries a penalty of a fine of Four Thousand Five Hundred Pesos (Php 4,500.00).
- C) **Tampering with Water Quality Monitoring Equipment:** Damaging, tampering, or interfering with water quality monitoring equipment, devices, or systems installed by the City or other competent authorities carries the penalty of a fine of Five Thousand Pesos (Php 5,000.00).
- D) **Unlawful Construction:** Engaging in construction or development activities within designated riparian zones or buffer areas without appropriate permission carries the penalty of a fine of Four Thousand Pesos (Php 4,000.00) for every day that the developer/owner of the construction project continued constructing from the date it/he/she received a notice of violation from the CENRO.
- E) **Obstruction of Drainage Systems:** Any intentional act that results in the blockage or obstruction of the City's drainage systems with waste, debris, or other materials carries the penalty of a fine of Three Thousand Pesos (Php 3,000.00). A person is deemed to have intentionally blocked or obstructed said drainage systems if they knew or could have known that their act would result in such blockage or obstruction.
- F) **Unauthorized Extraction:** Illegally extracting groundwater or drawing water from City reservoirs without proper permits carries the penalty of a fine of Two Thousand Pesos (Php 2,000.00) for every cubic meter of illegally extracted water as determined by the CENRO.
- G) **Misrepresentation in Reporting:** Providing false information or deliberately misrepresenting facts related to water usage, discharge, or quality during mandatory reporting or inspections carries the penalty of a fine of Five Thousand Pesos (Php 5,000.00). The same penalty applies to any person who distributes misleading information regarding proper water use policies or actively discourages participation in City-sponsored public awareness programs related to water quality and conservation.

- H) **Lack of Approved Rainwater Harvesting Facility/ies:** The failure of a subdivision developer, homeowners association, or building owner/manager to install a rainwater harvesting facility that has been approved by the CENRO within their premises despite receipt of a notice of violation from the said office shall result in the payment of a fine of P5,000.00 and the suspension of collection of garbage at the said subdivision, community, or building until such time that the said facility is installed.

Commented [Cc13]: For drafting of Ordinance on Rain Water Harvesting 2023

All fines collected under this section shall become part of the Bacoor Environment Fund.

#### ARTICLE VI. Air Pollution and Noise Pollution, including Carbon Sequestration

**Section 1. Operative Principles** - The City government acknowledges the significance of clean air and a noise pollution-free environment for the well-being of its residents. As the City progresses industrially and commercially, it commits to proactive measures that curb the increase in air and noise pollutants, emphasizing the transition to sustainable energy sources and green infrastructure. The City will leverage technologies to promote carbon sequestration as a measure to counteract emissions.

In addition, the following principles shall guide the implementation of the Sections of this Article:

- A) **Holistic Approach:** The City will approach air and noise pollution not as isolated issues but interconnected challenges, considering their cumulative impacts on health, environment, and economic vitality.
- B) **Preventive Action:** Before green lighting any development or industrial project, potential air and noise polluting elements will be thoroughly evaluated to ensure preventive measures are put in place.
- C) **Public Participation:** Recognizing that community engagement is key to understanding and mitigating air and noise pollution, the City will regularly solicit public input, both in planning and decision-making processes.
- D) **Continuous Improvement:** The City will invest in research and innovation to continuously update its standards and best practices related to air and noise pollution and carbon sequestration, ensuring they reflect the latest scientific understanding.
- E) **Environmental Justice:** Efforts to combat air and noise pollution will prioritize communities that have been disproportionately impacted, ensuring that all City residents benefit equally from clean air and a noise-free environment.
- F) **Transparency:** The City is committed to operating with transparency by regularly publishing air and noise pollution data, actions taken, and the



progress of carbon sequestration initiatives, thereby keeping the public informed.

- G) Partnerships for Progress: The City believes in fostering partnerships with industries, academic institutions, civil society, and neighboring regions to learn, share, and co-create solutions for air and noise pollution.

**Section 2. Vehicle Emission Control** - The City recognizes the significant contribution of vehicular emissions to air pollution, which poses health risks to residents and disrupts ecological balance. Ensuring that vehicles within the City's boundaries conform to environmentally sound standards is paramount. The City Environment and Natural Resources Officer (CENRO), in coordination with the Land Transportation Office (LTO) and the DENR, shall establish a stringent permitting system to guarantee that the emissions from vehicles and industries operating within the City are in compliance with the stipulated standards under the law.

Furthermore, to enhance vehicular emission control in the City, the following measures shall be implemented:

- A) Frequent Monitoring and Updates: Regular audits of the permitting system will be conducted to ensure its effectiveness, with provisions for necessary updates based on technological advancements and evolving environmental standards.
- B) Transition to Green Transportation: The City will encourage the use of electric and hybrid vehicles through incentives, infrastructure support like charging stations, and public awareness campaigns.
- C) Public Transportation Enhancement: Strategies will be developed to modernize public transportation, ensuring they are energy-efficient and produce minimal emissions. This includes the potential expansion of electric bus routes and encouraging shared mobility solutions.
- D) Regular Vehicle Checks: Mandatory regular emission checks will be instated for all vehicles, with stricter penalties for non-compliance. Vehicles not meeting the emission standards will be required to undergo necessary maintenance.
- E) Educational Initiatives: Public campaigns will be launched to educate residents about the importance of regular vehicle maintenance, its positive effects on reducing emissions, and the overall benefits to public health and the environment.
- F) Research and Collaboration: The City, through the **Smart Bacoor Renewability Research Center**, will collaborate with academic institutions and environmental organizations to research innovative solutions to reduce vehicle emissions, supporting pilot projects and studies that offer promising results.
- G) Incentives for Low-Emission Vehicles: Tax breaks, rebates, or other incentives will be offered to residents who purchase and use vehicles with lower emissions or those that utilize alternative, cleaner fuels.

Commented [Cc14]: Municipal Ordinance No. 19 Series of 2010

**Section 3. Industrial Pollution Control and Carbon Sequestration** - The City Environment and Natural Resources Officer, in tandem with the DENR, will ensure that industries in the City comply with the air quality standards and will promote practices

that contribute to carbon sequestration. Industries are also encouraged to adopt modern technologies that minimize carbon footprints and enhance air quality.

To further strengthen the City's stance on industrial pollution control and promote carbon sequestration:

- A) **Regular Audits and Compliance Reporting.** Industries will be mandated to submit periodic environmental compliance reports, detailing their emission levels, efforts in carbon sequestration, and adherence to air quality standards.
- B) **Mandatory Carbon Offsetting:** Large-scale industries with significant emissions will be required to offset their carbon footprints through initiatives like tree planting, investing in renewable energy, or supporting carbon capture and storage projects.
- C) **Training and Workshops:** The City will conduct regular training sessions and workshops to familiarize industries with the latest sustainable technologies, efficient waste management practices, and methods to optimize carbon sequestration.
- D) **Public-Private Collaborations:** Encourage collaboration between the public sector, private enterprises, and research institutions to develop and implement innovative solutions for pollution control and carbon sequestration.
- E) **Awareness and Recognition:** The City will host annual events or awards recognizing industries that have made significant contributions to reducing pollution and enhancing carbon sequestration. Such recognition will foster a competitive spirit among industries to adopt sustainable practices.

Commented [Cc15]: Additional data on greenhouse gas accounting

#### **Section 4. Comprehensive Air Quality, Noise, and Carbon Monitoring –**

The City Environment and Natural Resources Officer, collaborating closely with the DENR, will establish a comprehensive system for monitoring air quality, noise levels, and carbon sequestration potential, ensuring transparency and public awareness.

To bolster this monitoring initiative, the City shall do the following:

- A) **Integrated Monitoring Stations:** The establishment of advanced monitoring stations across strategic locations within the City that can simultaneously measure air quality, noise levels, and assess carbon sequestration potential.
- B) **Real-time Data Access:** Launch of a City-sponsored digital platform or mobile application where citizens can access real-time data on air quality and noise levels, fostering a culture of awareness and proactive response.
- C) **Annual Reports:** Publishing comprehensive annual reports detailing trends, findings, and potential areas of concern related to air quality, noise pollution, and carbon sequestration. These reports will be made available both digitally and in print.
- D) **Collaborative Research:** The City, through the Smart Bacoor Renewability Research Center, will be partnering with academic and research institutions to delve deeper into data interpretation, potential technological advancements for improved monitoring, and strategies to enhance carbon sequestration.

- E) **Emergency Response Protocols:** In the event of unforeseen deteriorations in air quality or excessive noise pollution, protocols will be in place for immediate public alerts and swift corrective measures.
- F) **Enhanced Noise Pollution Mapping:** Identifying and mapping 'quiet zones' and 'noise hotspots' in the City. Such mapping will inform urban planning decisions and potentially guide noise mitigation efforts.
- G) **Carbon Potential Surveys:** Periodic surveys and studies to identify areas with high carbon sequestration potential, promoting conservation, and identifying opportunities for carbon sink development.

**Section 5. Public Awareness and Education** - The City will launch ongoing public awareness campaigns, emphasizing the importance of clean air, noise pollution control, and the benefits of carbon sequestration, promoting individual and collective responsibility.

**Section 6. Collaboration with Industries for Cleaner Practices** - The multi-sectoral Environmental Advisory Board will foster collaborations with industries to share best practices in reducing air pollution, noise abatement, and enhancing carbon sequestration. This body will also advise the City Mayor on policy adjustments to further the city's green goals.

**Section 7. Acquisition and Implementation of Carbon Sequestration Technologies** - Recognizing the ever-increasing challenges posed by climate change and the imperative role of cities in counteracting its detrimental effects, the City Government is committed to leading the way in adopting innovative carbon sequestration technologies. For this purpose, the City Government shall acquire carbon sequestration technologies for the purpose of loaning the same at a discounted rate to industries in Bacoor that have been identified by CENRO to have high amounts of carbon emissions.

For the benefit of the public and the implementing authorities of this Code, the following are examples of Carbon Sequestration Technologies:

- A) **Bioenergy with Carbon Capture and Storage (BECCS):** A method that combines the generation of energy from biomass with the capture and storage of carbon dioxide. This process results in a net reduction of CO<sub>2</sub> in the atmosphere.
- B) **Direct Air Capture:** Technologies that directly absorb carbon dioxide from ambient air and then release it for storage or utilization.
- C) **Enhanced Weathering:** The use of minerals, like basalt or olivine, to naturally react with CO<sub>2</sub>, turning it into a solid carbonate that can be stored.
- D) **Urban Forestry and Green Infrastructure:** Creating urban forests, vertical gardens, and green roofs that naturally sequester carbon while also providing urban cooling and recreational benefits.
- E) **Blue Carbon Technologies:** Conservation, restoration, and sustainable management of coastal ecosystems like mangroves, seagrass meadows, and tidal salt marshes which have a high capacity to absorb and store CO<sub>2</sub>.

- F) **Soil Carbon Sequestration:** Implementing agricultural practices that increase the amount of carbon being absorbed and held in the soils, such as no-till farming, agroforestry, and cover cropping.

**Section 8. Guidelines for Acquisition of Carbon Sequestration Technologies** - In implementing Section 7 of this Article, the following guidelines shall be determining the types of Carbon Sequestration Technology to be acquired by the City Government:

- A) **Safety First:** Any technology being considered for acquisition must have been rigorously tested and deemed safe for both the environment and human health.
- B) **Proven Efficacy:** Technologies must have a proven track record of effectively sequestering carbon in real-world scenarios, validated by recognized scientific institutions.
- C) **Economic Feasibility:** While the environment remains our top priority, technologies must also be economically viable for large-scale implementation, ensuring judicious use of public funds.
- D) **Local Suitability:** Acquired technologies should be appropriate for our City's specific environment, climate, and urban structure.
- E) **Scalability:** Preference will be given to technologies that can be scaled up efficiently as the City grows and evolves.
- F) **Maintenance and Longevity:** Technologies should have a reasonable lifecycle and not demand overly frequent or prohibitively expensive maintenance.

