



# DANGERS OF THE BULACAN AEROTROPOLIS

## SUMMARY

The Bulacan Aerotropolis by the San Miguel Corporation (SMC) is purported to be the most ambitious development project in the economically-challenged Philippines during a global pandemic. Despite its 'promising' contributions to national economy, considerations regarding environmental, disaster risk reduction and management, socio-cultural, food security,

economic, legal, and governance concerns are on the line. This raises critical questions on whether the risk outweighs the cost and for whom will the Project benefit greatly. Inclusive and science-based alternatives prioritizing nature and human rights are presented to address intersectional issues that will be otherwise worsened by the proposed aerotropolis.

# BASIC FACTS

Bulacan International Airport Project  
(New Manila International Airport)



**BUDGET**  
₱735.634 Billion



**IMPLEMENTING AGENCY**  
Department of Transportation



**PROCUREMENT MODE**  
Unsolicited

- Submitted by the private sector
- Not in response to a formal solicitation or request by the government
- Not part of the list of priority projects
- No direct government guarantee
- Must involve new concept or technology



## TIMELINE

Cooperation period is Fifty (50) years. Construction period is ten (10) years.



**PRIVATE PROPONENT**  
San Miguel Aerocity, Inc.



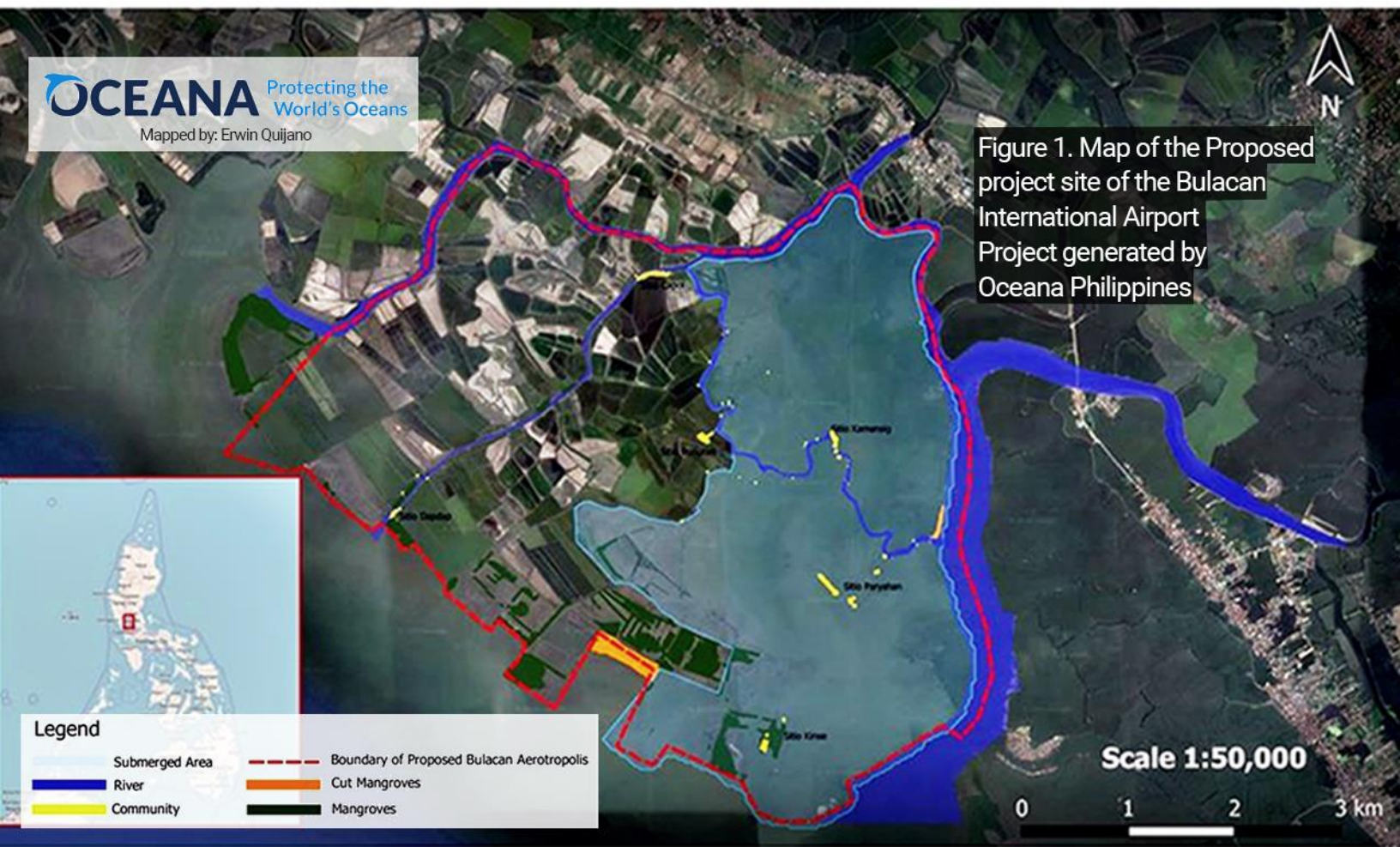
## CURRENT STATUS

Ongoing pre-construction activities



## PROJECT SITE

2,500-hectare coastal area in Bulakan, Bulacan. The proposed site 35 kilometers north of Manila will stretch from the Taliptip River Stream in Barangay Taliptip, Bulakan to Sitio Baluarte, Obando.