**Section 9. Lease of Carbon Sequestration Technologies to Business Establishments** - Recognizing the pivotal role that businesses play in the City's efforts to combat climate change, yet understanding that not all enterprises have the financial capability to independently adopt carbon sequestration technologies, the City Government is initiating a program to lease such technologies to eligible business establishments. The following shall govern this initiative:

- A) **Eligibility Criteria:**
  - a) **Financial Constraints:** The business must provide evidence of financial constraints that prevent them from purchasing the necessary carbon sequestration technologies outright. This can be demonstrated through financial statements, bank records, or other credible financial documents.
  - b) **Environmental Impact:** Preference will be given to businesses with higher carbon footprints or those operating in industries that are traditionally recognized as high emitters of greenhouse gases.
  - c) **Commitment to Sustainability:** Businesses must express a genuine interest and commitment to reducing their carbon footprint. This can be demonstrated through past practices, business plans, or other relevant documents.
  - d) **Local Operations:** Only businesses registered and operating within the City's jurisdiction will be eligible for this program.
- B) **Lease Provisions:**



- a) **Duration:** The lease duration will be determined based on the type of technology, its expected lifecycle, and the business's projected needs.
- b) **Maintenance Responsibilities:** While the City will provide the technology, the lessee business will be responsible for its regular maintenance and upkeep, ensuring that it functions optimally throughout the lease period.
- c) **Training:** The City will offer initial training sessions on the operation and maintenance of the leased technologies to ensure that the businesses can use them effectively and safely.
- d) **Lease Rates:** Lease rates will be set at a subsidized cost, keeping in mind the financial constraints of the lessee business. Payment plans can be negotiated based on the business's financial capabilities.
- e) **Periodic Assessment:** Businesses will be required to participate in periodic assessments to measure the effectiveness of the technology in reducing their carbon footprint. This will aid in identifying potential areas of improvement and ensuring that the program's goals are being achieved.
- f) **Renewal and Transition:** At the end of the lease term, businesses will have the option to renew the lease, transition to newer technologies, or explore opportunities to purchase the technology, if financially viable.

**C) Application Process:**

- a) Businesses interested in availing the lease program should submit a formal application detailing their need, desired technology, evidence of financial constraints, and commitment to sustainability.
- b) The City Environment and Natural Resources Office will review applications, conduct on-site inspections if necessary, and make recommendations based on the business's eligibility and the program's objectives.
- c) Successful applicants will be notified and required to sign a lease agreement outlining the terms, responsibilities, and other pertinent details. The parties to the agreement shall be the applicant and the City Government, through the City Mayor. In connection with this, the City Mayor is hereby authorized to sign said lease agreements provided that GENRO has given its recommendation for the Mayor to sign the same.

**Section 10. Incentives for Businesses Investing in Quality Carbon Sequestration Technology** - Understanding the crucial role that businesses play in addressing climate change, the City Government endeavors to incentivize those establishments that take proactive steps in investing in quality carbon sequestration technologies. This section provides a framework for granting such incentives, ensuring that the technology adopted is not only of superior quality but is also optimally utilized. The following shall govern the process by which incentives are granted:

**A) Eligibility Criteria:**

- a) **Technology Standards:** The carbon sequestration technology procured by the business should meet the quality standards set forth by the DENR and the City Environment and Natural Resources Office. It

should be recognized by reputable environmental bodies and should have proven efficacy in carbon capture.

- b) **Usage Commitment:** Businesses must demonstrate consistent usage of the technology to its optimal capacity. Periodic monitoring and verification will be conducted to ensure this.
- c) **Local Operations:** Only businesses registered and operating within the City's jurisdiction will be eligible for this incentive program
- d) **Proof of Purchase:** Valid documentation, including purchase receipts, warranty papers, and other relevant records, should be provided as evidence of technology ownership.

**B) Incentive Provisions:**

- a) **Grants for Technology Upgrades:** Eligible businesses may receive financial grants that can be utilized for subsequent upgrades to their existing carbon sequestration technology, ensuring that they remain at the forefront of technological advancements.
- b) **Recognition Program:** The City will launch an annual recognition program highlighting businesses that demonstrate excellence in their carbon sequestration efforts. This recognition will provide businesses with a green credential, enhancing their brand image and reputation in the community.
- c) **Subsidized Training Programs:** The City will offer discounted training programs, seminars, and workshops to businesses. These programs will focus on maximizing the efficiency of carbon sequestration technologies, understanding new advancements in the field, and other relevant topics.
- d) **Reduced Licensing and Permit Fees:** Eligible businesses can avail of reduced fees when applying for city licenses, permits, and other administrative services. This does not include tax-related fees or reductions.

**C) Application Process:**

- a) Businesses keen on availing these incentives must submit a detailed application, including proof of technology purchase, quality certifications, operational records, and other pertinent documents.
- b) The City Environment and Natural Resources Office will review the applications, conduct necessary verifications, and assess the business's adherence to the set criteria.
- c) Successful applicants will be notified and granted the applicable incentives based on their technology and practices.

**Section 11. Prohibited Acts and Penalties** - To protect the well-being of its citizens and ensure the effective implementation of policies and standards on air quality, noise pollution, and carbon sequestration, the following acts are strictly prohibited:

- A) **Non-compliance with Air Quality Standards:** Operating any establishment or industry that discharges pollutants in levels exceeding the city and national standards, as determined by CENRO. This act carries a fine of Five Thousand Pesos (Php 5,000.00).

- B) **Tampering with Carbon Sequestration Devices:** Deliberately modifying, altering, or tampering with carbon sequestration devices to reduce their efficiency or falsify their performance readings. This act carries a fine of Four Thousand Pesos (Php 4,000.00).
- C) **Excessive Noise Production:** Operating machinery, equipment, or conducting activities that consistently produce noise levels beyond the stipulated city standards without the necessary permits or soundproofing mechanisms. This act carries a fine of Four Thousand Pesos (Php 4,000.00).
- D) **False Reporting or Documentation:** Providing misleading or falsified documents, records, or reports pertaining to air and noise pollution levels, or carbon sequestration performance. This act carries a fine of Five Thousand Pesos (Php 5,000.00).
- E) **Non-adherence to Carbon Sequestration Practices:** For industries mandated to adopt carbon sequestration technologies, as determined by CENRO, neglecting to utilize or maintain such technologies properly. This act carries a fine of Four Thousand Five Hundred Pesos (Php 4,500.00).
- F) **Obstruction of Monitoring Efforts:** Intentionally hindering or obstructing the City Environment and Natural Resources Officer, or any authorized personnel, from conducting air quality, noise, or carbon sequestration monitoring activities. This act carries a fine of Three Thousand Five Hundred Pesos (Php 3,500.00).
- G) **Usage of Banned or Outdated Technology:** Operating or using equipment, machinery, or technology that has been deemed harmful to the environment, or phased out by the City due to excessive emissions or noise production. This act carries a fine of Four Thousand Pesos (Php 4,000.00).
- H) **Unauthorized Disposal of Carbon Sequestration Waste:** Disposing of waste or by-products from carbon sequestration technologies in non-designated areas or in manners that may harm the environment. This act carries a fine of Three Thousand Five Hundred Pesos (Php 3,500.00).
- I) **Improper Maintenance of Carbon Sequestration Technologies:** Failing to uphold regular maintenance schedules or ensuring the efficient operation of carbon sequestration technologies, leading to reduced efficacy. This act carries a fine of Three Thousand Pesos (Php 3,000.00).
- J) **Operation Without Valid Permits:** Running industrial, commercial, or residential operations known to produce significant air pollutants or noise without the necessary permits from the City Environment and Natural Resources Office. This act carries a fine of Four Thousand Pesos (Php 4,000.00).
- K) **Overstepping Lease Agreements:** For businesses availing the City's carbon sequestration technology lease program, any misuse, reselling, or unauthorized transfer of the leased technologies. This act carries a fine of Four Thousand Five Hundred Pesos (Php 4,500.00).
- L) **Failure to Attend Mandatory Environmental Training:** Not attending or deliberately skipping required training, seminars, or workshops organized by the City regarding air and noise pollution management and carbon sequestration. This act carries a fine of Two Thousand Five Hundred Pesos (Php 2,500.00).
- M) **Use of Prohibited Chemicals or Materials:** Utilizing chemicals or materials that have been banned by the City due to their harmful environmental impacts or

- potential to exacerbate air and noise pollution. This act carries a fine of Four Thousand Pesos (Php 4,000.00).
- N) Hindrance to Carbon Sequestration Efforts: Intentionally impeding city-sponsored carbon sequestration efforts, such as tree-planting activities or the establishment of green spaces. This act carries a fine of Three Thousand Pesos (Php 3,000.00).
  - O) Non-compliance with Mandatory Reporting: Failing to submit mandatory reports on air emissions, noise levels, and carbon sequestration progress, as required by the City for certain industries and establishments. This act carries a fine of Three Thousand Five Hundred Pesos (Php 3,500.00).
  - P) Emission of Particulate Matter Without Precaution: Causing, allowing, or permitting the emission of particulate matter from any source, including but not limited to vehicular activity, material export, construction activities, alterations, or industrial functions like loading and storing, without taking adequate precautions. Furthermore, discharging visible fugitive dust emissions beyond the property boundaries is prohibited. This act carries a fine of Four Thousand Pesos (Php 4,000.00).
  - Q) Unsanctioned Handling of Volatile Compounds: Storing, handling, processing, or using volatile compounds or organic solvents without the necessary vapor emission control systems, as mandated and approved by the City Mayor in coordination with relevant national agencies. This act carries a fine of Four Thousand Five Hundred Pesos (Php 4,500.00).
  - R) Overcapacity Operation of Pollution Sources: Operating any plant or pollution source beyond its operational capacity or the capacity of its emission control device, resulting in emissions exceeding national standards. This act carries a fine of Four Thousand Pesos (Php 4,000.00).
  - S) Usage of Emission-Concealing Devices: Constructing, installing, or utilizing any device or contraption intended to conceal emissions that would otherwise be in violation of this Article's provisions. This act carries a fine of Three Thousand Five Hundred Pesos (Php 3,500.00).
  - T) Unauthorized Construction of Industrial Chimneys: Constructing or erecting chimneys for industrial establishments that could introduce air impurities without prior clearance from the City Mayor. Note: Residential chimney construction remains exempt. This act carries a fine of Three Thousand Pesos (Php 3,000.00).
  - U) Operation of Over-Polluting Vehicles: Operating any vehicle that emits air pollutants exceeding the DENR-prescribed standards. This act carries a fine of Three Thousand Five Hundred Pesos (Php 3,500.00).
  - V) Release of Odor-Causing Air Pollutants: Releasing or permitting the emission of air pollutants that result in discernibly unpleasant odors. This act carries a fine of Three Thousand Pesos (Php 3,000.00).
  - W) Exceeding Noise Standards Without Clearance: Constructing, altering, or operating any source that results in noise levels beyond ambient standards set by the DENR without securing appropriate clearances from the City Mayor. This act carries a fine of Four Thousand Pesos (Php 4,000.00).
  - X) Creation of Unnecessary Noise Near Sensitive Areas: Causing or allowing excessive noise through any device in proximity to hospitals, schools, or judicial

institutions. This act carries a fine of Three Thousand Five Hundred Pesos (Php 3,500.00).

All fines collected under this section shall be directed towards the Bacoor Environment Fund.

**ARTICLE VII. Biodiversity and Conservation, including the Protection and Conservation of Mangrove Forests and Marine Life**

**Section 1. Purpose and Declaration of Policy** - The City recognizes the invaluable role that biodiversity plays in maintaining ecological balance, enhancing resilience against natural calamities, supporting socio-economic activities, and enriching the cultural and natural heritage of our community. With coastal ecosystems, particularly mangrove forests and marine life, being crucial in this role, it becomes imperative to prioritize their conservation and protection.

In adherence to this, it is hereby declared the policy of the City to:

- A) Commit to the protection, conservation, and sustainable use of its biological resources, particularly its mangrove forests and marine ecosystems, ensuring their health, functionality, and vitality for present and future generations
- B) Promote scientific research and the application of best practices in the management, restoration, and utilization of these vital ecosystems, ensuring that actions are rooted in sound science and tailored to local conditions.
- C) Engage in collaborative efforts, fostering partnerships with national agencies, non-governmental organizations, local communities, academic institutions, and other stakeholders, recognizing that the success of biodiversity conservation is a shared responsibility
- D) Ensure that all development initiatives and economic activities within the City's jurisdiction do not compromise the health and integrity of its biodiversity, adopting a proactive approach in impact assessments, mitigations, and adaptive strategies.
- E) Educate and raise awareness among its constituents about the importance of biodiversity, its threats, and the collective role in its protection, fostering a culture of stewardship and shared ownership

**Section 2. Definition of Terms** -

- A) **Marine Protected Areas (MPAs)** MPAs are designated areas where human activities are restricted to protect marine life and habitats.
- B) **No-Take Zones (NTZs)** NTZs are a subset of MPAs where all extractive activities, like fishing, are prohibited
- C) **Ecosystem-based Management (EBM)**. This approach recognizes the interconnectedness of marine ecosystems and incorporates the cumulative impacts of different sectors, such as fishing, tourism, and shipping
- D) **Integrated Coastal Zone Management (ICZM)**: ICZM promotes the coordinated development and management of coastal resources to balance economic, social, cultural, and ecological objectives.

**Section 3. Marine Protected Areas (MPAs) and No-Take Zones (NTZs) -**

- A) **Designation** - The City Government shall conduct baseline ecological and socioeconomic assessments to identify areas of high biodiversity, critical habitats, and areas under threat. The boundaries of the MPAs and NTZs shall be delineated clearly. MPAs and NTZs are considered EPCBs within the meaning of Article III of this Code.
- B) **Objectives** - The establishment of MPAs and NTZs have dual objectives. Biodiversity Conservation and Fishery Management. Biodiversity Conservation involves the protection and conservation of marine life, habitats, and ecosystems by safeguarding breeding or feeding grounds, coral reefs, or areas with unique or endangered species. Fishery management aims to curb the negative effects of overfishing and to allow certain fish populations to regenerate, with a particular emphasis on the protection of specific species, restoration of fish stocks, or safeguarding critical life stages of marine organisms such as their breeding or juvenile periods.
- C) **Zones** - Given that marine areas are vast and serve multiple purposes, it's often unrealistic or even counterproductive to apply a single level of protection across an entire MPA. Instead, different zones with varying protection levels allow for multiple uses while still achieving conservation goals. The following zones within MPAs and NTZs shall therefore be established, with varying rights and responsibilities associated thereto:
- a) **Strict NTZs:** These zones offer the highest protection level, where all extractive and harmful human activities are prohibited. This includes activities like fishing, mining, or dredging. The idea is to provide marine life with areas where they can thrive undisturbed.
  - b) **Buffer Zones:** Surrounding strict NTZs, these areas have some restrictions but might still allow certain activities. For instance, limited or traditional fishing methods might be permitted, while industrial fishing or activities that can harm the habitat are prohibited.
  - c) **Recreational Zones:** These zones are designated to cater to recreational activities like snorkeling, diving, or boating. While they allow human presence and some level of interaction with the marine environment, there are still rules to ensure that these activities don't harm the ecosystem.
  - d) **General Use Zones:** These are areas within an MPA where a broader range of activities might be allowed, but with guidelines to ensure sustainable use. They might permit commercial activities, infrastructure development, or larger scale fishing, provided that the entities who wish to engage in such activities secure an Environmental Compliance Certificate and a City Environmental Compliance Certificate pursuant to Article III of this Code.
  - e) **Special Zones:** Sometimes, specific zones cater to unique requirements. For instance, a research zone might be designated primarily for scientific studies, or a cultural zone might be set up to protect areas of archaeological or cultural significance.
- D) **Protection and Rehabilitation Plans** - Protection and Rehabilitation Plans for MPAs and NTZs are pivotal to ensure the long-term survival and recovery of

marine ecosystems. Whenever an MPA or NTZ is declared and established, the City Government shall formulate a Protection and Rehabilitation Plan that considers the following:

- a) **SMART objectives** - Each plan should be based on SMART (Specific, Measurable, Achievable, Relevant, and Time-bound) objectives
  - i) **Specific:** Define exact areas, species, or habitats that the plan aims to protect or rehabilitate. E.g., "Increase the population of the native clownfish species in NTZ X by 20%."
  - ii) **Measurable:** Ensure the objectives can be tracked quantitatively or qualitatively. E.g., "Reduce coral bleaching incidents in MPA Y by 50% within five years."
  - iii) **Achievable:** The objectives should be realistic, given the available resources, knowledge, and time. E.g., "Rehabilitate 5 acres of damaged seagrass beds over a period of 3 years."
  - iv) **Relevant:** Ensure the objectives align with the broader goals of the MPA/NTZ, and they address the most pressing issues or challenges.
  - v) **Time-bound:** Attach a clear timeline to each objective. E.g., "Eliminate illegal fishing in NTZ Z within 24 months."
- b) **Engagement of Local Communities** - Each plan should be formulated in consultation with affected communities surrounding the MPA or NTZ. Consultations should, as much as practicable, include:
  - i) **Initial Consultations:** Before drafting the plans, engage local communities to understand their perspective, concerns, traditional knowledge, and aspirations. This may include methods such as focus group discussions, town hall meetings, or surveys.
  - ii) **Co-creation of Plans:** Involve community representatives in plan drafting sessions. Consider traditional ecological knowledge, which often offers valuable insights into marine ecosystems and sustainable practices.
  - iii) **Public Review and Feedback:** Once a draft plan is prepared, make it available for public review. Conduct public hearings or meetings to gather feedback and suggestions.
  - iv) **Regular Communication and Updates:** Use community meetings, newsletters, or local media to regularly update local communities about the progress of the plans, challenges, and successes.
  - v) **Benefit Sharing:** Ensure that local communities share in the benefits derived from the MPA/NTZ, whether through sustainable tourism, access to certain resources, or other means. This could also include support for alternative livelihoods if traditional activities are restricted due to conservation efforts.
- E) **Rights and Obligations within MPAs** - For each zone within a Marine Protected Area (MPA), the rights, limitations, and obligations are tailored to achieve specific conservation goals while balancing human use, to wit

**a) Strict NTZs**

- i) **Rights** - The following activities are allowed in Strict NTZs
  - (1) Access for research, provided that the research is non-extractive and has minimal impact.
  - (2) Potential rights for traditional or indigenous practices, if any.
- ii) **Limitations** - The following are prohibited in Strict NTZs:
  - (1) Fishing, hunting, or extraction of any resources.
  - (2) Anchoring or infrastructure development
  - (3) Any other activity that might introduce pollutants or invasive species
- iii) **Obligations** - Visitors, even if engaging in activities that are allowed in Strict NTZs, are obliged to do the following:
  - (1) Follow City guidelines to minimize disturbance, e.g., maintaining a safe distance from sensitive habitats or wildlife.
  - (2) Report any illegal activities or observed threats to the ecosystem.

**b) Buffer Zones**

- i) **Rights** - The following activities are allowed in Buffer Zones.
  - (1) Limited fishing or extraction, typically under sustainable practices or quotas
  - (2) Access for tourism and recreational activities
- ii) **Limitations** - The following restrictions shall be put in place in Buffer Zones:
  - (1) Restrictions on types of fishing gear or methods to minimize impact.
  - (2) No large-scale commercial activities or developments.
  - (3) Potential limitations on vessel size or type
- iii) **Obligations** - Visitors, even if engaging in activities that are allowed in Buffer Zones, are obliged to do the following
  - (1) Adhere to sustainable practices and quotas.
  - (2) Monitor and report catch or activity data, as required by the City
  - (3) Follow City guidelines to minimize environmental impact.

**c) Recreational Zones**

- i) **Rights** - The following activities are allowed in Recreational Zones
  - (1) Access for recreational activities like snorkeling, diving, or boating
  - (2) Potential rights for commercial operations, such as dive shops or tour operators.
- ii) **Limitations** - The following restrictions shall be put in place in Recreational Zones:
  - (1) Restrictions on anchoring or touching sensitive habitats
  - (2) Fishing shall not be allowed except for recreational fishing, subject to further regulations and guidelines to



be promulgated by the City. In any case, all recreational fishing shall include the practice of "catch and release."

- iii) **Obligations** - Visitors, even if engaging in activities that are allowed in Recreational Zones, are obliged to do the following:
  - (1) Follow guidelines to ensure the safety and minimal impact on the environment.
  - (2) Report any observed illegal activities or threats.

**d) General Use Zones**

- i) **Rights** - The following activities are allowed in General Use Zones:
  - (1) Broad range of activities, including fishing, commercial operations, and potentially some level of infrastructure development.
  - (2) Extraction of resources, provided it's done sustainably.
- ii) **Limitations** - The following restrictions shall be put in place in General Use Zones:
  - (1) Activities must adhere to sustainability guidelines or quotas set by the City Government.
  - (2) Destructive practices or gear types are prohibited.

**F) Prohibited Acts and Penalties** - The following acts are hereby prohibited. Each prohibited act carries the penalty of a fine amounting to Five Thousand Pesos (Php 5,000) if it is carried out in a Strict NTZ or a Special Zone, Four Thousand Pesos (Php 4,000) if it is carried out in a Buffer Zone, Three Thousand Pesos (Php 3,000) if it is carried out in a Recreational Use Zone or General Use Zone

- a) **Extractive Fishing:** The act of removing marine organisms from their natural habitat with the intent of retaining the catch. This includes any method such as trawling, long-lining, netting, spearing, or using traps.
- b) **Anchoring on Sensitive Habitats:** Placing, dropping, or dragging an anchor or associated chain across habitats identified as sensitive, such as coral reefs, seagrass beds, or other identified vulnerable marine ecosystems.
- c) **Discharge of Pollutants:** Releasing or depositing substances, whether solid, liquid, or gaseous, that may alter the natural physical, chemical, or biological properties of the water or sediment, or be harmful to marine life.
- d) **Introduction of Non-native Species:** The intentional or unintentional release, planting, seeding, or transporting of a species, including its seeds, eggs, spores, or other biological material, not originally found within the MPA or NTZ.
- e) **Destruction or Alteration of Habitats:** Any action leading to the significant physical disturbance, damage, or alteration of the seabed, shoreline, or marine habitats, whether by manual, mechanical, chemical, or other means.
- f) **Harassment of Marine Life:** Any intentional act causing undue stress, harm, or significant behavioral change to marine organisms, such as chasing, touching, or cornering wildlife.

- g) **Commercial Activities without Authorization:** Conducting any commercial activity, including but not limited to tourism operations, fishing for sale, or seabed mining, without a valid permit or outside the terms of an existing permit.
- h) **Construction or Infrastructure Development:** Erecting structures, installations, or any infrastructure, whether permanent or temporary, without a valid permit issued by the City Government for that purpose and the appropriate Environmental Compliance Certificate and City Environmental Compliance Certificate.
- i) **Use of Prohibited Equipment or Gear:** Employing any equipment, gear, or tools that are listed as prohibited under the Implementing Rules and Regulations of this Article due to their potential harm to marine life or habitats. This can include specific fishing nets, dredges, or certain types of boats.
- j) **Collection of Biological Specimens:** Removing or collecting any marine organisms, dead or alive, parts thereof, or any other biological material for any purpose, including but not limited to research, hobby, or commercial use, without a valid permit.
- k) **Engaging in Non-permitted Recreational Activities:** Conducting recreational activities, such as jet skiing, wakeboarding, or others, that are demonstrated to have significant potential impacts on the environment or disturbance to marine life.
- l) **Violation of Zone-Based Restrictions on Use:** Failure to comply with the restrictions placed in each Zone pursuant to Paragraph E) of this Section.

**Section 4. Integrated Coastal Zone Management (ICZM) -** For every other coastal resource not declared as an MPA or NTZ, the CENRO shall formulate a City coastal zoning and management plans. The plan shall be based on co-management approach where the City government shall work with resource users and build upon existing laws, particularly in the institutionalization of the Fisheries and Aquatic Resource Management Councils (FARMC) pursuant to RA No. 8550, series of 1998, Section 69.

- A) **Zoning -** The zoning component of the plan shall classify City waters that have not otherwise been declared as MPAs or NTZs according to five (5) zones, namely:
  - a) **Conservation Zones:** Areas identified to have high ecological value but not strictly protected as MPAs or NTZs.
  - b) **Recreational Zones:** Designated areas for recreational activities like swimming, snorkeling, kayaking, and recreational fishing.
  - c) **Fishery Zones:** Areas designated for commercial and artisanal fishing, ensuring the activity is sustainable.
  - d) **Shipping and Navigation Zones:** Corridors designated for shipping, transportation, and navigation to ensure safe and efficient marine traffic.
  - e) **Industrial Zones:** Areas designated for marine industries other than fishing, such as ports, marinas, and renewable energy installations.
- B) **Purposes for the Zoning Plan -** The zoning plan shall achieve the following purposes:

- a) Provide basis for the provision of tenure to qualified coastal zone residents as a means to prevent incidence of squatting and/or unplanned settlements
- b) Locate, delineate and set aside appropriate areas for industries to secure the environmental requirements for the growth and development of coastal communities, such as, but not limited to the identification of areas for settlements, agriculture, institutions, infrastructure, commerce, recreation, tourism, natural reservations and sanctuaries and areas of cultural and historical significance.
- c) Delineate areas as sanctuaries, no-fishing zones, fishing gear restriction zones, and critical breeding and feeding areas of ecologically and economically important organisms.
- d) Delineate natural areas for the exclusive use of specific user groups such as, but not limited to, areas for recreation, tourism, research and education
- e) Delineate Mangrove areas to be covered under stewardship agreements and other applicable tenurial instruments
- f) Delineate areas where construction is prohibited pursuant to Presidential Decree No. 1967 and DENR Administrative Order No. 05, series of 1997

**Section 5. Multi-Species and Habitat-Based Approach to Fisheries Management**

- Ecosystem-based Management (EBM) takes into account the full array of interactions within an ecosystem. Pursuant to the City's commitment to EBM, the City Government hereby adopts a multi-species and habitat-based approach towards fisheries management, to wit:

- A) **Multi-species-based approach:** A multi-species approach recognizes and considers interactions between species, such as predator-prey relationships, competition for resources, and symbiotic associations and acknowledges that fishing one species can indirectly impact other species due to their interconnected roles within the ecosystem. The City shall therefore prioritize the health of the entire ecosystem rather than the status of individual species
- B) **Habitat-based approach:** A habitat-based approach focuses on identifying, protecting, and restoring essential habitats like spawning grounds, nursery areas, and feeding grounds that are critical for different life stages of fish and considers environmental factors like water quality, temperature, and substrate type which can affect fish populations. This approach recognizes the importance of connectivity between different habitats, considering that many fish species use multiple habitats throughout their life cycle.
- C) **Sustainable Harvesting** - The City Government shall adopt a comprehensive harvesting strategy that accounts for both the interdependent relationships between marine species and the vital habitats that support them. This strategy shall include the following, as far as practicable:
  - a) **Fishing quotas:** A fishing quota refers to a regulatory limit on the quantity or weight of a particular species of fish that can be caught within a specified area during a certain timeframe. Fishing quotas shall be set after (1) Scientific Assessment of Fish Stocks (2) Stakeholder

Consultation and Input, and (3) Regular publication of quotas and disseminating the same

- b) **Basis for fishing quotas:** Fishing quotas shall be determined by the City Agriculture Office not solely on single-species assessments but shall factor in the ecological roles and interactions of various marine species within the ecosystem. This includes considering predator-prey dynamics, competition for resources, and potential cascading impacts of removing specific species from the ecosystem.
- c) **Prioritization of restoration of essential habitats:** The City Government shall prioritize the protection and restoration of essential fish habitats, recognizing their critical role in supporting healthy fish populations. Special emphasis will be placed on spawning grounds, nursery areas, and feeding zones.
- d) **Dynamic Quotas:** The City Government shall implement a dynamic quota system, adjusting quotas in real-time based on ongoing monitoring of ecosystem health and changes in species interactions. This system will utilize the latest scientific data to ensure that fishing activities align with the current state of marine ecosystems.
- e) **Protection of Migratory Pathways:** Emphasis shall be placed on habitat connectivity and the life cycle needs of fish species. Recognizing that many species utilize multiple habitats throughout their life, measures will be taken to ensure these migratory pathways and habitats remain intact and undisturbed.
- f) **Prohibition against Overfishing:** any person who fishes beyond the set quotas shall be criminally liable for overfishing. Overfishing carries with it the penalty of a fine of One Thousand Pesos (Php 1,000) if the amount fished does not exceed One Hundred and Ten Percent (110%) of the quota for the given timeframe; Two Thousand Pesos (Php 2,000) if the amount fished exceeds One Hundred and Ten Percent (110%) of the quota but does not exceed One Hundred and Thirty Percent (130%) of the quota; Three Thousand Pesos (Php 3,000) if the amount fished exceeds One Hundred and Thirty Percent (130%) of the quota but does not exceed One Hundred and Fifty Percent (150%) of the quota; and Five Thousand Pesos (Php 5,000) if the amount fished exceeds One Hundred and Fifty Percent (150%) of the quota. The fines mentioned above shall be multiplied by the number of kilograms of the fishes caught by the offender in excess of the fishing quota.

**Section 6. Mangrove Reforestation and Conservation** - Mangrove reforestation and conservation hold paramount importance due to the unique role these coastal forests play in both ecological and human contexts. Mangroves serve as vital buffers against coastal erosion, storm surges, and tsunamis, acting as natural protective barriers for coastal communities. Ecologically, they provide critical habitats for a myriad of marine species, especially acting as breeding grounds for many fish species crucial for global fisheries. Their dense root systems sequester significant amounts of carbon, making them essential players in climate change mitigation. Moreover, they support intricate food webs, bolstering biodiversity, and enhancing ecosystem resilience. Hence, the

City Government reaffirms its commitment to preserving and restoring mangrove forests, to wit:

- A) **Reforestation Projects:** The City Government shall actively pursue and implement mangrove reforestation projects within its jurisdiction, targeting areas of degradation, historical mangrove sites, and locations identified as vulnerable to coastal erosion or sea-level rise
- B) **Species and Site Selection:** The City shall choose native mangrove species for reforestation projects. Introducing non-native species can disrupt local ecosystems and fail to provide the expected ecological benefits. With respect to the selection of sites for these projects, the City shall first understand the hydrology and soil conditions of the chosen site. Mangroves have specific saltwater and freshwater needs; an imbalance can affect their survival.
- C) **Natural Regeneration Encouragement:** In order to be more cost-effective, the City shall, whenever possible, prioritize the natural regeneration of mangroves over active planting. This approach shall also involve the removal of barriers to natural regeneration, such as blockages altering water flow, and the management of potential threats, including invasive species or pollution
- D) **Climate Resilience Consideration:** The City shall design mangrove restoration projects with an understanding of predicted climate change impacts, such as sea-level rise, increased storm frequency, or changes in salinity.
- E) **Holistic Ecosystem Restoration:** The City recognizes that mangroves are just one component of a larger coastal ecosystem, which might include seagrass beds, coral reefs, and estuaries. Thus, when restoring mangroves, the City shall consider the health and restoration needs of these adjoining ecosystems. Their mutual health can influence the success of mangrove reforestation.
- F) **Sustainable Economic Utilization:** The City shall promote sustainable uses of mangroves that support local economies, such as honey production, sustainable wood harvesting, or eco-tourism, provided that these activities are carried out in ways that do not threaten the mangrove's health or impede conservation efforts.
- G) **Prohibition Against the Cutting of Mangroves:** A fine of Five Thousand Pesos. (Php 5,000.00) plus imprisonment for thirty (30) days but not more than ninety (90) days shall be imposed against any person of legal age who cuts a mangrove tree without the written permission of the head of the CENRO. Not included in this prohibition is the cutting of mangrove trees conducted by the CENRO or its accredited affiliates for scientific or habitat maintenance purposes

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## ARTICLE VIII. Local Food Production and Security

### Chapter 1. Food Security Fund

**Section 1. Purpose and Declaration of Policy** - To foster and promote a resilient local food system that prioritizes sustainable agriculture practices, reduces food miles, and ensures security against hunger and malnutrition, The City of Bacoor reaffirms its

commitment to achieving food self-sufficiency by supporting local farmers, fostering community gardens, and advocating for responsible consumption.

**Section 2. Food Security Fund** - To reduce financial barriers and promote agricultural endeavors, the City of Bacoor will establish a Food Security Fund.

The Food Security Fund shall be allocated for the following purposes:

- A) **Grant and Loan Program:** Provision of grants and low-interest loans to marginalized farmers and urban agriculturalists, to support the purchase of quality seeds, equipment, and other essential farming inputs.
- B) **Training and Education:** Establishment and continuous support for comprehensive training programs focusing on sustainable farming techniques, organic practices, and value addition. Special emphasis will be placed on reaching out to low-income communities, ensuring their active participation.
- C) **Market Access Support:** Creation of platforms, both physical and digital, that enable small-scale farmers, especially those from vulnerable backgrounds, to sell their produce directly to consumers, eliminating middlemen and ensuring a fair price.
- D) **Emergency Response and Resilience Building:** Allocation of resources for the rehabilitation of farmlands affected by natural disasters or economic downturns, ensuring that affected farmers, especially those from low-income communities, can swiftly resume agricultural activities.
- E) **Establishment and maintenance of community gardens.**

**Section 4. Sourcing of the Food Security Fund** - To ensure the sustainability of the Food Security Fund, funds shall be sourced through:

- A) **City Budget Allocation:** A fixed percentage of the City of Bacoor's annual budget shall be allocated to the Food Security Fund through an appropriations ordinance to be formulated by the City Treasurer's Office, the City Budget Office, the City Accountant's Office, the CENRO, and the Office of the City Administrator to be submitted for the review and consideration of the Sangguniang Panlungsod not later than sixty (60) days prior to the date of effectivity of this Ordinance.
- B) **Public-Private Partnerships:** Collaborations with private entities committed to corporate social responsibility, wherein companies can contribute to the fund as part of their community outreach and sustainability programs or corporate social responsibility initiatives.
- C) **Grants and Donations:** Actively seeking grants from national and international organizations focusing on food security, sustainable agriculture, and urban farming. The City shall also welcome contributions from philanthropists and charitable organizations.
- D) **Agri-Tourism Revenue:** A percentage of revenues from agri-tourism activities within the City will be deposited to the Food Security Fund, ensuring that as the City benefits from its natural and agricultural resources, it also invests back into them. The amount of revenues from agri-tourism activities shall be determined through an appropriations ordinance to be formulated by the City Treasurer's

Office, the City Budget Office, the City Accountant's Office, the City Tourism and Cultural Affairs Department, the City Agriculture Office, and the Office of the City Administrator to be submitted for the review and consideration of the Sangguniang Panglungsod not later than sixty (60) days prior to the date of effectivity of this Ordinance.

## Chapter 2 Community Gardens (Community Farming)

**Section 4. Establishment of Citywide Community Gardens** - The City shall identify suitable plots of public land or idle lands for the establishment of community gardens. Local neighborhoods and schools are encouraged to participate in the cultivation of these gardens. The City shall provide seedlings, tools, training, and other resources to interested residents.

**Section 5. Definition of Community Gardens** - Community gardens refer to pieces of land gardened collectively by a group of people, typically residents of the locality. These gardens can be split into individual plots or be collectively farmed, and they are intended to produce fruits, vegetables, and ornamental plants for the benefit and enjoyment of the community.

**Section 6. Maintenance of Community Gardens** - Where a community garden is located within or adjacent to a subdivision project that has an organized homeowner's association, such association must contribute a minimum of PHP 5,000.00 or PHP 50.00 per homeowner in the subdivision project, whichever is higher, annually. This amount will be put in the Food Security Fund and shall be used for the maintenance of the Community Gardens. For this purpose, "maintenance" shall mean the replenishing of soil, repairing tools, purchasing new seedlings, and other maintenance tasks. Homeowners' associations participating in the development of community gardens may use any income from produce they harvested in paying the said annual contributions. The City Government is hereby authorized to augment the Food Security Fund by matching the amount of contribution made by homeowners' association to the Food Security Fund.

**Section 7. Access and Usage Rights for Community Gardens** -To ensure that all residents can benefit from community gardens:

- A) Plots in community gardens will be made available on a first-come-first-serve basis, with priority given to residents who do not have access to private gardening space.
- B) The City will establish a rotational system if demand exceeds available plots, allowing different community members to utilize the gardens over time.
- C) Rules and guidelines on the use and sharing of produce will be developed with community input to ensure equitable distribution.

**Section 8. Environmental and Educational Initiatives in Community Gardens** - Recognizing the potential of community gardens as hubs for learning and environmental stewardship:

- A) The City will organize regular workshops on organic farming, composting, and sustainable gardening practices.
- B) Partnerships with local schools will be fostered to integrate community gardening into educational programs, promoting hands-on learning for students about agriculture, ecology, and nutrition.
- C) Special plots may be designated for native plant cultivation, fostering biodiversity and serving as a sanctuary for local pollinators and wildlife.

**Section 9. Unauthorized Access or Use of Community Gardens** - Any individual who accesses or uses community gardens without proper authorization or in violation of established community garden rules and regulations shall be fined PHP 1,000 for every violation. Upon the third violation, any further offenses shall, in addition to the fine, merit the permanent prohibition from using any community garden within the City of Bacoor.

**Section 10. Destruction or Diminishing of Usability of Community Garden Plots** - Any individual found to have destroyed or diminished the usability of plots in community gardens shall be fined PHP 2,000 for destruction and PHP 1,000 for diminishing usability. In addition to the fines, they shall be required to bear the costs of restoring the affected plot and may be barred from accessing any community garden within the City of Bacoor for a period of up to three (3) years from the time they successfully restored the plot. For the purposes of this section, "destroy" and "diminish" are defined as:

- A) **Definition of "Destroy"**: "Destroy" means any act that renders a plot within a community garden completely unusable for its intended purpose, including but not limited to, contamination of soil with toxic chemicals and the like, removal of topsoil, or causing irreversible harm to plant life.
- B) **Definition of "Diminish Usability"**: Diminishing the usability of a plot refers to any act that reduces the capacity of the plot to support plant life or agricultural activities, such as compacting soil, littering, or introducing non-native invasive species.

### Chapter 3 Small-Scale Farming

**Section 11. Support for Small-scale Farmers** - To ensure a sustainable livelihood for local farmers and a continuous food supply for Bacoor's citizens, the City shall:

- A) Offer training programs on sustainable agricultural practices.
- B) Facilitate access to funding and subsidies.
- C) Promote direct-to-consumer sales platforms such as farmer's markets and farm-to-table initiatives.
- D) Advocate for organic farming, discouraging the use of harmful pesticides and fertilizers.