# ENVIRONMENTAL IMPACTS



Figure 2. Visualization of the range of the Marikina Valley Fault System (red line) generated by DOST-PHIVOLCS

## FLOODING & GEOHAZARD RISKS

- During the Senate hearing on the franchise for San Miguel Corp's aerocity in September 2020, PHIVOLCS Director and DOST Undersecretary for Disaster Risk Reduction Renato Solidum warned that the project site is **prone to strong ground shaking and liquefaction<sup>1</sup>** and thus would need mitigation measures.

The **Marikina Valley Fault System** is an active fault extending from Doña Remedios Trinidad, Bulacan, crossing Rizal and Metro Manila cities southward to Laguna.

An analysis by Galgana (2007) and Nelson et. al. (2000) showed that the west valley segment of the fault, which crosses Bulacan, is **capable for large-scale earthquakes & is ripe for movement with an estimated magnitude of up to 7.6.**

<sup>1</sup> *liquefaction* is fully or partially saturated & loosely-packed soil losing its strength due to strong ground shaking

- The project, which will be built along the coast of Manila Bay, is bound to trigger coastal flooding and storm surge on an already flood-prone area and adjacent towns.

Based on maps generated by the Bulacan Provincial Disaster Risk Reduction Management Office (PDRRMO) as shown on their website (<https://www.bulacan.gov.ph/pdcc/mapz.php>), Bulacan is susceptible to storm surges and various types of flooding.

Figures 3-6 (top to bottom) feature information from Bulacan PDRRMO maps on susceptibility of the project site (Bulakan, Bulacan) and nearby areas to flood hazards.

FIGURE 3. COASTAL FLOODING (STORM SURGE & HIGH TIDE)



FIGURE 4. RIVER FLOODING FROM UPSTREAM SOURCES



FIGURE 5. FLOODS DUE TO PONDING (RELATIVELY FLAT AREA)