**Section 12. Financial Support for Small-scale Farmers** - Eligible farmers may access low-interest loans and grants for the purchase of quality seeds, equipment, and other necessary resources, which shall be sourced from the Bacoor Food Security Fund.

**Section 13. Eligibility Criteria for Financial Support** - To be eligible for financial support from the Bacoor Food Security Fund, applicants must meet the following criteria:

- A) **Residency:** The applicant must be a resident of the City of Bacoor for at least three consecutive years prior to the application and should have a proven track record of farming within the city limits during this period.
- B) **Land Ownership or Lease:** The applicant must either own, lease, or have the legal rights to use the farmland for which they are seeking support. Proof of land ownership or a valid lease agreement must be presented.
- C) **Prior Experience:** The applicant must have a minimum of two years of farming experience. This can include crop cultivation, livestock rearing, aquaculture, or other forms of agricultural activity relevant to their application.
- D) **Training and Capacity Building:** The applicant should have undergone or be willing to undergo relevant agricultural training or capacity-building workshops organized by the City or recognized agricultural institutions. This ensures that the support given translates to sustainable and efficient farming practices.
- E) **Sustainable Farming Commitment:** The applicant must commit to employing sustainable farming practices, including but not limited to crop rotation, organic farming, and water conservation. A brief proposal or farming plan may be required to showcase this commitment.
- F) **Financial Need Assessment:** Applicants must demonstrate a genuine financial need, which will be determined by a financial assessment conducted by the City. This assessment will consider factors such as current income levels, dependents, and existing liabilities.

The City will periodically review the criteria for eligibility to ensure maximum reach and benefit. Meeting the criteria does not guarantee support but ensures that the applicant is considered.

**Section 14. Financial Aid Agreement** - Successful applicants must agree to an aid agreement with the City Government that sets forth the terms and conditions of the grant of financial aid. The City Mayor is hereby authorized to enter into these agreements on the City's behalf.

**Section 15. Misrepresentation in Financial Aid Application** - Any applicant who knowingly misrepresents any material fact in their application for financial aid from the Bacoor Food Security Fund shall be barred from future participation in City-sponsored agricultural financial support programs for a period of five (5) years. Additionally, he or she shall be liable for:

- A) The return of all funds actually disbursed to them by the City Government as part of said financial assistance.

- B) Indemnifying the City Government for all damages other associated with the processing of the application, including administrative costs.
- C) The payment of a fine of Php 2,000.00.

**Section 16. Violation of Financial Aid Terms** - Recipients of financial aid who violate the terms and conditions set out in their aid agreement must return all the money disbursed to them and will be subject to a fine of PHP 1,000. Violations include, but are not limited to, misuse of funds, failure to employ sustainable farming practices as committed, or discontinuation of farming without prior notice. Additionally, the recipient will be disqualified from future city agricultural programs for a period of five years.

**Section 17. Infrastructure Development for Small-scale Agriculture** - Recognizing the need for modern and efficient facilities, the City commits to:

- A) Investing in the development and maintenance of irrigation systems suitable for small farms.
- B) Establishing local post-harvest facilities to reduce waste and improve product quality.
- C) Facilitating easy access to farm-to-market roads, ensuring efficient transportation of produce.

**Section 18. Farmer Training and Capacity Building** - The City, in collaboration with agricultural experts and institutions, shall conduct regular workshops and training programs tailored for small-scale farmers. These programs will cover:

- A) Modern farming techniques and technologies.
- B) Organic farming practices and certification processes.
- C) Pest and disease management without relying heavily on chemicals.
- D) Financial literacy and farm business management.

Small-scale farmers who are applying for financial aid or are receiving financial aid may be required to attend these workshops.

**Section 19. Research and Development Support** - To ensure that small-scale farmers remain competitive and sustainable in their operations, the City will:

- A) Partner with academic institutions and research bodies to provide farmers with access to the latest agricultural research and innovations.
- B) Facilitate field trials for new and resilient crop varieties suitable for the city's climate and soil conditions.
- C) Establish a helpline and consultation center where farmers can seek expert advice on various challenges they face.

#### Chapter 4. Urban Farming

**Section 20. Urban Farming Initiatives** - Recognizing the limited agricultural land in urban settings, the City promotes urban farming methods, such as vertical farming, rooftop gardens, hydroponics and aquaponics farming. Residential and commercial building owners are encouraged to allocate spaces for urban farming, with incentives provided for outstanding contributions to the city's local food production. For clarity, the following definitions are provided:

- A) **Vertical Farming:** This refers to the practice of growing crops in vertically stacked layers or on vertically inclined surfaces. It often involves the use of controlled-environment agriculture (CEA) technology, where all environmental factors can be controlled. These facilities utilize artificial control of light, environmental control (humidity, temperature, gases), and fertigation. The aim is to produce food in challenging environments, like where arable land is rare or unavailable.
- B) **Rooftop Gardening:** Rooftop gardening refers to the cultivation of edible plants on the top of residential, commercial, and industrial buildings. This method not only maximizes the use of space in urban settings but also aids in temperature regulation for the building, rainwater absorption, and can contribute to urban biodiversity.
- C) **Aquaponics:** A system that combines conventional aquaculture (raising aquatic animals such as snails, fish, or prawns in tanks) with hydroponics (cultivating plants in water) in a symbiotic environment. The waste produced by farmed fish or other aquatic creatures supplies nutrients for plants, which in turn purify the water.
- D) **Hydroponics:** Hydroponics is a method of growing plants without soil by using mineral nutrient solutions in a water solvent. Plants are provided with the essential nutrients directly to their roots, allowing for potentially faster growth rates and larger yields compared to traditional soil cultivation.
- E) **Urban Composting:** This refers to the process of decomposing organic waste in urban settings to produce compost. This can be done at household levels or community levels, converting kitchen wastes, yard wastes, and other biodegradable city wastes into nutrient-rich compost, which can then be used to enrich the soil in urban gardens or farming initiatives.

**Section 21 Vertical Farming Promotion** - The City of Bacoor recognizes the efficiency of vertical farming in urban landscapes. As such:

- A) It will facilitate partnerships between urban farmers and technology providers to promote the adoption of vertical farming techniques.
- B) It will offer grants or subsidies for pilot vertical farming projects that can serve as models for the community through the Bacoor Food Security Fund. Applications for vertical farming grants shall follow the same procedure outlined in Sections 13 and 14 of this Article, except that prior farming experience shall not be a mandatory requirement but is highly encouraged. Furthermore, the penalties provided under Sections 15 and 16 shall also apply to this Section.

**Section 22. Rooftop and Balcony Gardening Encouragement** - Understanding the space constraints of urban settings, the City shall:

- A) Organize workshops teaching residents how to set up and maintain rooftop and balcony gardens
- B) Collaborate with housing developers to integrate green roofs and balcony gardening spaces in new building designs.
- C) Establish a recognition and reward system for outstanding urban rooftop and balcony gardens within the city.
- D) Require all condominium developers to include rooftop gardening in their development plans.

**Section 23. Aquaponics and Hydroponics Development** - To promote sustainable and efficient urban food production systems, the City shall:

- A) Conduct training programs introducing the principles and benefits of aquaponics and hydroponics.
- B) Offer starter kits to interested residents to encourage adoption of these methods for an affordable fee.
- C) Partner with local institutions to establish demonstration sites showcasing the viability of aquaponics and hydroponics in urban settings.

**Section 24. Urban Composting and Soil Health** - Realizing the importance of soil quality in urban farming:

- A) The City will initiate community composting programs, teaching residents how to convert organic waste into valuable compost.
- B) Workshops on maintaining soil health, understanding soil types, and practicing crop rotation in limited spaces will be organized.
- C) The City will also set up compost distribution centers, providing quality compost to urban farmers at subsidized rates.

#### Chapter 5. Agri-Tourism

**Section 25. Definition of Agri-tourism** - Agri-tourism refers to the act of visiting a working farm or any agricultural, horticultural, or agribusiness operation to enjoy, be educated, or be involved in activities that the setting affords. This integrates the tourism and agricultural sectors by providing leisure, education, and entertainment through hands-on experiences.

**Section 26. Promotion of Agri-tourism in Bacoor** - The City of Bacoor shall actively promote and support the development of agri-tourism destinations within its jurisdiction. This includes marketing campaigns, setting up informational kiosks, and collaborating with local and national tourism agencies. The City of Bacoor may prioritize the following agri-tourism initiatives:

- A) Farm-to-table experiences, where visitors can harvest and prepare their own meals.
- B) Educational farm visits focused on local farming techniques and traditions.

- C) Agri-craft workshops, allowing tourists to engage in hands-on crafting sessions using farm produce.
- D) Farm stays, offering tourists the opportunity to lodge within operational farms.
- E) Culinary tours, emphasizing local ingredients and traditional Bacoor dishes.
- F) Any other initiative where the local agricultural industry is emphasized as a key component of Bacoor's sustainable development.

The City of Bacoor shall also endeavor, when necessary, to establish these destinations on its own or in partnership with the private sector. In these cases, the City Government may impose reasonable fees, including rent, when applicable on private operators of agri-tourism initiatives. *Provided*, that the fees or rentals paid shall accrue to the Food Security Fund.

**Section 27. Joint Creation of an Agri-tourism Development Plan** - The City Environment and Natural Resources Office (CENRO) and the Bacoor Tourism Development Office shall collaboratively create a comprehensive Agri-tourism Development Plan, detailing the strategies, initiatives, and resources necessary to bolster Bacoor's agri-tourism sector.

**Section 28. Essential Components of the Agri-tourism Development Plan** - The Agri-tourism Development Plan must include, but not be limited to, the following components:

- A) A clear inventory and assessment of current agri-tourism assets and resources in Bacoor.
- B) Identification of potential areas for new agri-tourism sites and developments.
- C) Specific strategies for community engagement and capacity-building, ensuring that local residents benefit from agri-tourism growth.
- D) Detailed marketing and branding strategies tailored to target local, national, and international tourists.
- E) A comprehensive risk management framework to address potential challenges and threats to Bacoor's agri-tourism.

**Section 29. Periodic Review of the Agri-tourism Development Plan** - Every five years, the CENRO and Bacoor Tourism Development Office shall jointly conduct a thorough review of the Agri-tourism Development Plan. This review will take into account new trends, feedback from stakeholders, technological advancements, and other relevant factors, ensuring that the plan remains updated, effective, and in line with Bacoor's evolving needs and aspirations.

**Section 30. Incentives for Agri-tourism Establishments**- Agri-tourism operators and businesses in Bacoor shall be eligible for fiscal and non-fiscal incentives, to be determined through an ordinance to be formulated by the City Agriculture Office, the City Accounting Office, the City Budget Officer, the City Treasurer and the City Administrator's Office to be submitted for the review and approval Sangguniang Panlungsod not later than sixty (60) days from the date of effectivity of this Ordinance. These incentives shall come from the Bacoor Food Security Fund

**Section 31. Safety and Standards In Agri-tourism** - The City, in collaboration with relevant national agencies, shall establish safety and quality standards for agri-tourism destinations to ensure the wellbeing of both visitors and the local community.

**Section 32. Integration of Local Products in Agri-tourism** - Agri-tourism establishments shall be encouraged to prioritize the showcasing and sale of local products, thereby providing a platform for local farmers and artisans to access wider markets and promote Bacoor's agricultural heritage.

**Section 33. Ecological Sustainability in Agri-tourism** - Agri-tourism operations must adhere to sustainable agricultural practices, ensuring that they contribute positively to the environment, maintain biodiversity, and use resources judiciously.

**Section 34. Infrastructure Development for Agri-tourism** - The City shall allocate funds for developing necessary infrastructure such as roads, signage, and facilities to support and enhance agri-tourism experiences in Bacoor.

**Section 35. Collaboration with Private Sector** - The City will foster partnerships with private entities, including corporations, local businesses, and financial institutions, to leverage their expertise, resources, and networks in advancing the agri-tourism sector in Bacoor.

#### CHAPTER 5. Reduction of Organic Waste

**Section 36. Reduction of Organic Waste** - In order to reduce the amount of organic waste and to promote the diversion of said waste for composting or other sustainable treatments, the following shall be observed by all covered entities:

- A) **Mandatory Source Reduction:** All households, businesses, institutions, and other entities within Bacoor City shall implement measures to reduce the generation of organic waste at the source, prioritizing waste prevention and minimization strategies.
- B) **Composting Programs:** The City Government, through the CENRO and the City Agriculture Office, shall establish and promote community-based and centralized composting programs to convert organic waste into valuable compost, reducing the volume directed towards landfills.
- C) **Organic Waste Recycling:** Businesses producing large volumes of organic waste, including restaurants, markets, and food processors, shall implement organic waste recycling programs within their premises or at a site to be identified, maintained, and managed by them in close and periodic coordination with the CENRO and the City Agriculture Office. To minimize the cost of this endeavor and to promote ease of compliance, the CENRO shall identify a suitable site for organic waste recycling activities that can be jointly used and maintained by the said businesses in partnership with the City Government. The CENRO may also assist in the collection of biodegradable waste from the said

establishments after payment of the appropriate collection fees as mandated by the Revenue Code of the City of Bacoor.

- D) **Promotion of Biodegradable Products:** Covered entities are encouraged to utilize biodegradable products and materials in operations, reducing the generation of non-compostable organic waste.
- E) **Food Donation Initiatives:** To combat food wastage, businesses and institutions are mandated to collaborate with local food banks, shelters, and other relevant organizations, channeling edible surplus food to those in need rather than disposal.
- F) **Prohibition Against Non-Segregation of Waste:** The penalties provided under City Ordinance No. 2014-005 (the "2014 Garbage Segregation Ordinance of the City of Bacoor") shall be imposed against any person, natural or juridical, who shall violate this Chapter.

**Section 37. Community-Based and Centralized Composting Programs -** In implementing Section 36(B) of this Article, the City shall do the following:

- A) **Establishment of Centralized Composting Facilities:** The City Government shall identify, develop, and operate centralized composting facilities equipped with modern technologies to manage and convert a significant portion of the city's organic waste into compost.
- B) **Integration with Community Gardens:** Organic compost produced from both centralized and community-based composting initiatives shall be primarily directed to support the community gardens as outlined in Article VIII, Chapter 2. This will not only reduce waste but will also promote local food security.
- C) **Monitoring and Quality Control:** The City Government shall put in place mechanisms to periodically monitor the quality of compost produced, ensuring it meets the required standards and is safe for use, especially in community gardens.
- D) **Expansion of Collection Services:** Dedicated collection services for organic waste destined for composting shall be expanded, ensuring that maximum organic waste is directed towards composting facilities and minimizing its disposal in landfills.
- E) **Public-Private Partnerships:** The City Government shall explore collaborations with private entities and NGOs to enhance the capacity, reach, and efficiency of both centralized and community-based composting initiatives.
- F) **Promotion of Compost Usage:** Apart from community gardens, the City Government shall actively promote the use of compost in public parks, green spaces, and among local farmers, contributing to soil health and reducing the need for synthetic fertilizers.
- G) **Public Education:** The CENRO and the City Agriculture Office shall jointly conduct continuing public education campaigns on waste segregation and composting. For ease of conducting education and training activities, the CENRO and the CAO are empowered to cluster the various residential subdivisions and communities within the City in the scheduling of the said activities. The CENRO and the CAO must consistently monitor the application by City residents of the community composting training given to them and assess if there is a need for further training or re-training.



## ARTICLE IX. Energy Efficiency in Buildings and Green Infrastructure

**Section 1. Purpose and Intent** - The purpose of this Article is to ensure that all infrastructure projects undertaken by the City Government of Bacoor are developed and executed with a focus on smart urban development, energy efficiency, and the integration of green infrastructure. This commitment aligns with the City's broader objectives to mitigate environmental impact, reduce carbon emissions, and contribute to sustainable development goals. The intent is to set forth guidelines, standards, and procedures that will guide City Government in making informed decisions that prioritize energy-efficient design and green infrastructure components in its projects.

### Section 2. Definitions and Terms -

- A) **Green Infrastructure:** refers to natural or semi-natural systems that provide benefits to the environment includes both the natural environment and engineered systems.
- B) **Energy Efficiency:** refers to the use of technology and design to minimize the amount of energy required to provide a certain level of comfort or performance or to increase the level of comfort or performance with the same amount of energy.
- C) **Sustainable Building Materials:** Materials that are eco-friendly and have low embodied energy, sourced sustainably, and do not deplete natural resources.
- D) **Renewable Energy Sources:** Sources of energy that are not depleted when used, such as wind or solar power.
- E) **Energy Audit:** A systematic process to review and analyze energy flows for energy conservation in a building, process, or system to reduce the amount of energy input without negatively affecting output.
- F) **Smart Technology:** Systems or devices that operate interactively and autonomously, often used to control and monitor energy usage.
- G) **Water-Efficient Landscaping:** Landscaping designed to reduce water use and run-off through the incorporation of native plant species, permeable pavements, and other sustainable practices.
- H) **City Government Projects:** Infrastructure projects that are funded, executed, or otherwise directly overseen by the City Government of Bacoor.
- I) **HVAC** - is an acronym that stands for Heating, Ventilation, and Air Conditioning. The term HVAC is used to describe a complete comfort system that can be used to heat and cool buildings and infrastructure projects, as well as provide improved indoor air quality.
- J) **Certified Materials:** Materials that have been evaluated and certified by recognized environmental organizations for their sustainability.
- K) **Embodied Energy:** The total energy consumed by all of the processes associated with the production of a building material.
- L) **Recycled Material:** Material that has been reprocessed and repurposed from waste.
- M) **Renewable Material:** Material made from resources that can be regenerated at a rate comparable or faster than the rate at which they are consumed.

**Section 3. Scope** - All City Government Projects must comply with established guidelines for green infrastructure and energy efficiency as set forth in this Article. These guidelines are to be integrated into the planning, design, construction, and maintenance phases of any infrastructure project. These guidelines apply to all City Government Projects including, but not limited to, buildings, public facilities, and infrastructure projects.

**Section 4. Pre-Construction Energy Audit** - Before the commencement of any project, a comprehensive energy audit must be conducted to establish baseline energy usage and identify opportunities for energy conservation. The audit shall be conducted in phases:

**A) Phase 1: Preliminary Assessment**

- a) **Appoint an Energy Audit Team:** A multidisciplinary team, including energy engineers, architects, and sustainability experts, should be formed.
- b) **Review Existing Data:** Examine available plans, studies, and energy bills, if applicable.
- c) **Initial Site Visit:** Conduct a walk-through to get a first-hand view of the proposed project site.

**B) Phase 2: Data Collection**

- a) **Energy Consumption:** Use metering equipment to gather data on energy usage patterns for existing structures, if available.
- b) **Building Envelope Analysis:** Inspect insulation, windows, doors, and other envelope components for their energy efficiency attributes.
- c) **HVAC Systems:** Collect data on existing HVAC systems, if applicable, including efficiency ratings.
- d) If the project site does not have any established structures, Phase 2 of the Energy Audit shall involve the use of software to model the site's topography, solar exposure, wind patterns, thermal conditions, and the efficiency of proposed HVAC systems.

**C) Phase 3: Data Analysis**

- a) **Benchmarking:** Compare gathered data against industry standards and similar projects.
- b) **Identification of Energy Efficiency Measures (EEMs):** Develop a list of potential EEMs based on data analysis.

**D) Phase 4: Economic Analysis**

- a) **Cost-Benefit Analysis:** Perform a cost-benefit analysis for each identified EEM.
- b) **ROI Calculation:** Calculate the Return on Investment for implementing each EEM.

**E) Phase 5: Audit Report**

- a) **Draft Report:** Create a comprehensive energy audit report detailing the findings, recommendations, and economic analyses.
- b) **Peer Review:** Have the draft reviewed by independent experts for validation.

- c) **Final Report:** Submit the final report to the relevant city offices for review and approval.
- F) **Phase 6: Integration into Project Design:** Based on the final energy audit report, integrate selected EEMs into the project design.
- G) **Phase 7: Review and Approval:** Submit the project design with integrated EEMs to the City's Environmental and Natural Resources Office (CENRO) and other relevant bodies for final approval.

**Section 5. Use of Sustainable Building Materials** - Construction materials shall be sourced responsibly, prioritizing recycled or renewable materials that have been certified by recognized environmental organizations.

**Section 6. Sustainable Sourcing** - In sourcing materials for infrastructure projects, the City Government shall:

- A) Prioritize the use of sustainable building materials that are locally sourced to reduce transportation emissions.
- B) Encourage the use of recycled and renewable materials.
- C) For the purposes of procurement, include the aforementioned preferences in the technical specifications noted in the procurement project requirements and bidding documents.

**Section 7. Water-Efficient Systems** - Projects shall incorporate water-efficient landscaping, plumbing, and other fixtures to reduce water consumption and waste.

**Section 8. Water-Efficient Plumbing Systems** - All plumbing systems installed in the new projects must meet the local water efficiency standards. These may include but are not limited to low-flow toilets, sensor-based faucets, and water-efficient shower heads. All systems should aim to meet or exceed the standards set forth by relevant local or national bodies for water efficiency.

**Section 9. Water-Efficient Fixtures** - All fixtures that use water—including sinks, toilets, and faucets—should be certified as water-efficient by a recognized certification body or by the CENRO. Fixtures should also come equipped with features like automatic shutoff to prevent accidental waste of water.

**Section 10. Rainwater Harvesting Systems** - Projects are encouraged to include systems for the collection and storage of rainwater. Collected rainwater should be used for non-potable purposes such as landscape irrigation, toilet flushing, and cooling systems wherever possible.

**Section 11. Greywater Recycling** - Systems for treating and recycling greywater (from sinks, showers, etc.) are strongly encouraged and should be incorporated into project designs wherever feasible.

**Section 12. Monitoring and Reporting** - Each project must include mechanisms for monitoring water usage and efficiency. Regular reports on water consumption,

savings, and the effectiveness of installed systems must be submitted to the Sustainable Bacoor Renewability Research Center for review.

**Section 13. Energy-Efficient Technology** - All projects must incorporate energy-efficient technologies such as LED lighting, solar panels, and other renewable energy sources where feasible. Heating, ventilation, and air conditioning (HVAC) systems installed in projects must meet or exceed current energy efficiency standards as specified by the Department of Energy.

Projects should include building energy management systems (BEMS) to monitor and control building energy usage, optimizing energy efficiency. Where possible, inclusion of energy storage solutions, such as batteries, should be considered to store excess energy generated from renewable sources for later use.

**Section 14. Smart Technology Integration** - The design must include the integration of smart technology to monitor and control energy usage effectively. These include, but are not limited to, the following:

- A) **Smart Technology in Lighting and Energy Systems:** Projects must incorporate smart technology to control and monitor lighting and other energy systems. This includes features like adaptive lighting in streetlights, which dim or brighten based on pedestrian and vehicular traffic.
- B) **Intelligent Water Management Systems:** For water management projects, such as dams and treatment plants, smart sensors must be installed to measure various water quality parameters, flow rates, and operational statuses.
- C) **Traffic Management in Road Projects:** Smart sensors should be employed to measure and manage traffic flow, waiting times at intersections, and other relevant data. Traffic lights, for instance, should be adaptable to current traffic conditions.

**Section 15. Data Measurement Metrics** - To align the smart technology systems with the City of Bacoor's sustainability objectives, the following data measurement metrics should be taken into account for various infrastructure projects:

- A) **Energy Consumption Metrics:** Real-time data on electricity consumption, peak demand periods, and energy sources must be collected to optimize energy use and increase reliance on renewable energy sources.
- B) **Water Quality and Usage Metrics:** Measurements should be taken for water quality parameters like pH, turbidity, and contaminant levels, as well as water usage and waste metrics.
- C) **Air Quality Metrics:** Sensors should monitor air pollutants such as PM2.5, PM10, CO2 levels, and other harmful emissions to improve public health and guide environmental policy.
- D) **Traffic and Mobility Metrics:** Data on traffic volume, speed, congestion points, and pedestrian counts are essential for effective traffic management and future infrastructure planning.

- E) **Waste Management Metrics:** Data on waste generation, collection efficiency, and recycling rates must be gathered to improve waste management services and promote circular economy practices.
- F) **Public Safety Metrics:** Incident reports, emergency response times, and locations of safety equipment like fire hydrants and public defibrillators should be mapped and monitored.
- G) **Social Metrics:** Data on public service access, including education, healthcare, and public transportation, should be collected to assess and improve social infrastructure.
- H) **Noise Pollution Metrics:** Noise levels should be monitored in residential, commercial, and industrial areas to assess and mitigate noise pollution.
- I) **Natural Resource Metrics:** Data on soil quality, deforestation rates, and other natural resource metrics must be collected to guide sustainable land use policies.

**Section 16. Integration and Centralization** - All the data sets generated under Section 15 should be integrated into a centralized system for comprehensive analysis, making them easily accessible for various city departments, particularly the Smart Bacoor Renewability Research Center.

**Section 17. Cybersecurity Measures** - Due consideration should be given to the security of these smart technologies. Measures should be put in place to ensure data integrity and guard against unauthorized access.