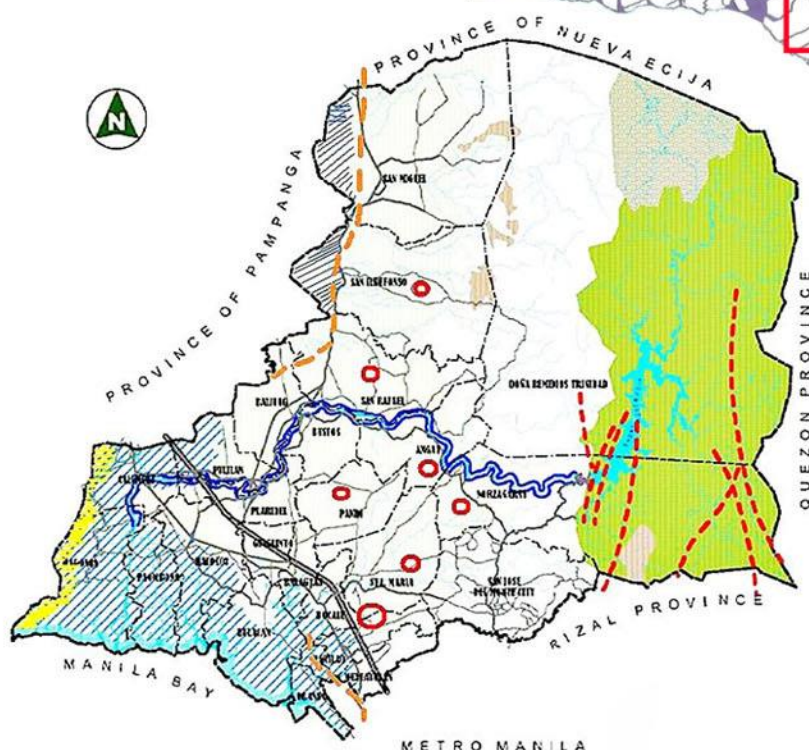


FIGURE 6. HAZARD & VULNERABILITY MAP OF BULACAN PROVINCE

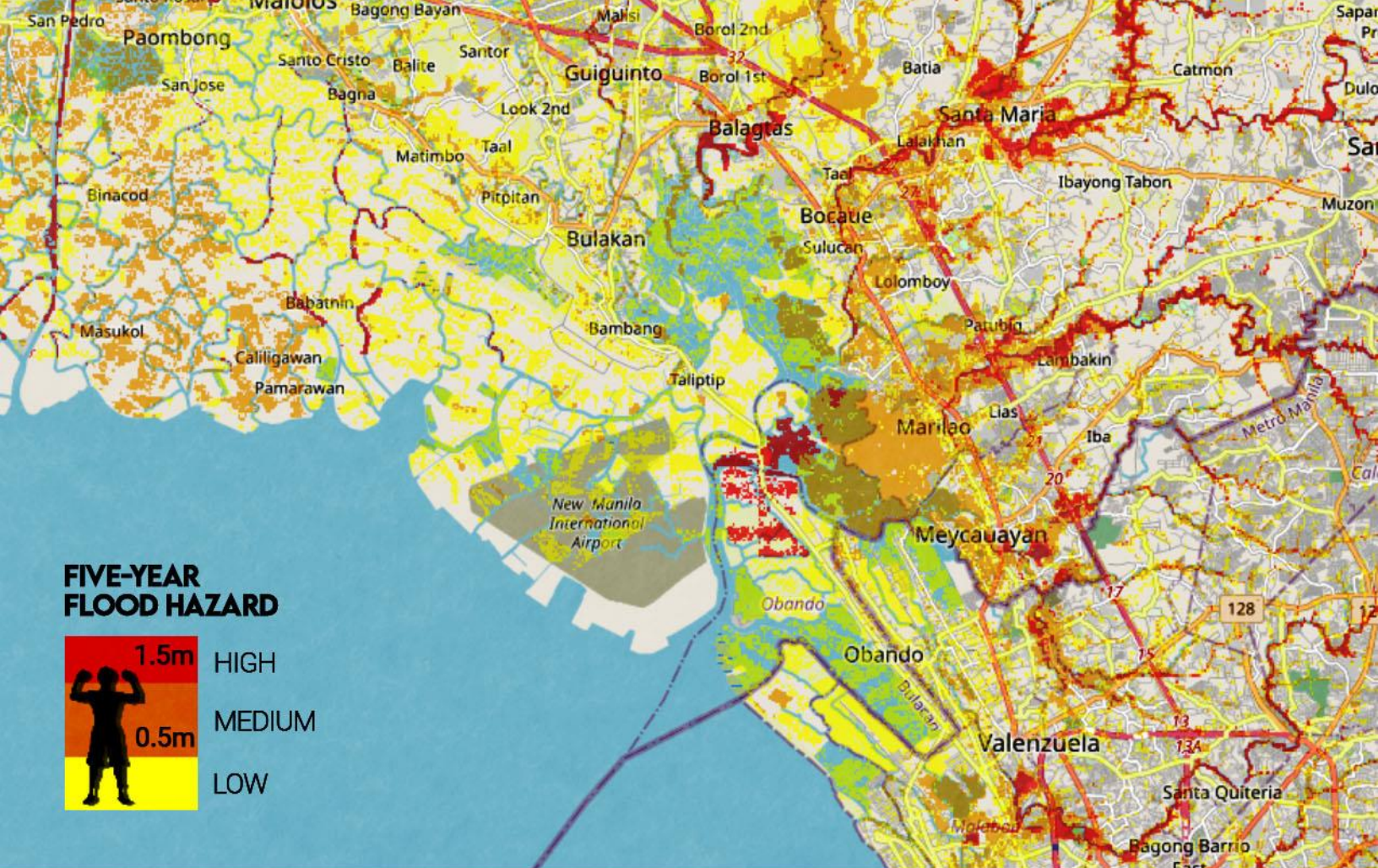


Figure 6. Five-Year Flood Hazard Map of the project site and nearby areas generated through the UP NOAH website (<http://noah.up.edu.ph/>). This features flood with 20% probability of occurring in a single year.

Flood Hazard maps from UP NOAH showcase similar data wherein **Bulacan is susceptible to flood hazards especially in areas nearby river systems.** According to the Environmental Management Bureau (EMB) of the DENR, there are recorded 17 classified water bodies spanning across Bulacan.

The **project site's susceptibility to hazards have already been perceived** through repercussions felt from disrupting the area. In May 2018, Taliptip residents have reported illegal and wide-scale mangrove cutting in the sitios. Three months later, the Bulacan

Ecumenical Forum (BEF) recounted **floodwaters entering Sitio Bunutan for the first time as high as one meter, which took two weeks for the flood to subside.**

- Bulacan and other towns of Bulacan have reported experiences of **land subsidence** (sinking of land caused by groundwater being pumped out from below). This happens often via unregulated wells for homes, factories, and farms catering to a booming population and growing economy. **Population increase brought about by the aerotropolis would essentially worsen the subsidence.**

## BIODIVERSITY THREATS

- The **rich mangrove ecosystem in the coastal waters of Bulacan** houses 22 mangrove species and diverse marine species. It **protects from floods and storm surges, and it helps increase water quality.** These mangroves will be **deforested** to make way for the aerotropolis.



- The **Manila Bay is an identified Key Biodiversity Area (KBA)** by the Biodiversity Management Bureau (BMB) in 2006. In 2019, Japanese scientists **discovered a new species of sardines endemic to Manila Bay** and other parts of the Philippines. Reclamation<sup>2</sup> projects like the aerotropolis will **disrupt and destroy marine habitats** and **put marine life population at risk.**

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<sup>2</sup> *reclamation* is the process of creating new land forms on water bodies through filling the body of water with rocks, clay, and/or cement

- **Migratory birds** from as far as China, Korea, Japan, Australia, and New Zealand prefer **wetland areas in Region 3 as a wintering refuge**. These birds feed and breed from October to March to escape the cold winter (DENR Region 3). Sightings of the endangered Black-faced Spoonbill (*pictured right*) were recorded in the project site in Brgy. Taliptip. **Disturbance of birds' migration patterns due to loss of breeding grounds would disrupt the flow of ecosystems altogether.**



Black-faced Spoonbill in Kakegawa Kachoen photographed by Takashi Hososhima. Photo is used under CC BY-SA 2.0.



- **Pollution** brought about by deforested mangroves, land fill from reclamation, development of industrial zones, and increased wastes will worsen environmental condition, increase risk of hazards, and reverse all efforts in rehabilitating Manila Bay.

An aerial photograph showing a large area of brown, muddy floodwater. In the upper left and lower left corners, there are patches of green vegetation, including palm trees and other tropical plants. In the lower right corner, a small, rectangular building with a blue roof is partially submerged in the water. The overall scene depicts a significant natural disaster, likely a flood.

# **DISASTER RISK REDUCTION & MANAGEMENT**

As defined by the World Health Organization of the UN, a disaster is an “occurrence **disrupting the normal conditions of existence** and causing a **level of suffering that exceeds the capacity of adjustment of the affected community.**” The only difference between a hazard and a disaster is the **quality of disaster preparedness and management in order to adapt and mitigate calamities.** Hazards often happen but disasters can be prevented with **proper governance, accountability, and nature-based development** preventing death, destruction, and loss. Weak governance structures are prone to deadly disasters.