**Section 18. Unauthorized access** - Unauthorized access to smart data is defined as gaining access to, manipulating, altering, or deleting any smart city data sets, databases, or control systems without explicit permission from the City Government or relevant authorized entities.

Any individual, group, or entity found guilty of unauthorized access to smart data will be subjected to a penalty of Five Thousand Pesos (PHP 5,000.00). In addition, the guilty party shall also face imprisonment of One (1) year.

**Section 19. Compatibility and Scalability** - Smart technology systems must be designed to be compatible with existing infrastructure and be scalable to meet future sustainability objectives.

**Section 20. Review and Approval** - All plans for City Government Projects that include the components mentioned above shall be reviewed and approved by the City's Environmental and Natural Resources Office (CENRO) in coordination with other relevant agencies.

**Section 21. Retrofitting and Upgrading Existing Infrastructure** - To ensure the City's full commitment to sustainable development and environmental responsibility, all existing infrastructure projects and facilities shall undergo a feasibility study to evaluate the potential for incorporating the sustainability measures outlined in this Article. If so feasible, the necessary steps shall be taken to upgrade them.

Commented [Cc17]: Green Building Ordinance

## ARTICLE X. Green Job Creation

**Section 1. Purpose and Intent** - The City of Bacoor recognizes the urgent need to address environmental challenges while simultaneously promoting economic growth and creating employment opportunities for its residents. This Article aims to integrate the principles of sustainable development into the local labor market by promoting the creation of green jobs. Through these initiatives, the City seeks to achieve a harmonious balance between economic advancement, environmental protection, and societal well-being.

### Section 2. Definitions and Terms

- A) **Green Jobs:** These are employment opportunities that directly contribute to preserving or restoring the environment. They can be in traditional sectors such as manufacturing and construction or in emerging green sectors like renewable energy and energy efficiency.
- B) **Green Job Initiatives:** Refers to programs, projects, or strategies endorsed or initiated by the City aimed at creating or supporting green jobs.
- C) **Sustainable Development:** The practice of meeting the needs of the present without compromising the ability of future generations to meet their own needs.

**Section 3. Establishment of Green Jobs Program** - The City of Bacoor shall establish a Green Jobs Program under the supervision of the City Environment and Natural Resources Office (CENRO). This program will oversee the identification, development, and support of green job initiatives, ensuring alignment with the city's environmental and economic goals. The program will also serve as the central hub for information dissemination, training, and capacity-building related to green employment.

**Section 4. Eligibility Criteria for Green Job Initiatives** - To qualify for support under the Green Jobs Program, initiatives must:

- A) Demonstrate a clear contribution to environmental preservation or restoration.
- B) Show potential for sustainable economic growth and job creation for Bacoor residents.
- C) Comply with all local, national, and international environmental standards and regulations.
- D) Prioritize the use of local resources, technologies, and expertise.
- E) Promote inclusivity, ensuring opportunities for all, including marginalized sectors.

**Section 5: Funding Mechanisms for Green Job Creation** - Funding for the Green Jobs Program and its supported initiatives will be primarily sourced from the Bacoor Environment Fund as established in Article XII.

The City may also seek external funding and partnerships, such as grants and collaborations, to further enhance and expand the Green Jobs Program.

**Section 6. Private Sector Participation in Green Jobs Programs** - Recognizing the significant role the private sector plays in driving economic growth and innovation, the City of Bacoor encourages businesses to initiate or participate in Green Jobs programs. Businesses who have duly-accredited Green Jobs programs shall be known as Green Employers. The City shall provide benefits to Green Employers, as explained in Section 8 of this Article.

**Section 7. Types of Green Jobs Programs by the Private Sector** - The following is a non-exhaustive list of Green Jobs programs that may be initiated by the private sector:

- A) **In-house Green Training and Skill Development:** Businesses can establish training programs tailored to their industries, focusing on integrating sustainable practices into everyday operations. Such programs may range from workshops on energy-efficient machinery operation to seminars on sustainable sourcing.
- B) **Green Internships:** Internship programs targeting young professionals or fresh graduates shall be considered Green Jobs programs when the scope of work of the intern focuses on renewable energy, sustainable agriculture, or waste management.
- C) **Green Research and Development:** Enterprises, especially those in the technology and manufacturing sectors, are encouraged to allocate resources for the research and development of eco-friendly products, services, or operational methods.
- D) **Collaborative Community Projects:** Businesses can collaborate with local communities, schools, or other organizations to establish projects that align with the goals of green job creation. Examples include community-based recycling programs, urban gardening initiatives, or local renewable energy installations.

**Section 8. Incentives for Businesses with Green Jobs Programs** - To stimulate the creation and sustained operation of Green Jobs programs in the private sector, the City of Bacoor shall offer a range of incentives tailored to assist businesses, which may include:

- A) **Recognition and Certification:** Businesses running approved Green Jobs programs may receive a City-issued certification, endorsing them as Green Employers. This certification may be used by the business for promotional purposes.
- B) **Promotional Support:** Green Employers will be featured on the City's official website. For this purpose, a directory of Green Employers shall be created.
- C) **Workshops and Networking:** The City will periodically organize workshops, seminars, and networking events dedicated to green initiatives. Participating businesses will have the opportunity to share their experiences, learn from others, and establish potential collaborations.
- D) **Reduced Permitting Fees:** For certain city permits and licenses, businesses with active Green Jobs programs may benefit from reduced fees.

- E) **Technical Assistance:** Through CENRO and related agencies, the City will offer technical guidance to businesses looking to establish or refine their Green Jobs programs, ensuring their initiatives align with best practices and deliver genuine environmental and societal benefits.

**Section 9. Accreditation of Green Employers** - The following process shall be applicable for businesses seeking to be accredited as Green Employers:

- A) **Application Submission:** Interested businesses shall submit a comprehensive application to the City Environment and Natural Resources Office (CENRO). The application should detail the nature of their Green Jobs program, its objectives, and the expected environmental and societal benefits.
- B) **Documentation:** The application should be accompanied by relevant documentation, including:
  - a) A clear outline of the green job roles within the organization.
  - b) Details of any training programs intended for green job roles.
  - c) Evidence of past or ongoing sustainable initiatives or practices.
  - d) Any third-party verifications or certifications related to environmental sustainability.
- C) **Review Period:** Upon submission, CENRO will review the application and attached documents. This review process may take up to 60 days. Businesses may be contacted during this period for additional information or clarification.
- D) **Site Verification:** CENRO may conduct on-site inspections or interviews to verify the authenticity of the claims made in the application and assess the genuine impact of the business's Green Jobs program.
- E) **Evaluation Committee:** A special committee consisting of representatives from CENRO, the Bacoor Tourism Development Office, and other relevant agencies will evaluate applications based on established criteria.
- F) **Notification:** Businesses will be notified in writing about the outcome of their application. Successful applicants will receive their Green Employer certification and details of the benefits and responsibilities associated with the accreditation.
- G) **Renewal:** Accreditation as a Green Employer is valid for three years. To maintain their status, businesses must apply for renewal within six months from the expiration of their most recent accreditation.
- H) **Payment of Fee:** Each applicant shall pay a processing fee of Two Thousand Pesos.

**Section 10. Mandatory Green Employer Certification** - Businesses operating within Bacoor City in the renewable energy, sustainable agriculture, or waste management sectors must secure accreditation as a Green Employer. These businesses must acquire their certification within one year from the start of its business operations.

**Section 11. Responsibilities of Green Employers** - Upon receiving accreditation as a Green Employer, businesses are entrusted with upholding the green employment standards and values of Bacoor City. To this end, Green Employers shall abide by the following responsibilities:



- A) **Continuous Commitment:** Maintain an active and robust Green Jobs program for the duration of its accreditation. *Provided*, that this paragraph shall not apply if the business suffers significant financial losses leading to the termination of its Green Jobs Program. *Provided, further*, that the Green Employer is obligated to restore said program as soon as practicable.
- B) **Employee Engagement:** Ensure that employees are well-informed about the company's Green Jobs initiatives and are provided with opportunities to participate, upskill, or transition to green job roles.
- C) **Adherence to Regulations:** Comply with all relevant local, national, and international environmental and labor standards. Any changes to these regulations should be promptly integrated into the company's practices.
- D) **Regular Review and Improvement:** Periodically review and update their Green Jobs program to incorporate new technologies, methodologies, and best practices in the field of sustainability. This commitment to continuous improvement ensures that the program remains effective and relevant.
- E) **Renewal of Accreditation:** Ensure the timely renewal of their Green Employer status by adhering to the accreditation process outlined in Section 9.

Commentary (Cc14): Tandem with BPLO, City Livelihood, PESO

## ARTICLE XI. Bacoor Environment Fund

### Chapter 1. The Fund

**Section 1. Establishment of the Fund** - The City of Bacoor hereby establishes the "Bacoor Environment Fund" (hereinafter referred to as the "Fund"). This Fund is dedicated to supporting and promoting sustainable development, environmental conservation, and green initiatives within the City. Its primary purpose is to provide financial resources for projects, programs, and activities that further the environmental goals and objectives of Bacoor City, ensuring a healthy, sustainable, and resilient future for its residents.

**Section 2. Source of Funds** - The Fund shall have the following sources:

- A) **City Budget Allocations:** A specified percentage of the City's annual budget shall be earmarked for the Bacoor Environment Fund. The exact percentage shall be determined by the City Council in consultation with the City Environment and Natural Resources Office (CENRO).
- B) **Green Bonds:** As described in Chapter 2 of this Article, proceeds from the issuance of city green bonds shall be a dedicated source of funding for environmental initiatives under this Fund.
- C) **Public-Private Partnerships:** Funding may also come from collaborations with private entities interested in environmental conservation and sustainability. These contributions shall be subject to a vetting process to ensure they align with the goals of the Bacoor Environment Fund.
- D) **Grants and Donations.** Monies received from national or international grants, as well as donations from individuals, non-governmental organizations, and international bodies, may be channeled into the Fund.

- E) **Environmental Fees and Levies:** Specific environmental fees, such as a carbon offset fee, plastic bag fee, or pollution penalties, may be levied and directed into the Fund.
- F) **Revenue from City-Owned Sustainable Initiatives:** Profits generated from city-owned environmental or sustainable projects, such as recycling plants or renewable energy installations, will be partially allocated to the Fund. For the purposes of this Section, "profits" shall mean revenues minus costs.
- G) **Investment Income:** Any income generated through the investment of idle Fund monies shall be re-invested back into the Fund.
- H) **Fines and Penalties:** Fines collected from violations of environmental laws and regulations within the City of Bacoor shall be allocated to the Bacoor Environment Fund.
- I) **Land Use Fees for Environmentally Critical Projects:** Any fees collected from Environmentally Critical Projects in Bacoor (ECPBs) as part of the City Environmental Compliance Certificate (CECC) shall be allocated to the Fund.
- J) **Fund-Raising Activities:** The City may engage in specific fund-raising activities aimed at supplementing the Bacoor Environment Fund. These activities shall be conducted transparently and be subject to regular audit.

**Section 3. Management and Oversight** - The Bacoor Environment Fund shall be managed and overseen by a dedicated Fund Management Committee. The Committee shall consist of:

- A) The City Mayor, who shall serve as the Chairperson.
- B) The head of the City Environment and Natural Resources Office (CENRO), who shall serve as the Vice Chairperson.
- C) A representative from the City Council, preferably the chair of the environment committee.
- D) A representative from the City Finance Department.
- E) Three (3) representatives from non-governmental organizations active in environmental protection, to be selected by the City Mayor in consultation with the City Council.
- F) One (1) representative from the local business community, preferably involved in sustainable or environmental practices, to be selected by the City Mayor in consultation with the City Council.

**Section 4. Responsibilities of the Fund Management Committee** - The Fund Management Committee shall have the following responsibilities:

- A) **Fund Allocation:** The Committee shall be responsible for determining how the Fund's resources are allocated, consistent with the priorities and guidelines set forth in this Article and any subsequent revisions or guidelines.
- B) **Transparency:** The Committee shall publish an annual report outlining how funds have been allocated, including details of all projects funded, their status, and their impact. This report will be made publicly available through the City's official website and other appropriate media.
- C) **Financial Auditing:** The Fund shall be subject to an annual financial audit by an accredited auditing firm. Results of the audit shall be published as part of the annual report.

- D) **Compliance Monitoring:** The Committee shall ensure that funds are used in compliance with all applicable laws, regulations, and guidelines. Projects found to be non-compliant shall be subject to immediate review, and funds may be reallocated as the Committee deems appropriate.
- E) **Strategic Planning:** The Committee shall engage in periodic strategic planning to assess the Fund's impact and re-evaluate its priorities. This shall include a comprehensive review every five years, in consultation with experts, stakeholders, and the general public.
- F) **Review of Applications:** For projects requiring funding, the Committee will be responsible for the initial review of applications and will make funding recommendations based on the project's alignment with the Fund's objectives.
- G) **Emergency Provisions:** In the event of environmental emergencies that require immediate action, the Committee is empowered to allocate funds in an expedited manner, subject to subsequent review.

## Chapter 2. Green Bonds

**Section 5. Green Bonds - Issuance of city green bonds, the proceeds of which shall be exclusively used for initiatives under the Food Security Fund. Green Bonds shall be interest-bearing instruments to encourage investment. For this purpose, the floating of green bonds is hereby authorized pursuant to Section 11 (2)(iv) of the Charter of the City of Bacoor (Republic Act No. 10160).**

**Section 6. Green Bonds Investment Appeal - Investing in Green Bonds will be promoted as an environmentally conscious and socially responsible investment option. Marketing materials and investment prospectuses shall explicitly state the environmental and social benefits of the bonds.**

**Section 7. Regulatory Compliance of Green Bonds - The issuance of these green bonds shall be subject to the approval and oversight of relevant regulatory agencies, and shall comply with any existing laws and regulations concerning bond issuance.**

**Section 8. Transparency and Reporting - For the benefit of the bondholders, an annual report detailing the use of the bond proceeds shall be published. This ensures transparency and allows bondholders to understand how their investment is contributing to food security and environmental initiatives.**

**Section 9. Rate of Return - The bonds will offer a competitive rate of return, to be determined in consultation with financial experts, to attract potential investors.**

**Section 10. Maturity and Payment Terms - Terms for the maturity of the bonds and payment to bondholders shall be clearly outlined in the bond prospectus.**

## ARTICLE XII. Smart Bacoor Renewability Research Center

**Section 1. Establishment and Purpose of the Smart Bacoor Renewability Research Center** - The City of Bacoor hereby establishes the Smart Bacoor Renewability Research Center (SBRRC). The purpose of the SBRRC is to serve as a hub for research and development (R&D) focused on green technologies, renewable energy, and sustainable practices that contribute to environmental protection and economic development within the city. The SBRRC aims to foster innovation, disseminate knowledge, and encourage collaboration between public and private sectors to achieve a sustainable future for the City of Bacoor.

**Section 2. Definitions and Terminology** - As used in this Article, the following terms shall be defined and understood as follows:

- A) Smart Bacoor Renewability Research Center (SBRRC): A research and development center established by the City of Bacoor to focus on green technologies, renewable energy, and sustainable practices.
- B) Green Technologies: Techniques, equipment, and approaches that are environmentally friendly and are focused on sustainability, energy efficiency, waste reduction, and minimizing environmental impact.
- C) Renewable Energy: Energy from a source that is not depleted when used, such as wind, solar power, or hydroelectric power.
- D) Sustainable Practices: Actions and strategies aimed at achieving long-term environmental, economic, and social benefits, while minimizing negative impacts on natural resources and ecosystems.
- E) Public Sector: Refers to governmental bodies and institutions responsible for policy-making, public services, and governance.
- F) Private Sector: Refers to individuals, companies, and organizations that are not part of the government.
- G) Collaboration: The act of working jointly with different sectors, organizations, or individuals on a shared objective, project, or mission.
- H) Research and Development (R&D): Investigative activities undertaken to discover new knowledge and derive new forms of practical applications from such knowledge.
- I) Environmental Protection: Measures taken to safeguard the environment from degradation, including conserving natural resources, reducing waste, and promoting sustainable development.
- J) Economic Development: Efforts to improve the quality of life and well-being of the city's inhabitants through job creation, revenue generation, and community development.

**Section 3. Organizational Structure** - The Smart Bacoor Renewability Research Center shall operate under the purview of the City Environment and Natural Resources Office (CENRO). To adequately staff and manage the research center, the following new positions, along with their qualifications and salary grades, are hereby established:

- A) Director:

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- a) Responsibilities: Overseeing the entire operation of the research center, setting research agendas, managing budgets, and coordinating with other departments and external organizations.
  - b) Qualifications: Master's degree in Environmental Science, Engineering, or related field, with at least 2 years of experience in research and management roles.
  - c) Salary Grade: SG \_\_\_\_
- B) Deputy Director for Research:
- a) Responsibilities: Directing the research efforts and projects, oversight of research teams, and liaison with funding bodies.
  - b) Qualifications: Master's degree in a related scientific field with at least 2 years of experience in research management.
  - c) Salary Grade: SG \_\_\_\_
- C) Research Scientists (3):
- a) Responsibilities: Conducting primary research activities.
  - b) Qualifications: Bachelor's degree in related fields such as renewable energy, environmental engineering, etc..
  - c) Salary Grade: SG \_\_\_\_
- D) Data Analysts:
- a) Responsibilities: Data gathering, analysis, and reporting.
  - b) Qualifications: Bachelor's degree in Data Science, Statistics, or a related field.
  - c) Salary Grade: SG \_\_\_\_
- E) Administrative Staff:
- a) Responsibilities: Assists in day-to-day administrative tasks.
  - b) Qualifications: Bachelor's degree in Business Administration or a related field.
  - c) Salary Grade: SG \_\_\_\_

The roles and responsibilities, qualifications, and other job-related details of these new positions shall be specified in the operational guidelines to be developed by CENRO in consultation with the City Human Resource Management Office.

**Section 5. Collaboration with Academic and Research Institutions** - In the pursuit of advancing research and fostering innovation in green technologies and environmental solutions, the SBRRRC may recommend the City Mayor to enter into research agreements with academic and research institutions. These collaborations may include, but are not limited to, the following:

- A) Joint Research Initiatives: Collaborative projects aimed at tackling specific environmental challenges facing the City of Bacoor and beyond, utilizing the expertise and resources of both the SBRRRC and the partnering institution.
- B) Exchange of Expertise and Resources: The sharing of academic and professional experts, laboratory facilities, equipment, and other resources necessary for the successful completion of research projects.
- C) Student Internship Programs: Facilitating internships and fellowship programs for students from collaborating institutions to gain practical experience in environmental research and technology development.

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- D) **Publication and Dissemination:** Co-authoring research papers, reports, and other publications to disseminate the findings and encourage broader discussions and further studies in the field of environmental science.
- E) **Funding and Grants:** Exploring opportunities for joint funding from government agencies, international organizations, and private sectors to support collaborative research initiatives.
- F) **Technical Assistance and Capacity Building:** Offering training workshops, seminars, and other educational programs to build the capabilities of researchers, students, and staff from both the SBRRRC and the collaborating institution.

**Section 6. Partnership with Industry Stakeholders** - In order to translate research findings into actionable solutions and scalable technologies, the SBRRRC is encouraged to form partnerships with industry stakeholders, including but not limited to corporations, small and medium-sized enterprises, non-governmental organizations, and other private entities. These partnerships may be executed for the following purposes in this non-exclusive list:

- A) **Technology Transfer:** Facilitating the exchange of technology and innovation from the research stage to real-world application, allowing for more rapid and effective implementation of environmental solutions.
- B) **Pilot Testing and Implementation:** Collaborating with industry partners to conduct field tests or pilot projects that can demonstrate the feasibility and effectiveness of technologies developed or recommended by the SBRRRC.
- C) **Resource Mobilization:** Pooling financial, technical, and human resources to support the execution and scaling of projects that have undergone successful initial testing.
- D) **Public Awareness and Advocacy:** Working together to create public awareness campaigns that educate the community about the importance of environmental sustainability and the solutions available for addressing related challenges.
- E) **Data Sharing and Analysis:** Leveraging industry data and insights to refine research methodologies and outcomes, aiming for practical, effective solutions to environmental issues.
- F) **Regulatory Collaboration:** Consulting with industry stakeholders to provide recommendations on environmental regulations and guidelines that balance economic growth with ecological preservation.
- G) **Revenue Generation:** Exploring mechanisms for commercializing technologies or solutions developed through the SBRRRC, with revenue generated to be reinvested in further research and development activities.

#### ARTICLE XIII. Sustainable Bacoor Roundtable Summit

**Section 1. Purpose and Intent** - The Sustainable Bacoor Roundtable Summit, hereinafter referred to as the "SBR Summit," aims to create a platform for dialogue, sharing of best practices, and collaborative planning among local, national, and international experts in the fields of environmental sustainability, green energy, and circular economy. The Summit will be conducted annually and will focus on the latest

research, innovations, and actionable solutions to address Bacoor's unique environmental challenges and opportunities.

**Section 2. Summit Scope and Themes** - The SBR Summit will cover a wide range of topics related to environmental sustainability, including but not limited to waste management, water conservation, renewable energy, urban farming, and green job creation. The specific themes for each year's summit shall be recommended to the City Mayor by a committee composed of members from the City Environment and Natural Resources Office (CENRO), Bacoor Tourism Development Office, and other relevant stakeholders.

**Section 3. Participation and Invitations** - The Summit shall extend invitations to leading experts in environmental sciences, policy-making, technology, and academia. Private enterprises, civil society organizations, and the general public are also encouraged to attend. Special focus will be given to ensuring the participation of local stakeholders, including but not limited to local businesses, educational institutions, and community organizations.

**Section 4. Summit Organizing Committee** - An organizing committee shall be formed at least six months prior to the scheduled summit. The committee will be responsible for planning, coordinating, and executing the summit's activities, including the selection of speakers, establishment of agenda, and logistics. This committee will be under the purview of the CENRO and will include representatives from other relevant city offices.

**Section 5. Funding and Sponsorship** - The SBR Summit shall be primarily funded through the Bacoor Environment Fund, supplemented by sponsorships, grants, and registration fees, as appropriate. The committee is authorized to seek additional external funding and sponsorships in alignment with the goals and themes of the Summit.

**Section 6. Documentation and Dissemination** - The proceedings, resolutions, and key insights from each SBR Summit shall be documented and published. This will include the preparation of a Summit Report that will be disseminated to all relevant city agencies and made publicly accessible for the benefit of the community.

**Section 7. Review and Follow-up Actions** - Within 60 days after the conclusion of the SBR Summit, the organizing committee will meet to review the outcomes and identify actionable items and follow-up projects based on the discussions and recommendations arising from the Summit.

**Section 8. Community Engagement** - In the lead-up to and following each SBR Summit, a series of community engagements will be conducted to disseminate information, gather input, and ensure that the outcomes of the Summit are integrated into the city's environmental strategies.

**Section 9. International Collaboration** - The SBR Summit aims to establish Bacoor as a hub for sustainable practices and welcomes the participation of international experts, institutions, and organizations. Mechanisms for international collaboration and exchange of expertise shall be explored as part of the Summit's ongoing activities.

**Section 10. Annual Review** - The efficacy, reach, and impact of the SBR Summit will be reviewed annually, with adjustments made as necessary to better align the Summit with its stated goals and the evolving environmental needs of the City of Bacoor.

#### ARTICLE XIV. Final Provisions

**Section 1. Separability Clause** - If, for any reason or reasons, any part of the provisions of this Code shall be held unconstitutional or invalid, other parts hereof which are not affected thereby shall continue to be in full force and effect.

**Section 2. Repealing Clause** - All Ordinances, Resolutions, Circulars, Memorandums or Rules and regulations inconsistent with the provision of this Code are hereby repealed and modified accordingly.

**Section 3. Effectivity Clause** - This Code shall take effect after ten (10) days from the date a copy thereof is posted in a bulletin board at the entrance of the City Hall of Bacoor and in at least two (2) other conspicuous places in the City of Bacoor not later than five (5) days after approval thereof.

**Section 4. Review and Amendment Clause** - Every seven (7) years from the enactment of this Code, a special committee shall be convened to review its provisions and effectiveness. Recommendations for amendments, if any, shall be presented to the City Council for appropriate action.

**Section 5. Monitoring and Evaluation Mechanism** - A monitoring and evaluation system shall be established to assess the effectiveness and impact of the programs and policies under this Code. Regular reports, at least annually, shall be submitted to the City Council detailing the progress and challenges encountered.

APPROVED this \_\_\_ day of \_\_\_\_\_, 202\_ at the City of Bacoor, Cavite.

*I hereby certify that the foregoing Ordinance was duly approved in accordance with law by the 5<sup>th</sup> Sangguniang Panlungsod of the City of Bacoor, Cavite.*

Certified by:

**HON. ROWENA BAUTISTA-MENDIOLA**  
*City Vice Mayor/Presiding Officer*



Attested by:

**ATTY. KHALID A. ATEGA JR.**  
*Sangguniang Panlungsod Secretary*

Approved by:

**HON. STRIKE B. REVILLA**  
*City Mayor*  
Date of Approval: \_\_\_\_\_