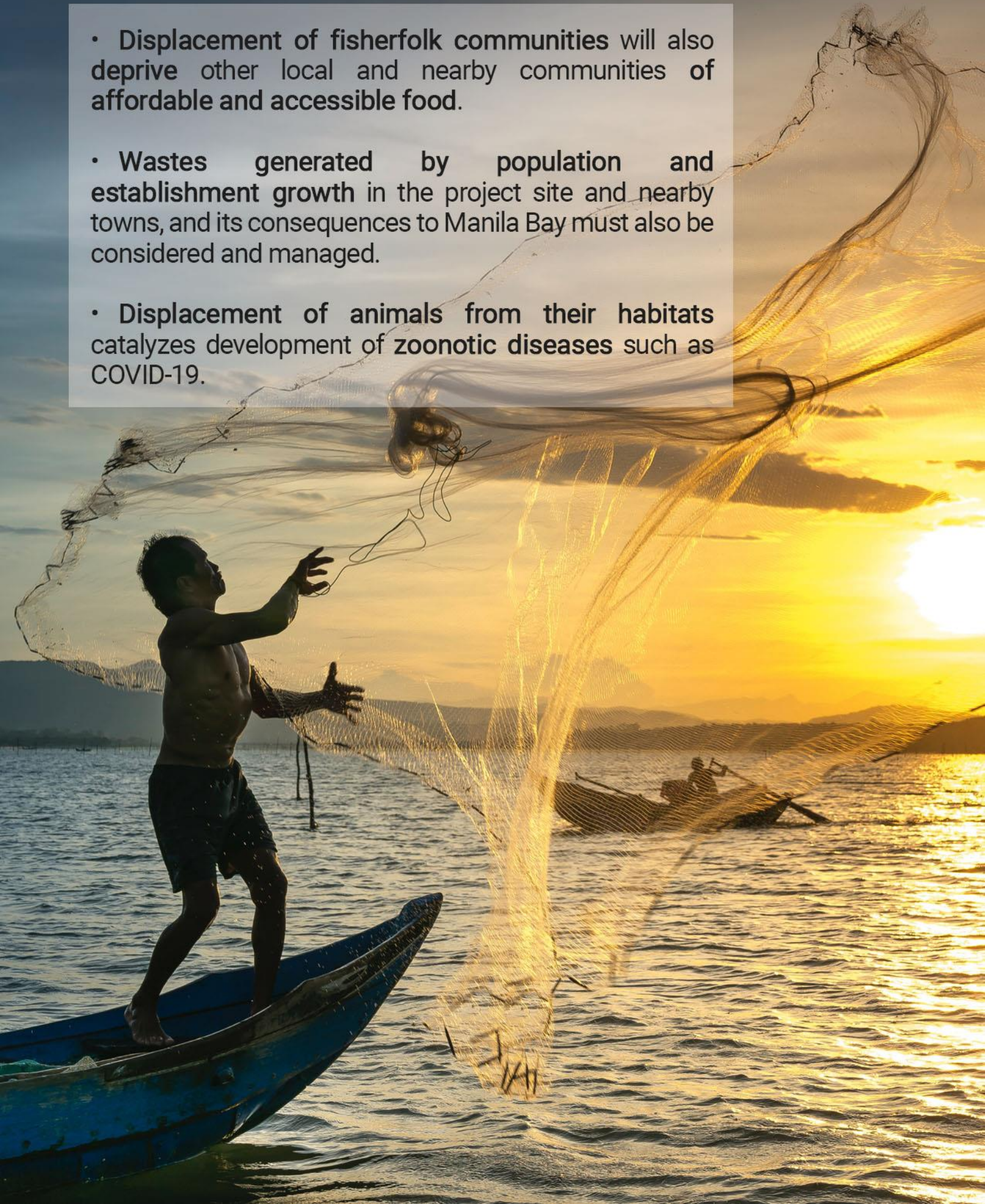
# SOCIO-CULTURAL IMPLICATIONS

- A 2019 study conducted by the UP National Institute of Geological Sciences (NIGS) highlighted the community in one of the project sites in **Talipot, Bulacan** as having **successfully adapted and withstood natural hazards** such as earthquakes, floods, and storm surges for more than 60 years of living in the bay. The community was noted to have developed an effective local early warning system, practical preparations, timely evacuation, and resilient rebuilding of homes, resulting to a record of zero casualties or major injuries to date of the study. The community keeps on coming back to the area despite the hazards because of the **benefits they gain from the environment**. With the aerotropolis project, **the encultured value for nature as a necessity for living will be disrupted** and a thriving community that otherwise could be a model population on DRRM and CCA, **will be in risk of disappearance**.

- Displacement of fisherfolk communities will also deprive other local and nearby communities of affordable and accessible food.

- Wastes generated by population and establishment growth in the project site and nearby towns, and its consequences to Manila Bay must also be considered and managed.

- Displacement of animals from their habitats catalyzes development of zoonotic diseases such as COVID-19.



# FOOD SECURITY AND ECONOMIC IMPLICATIONS

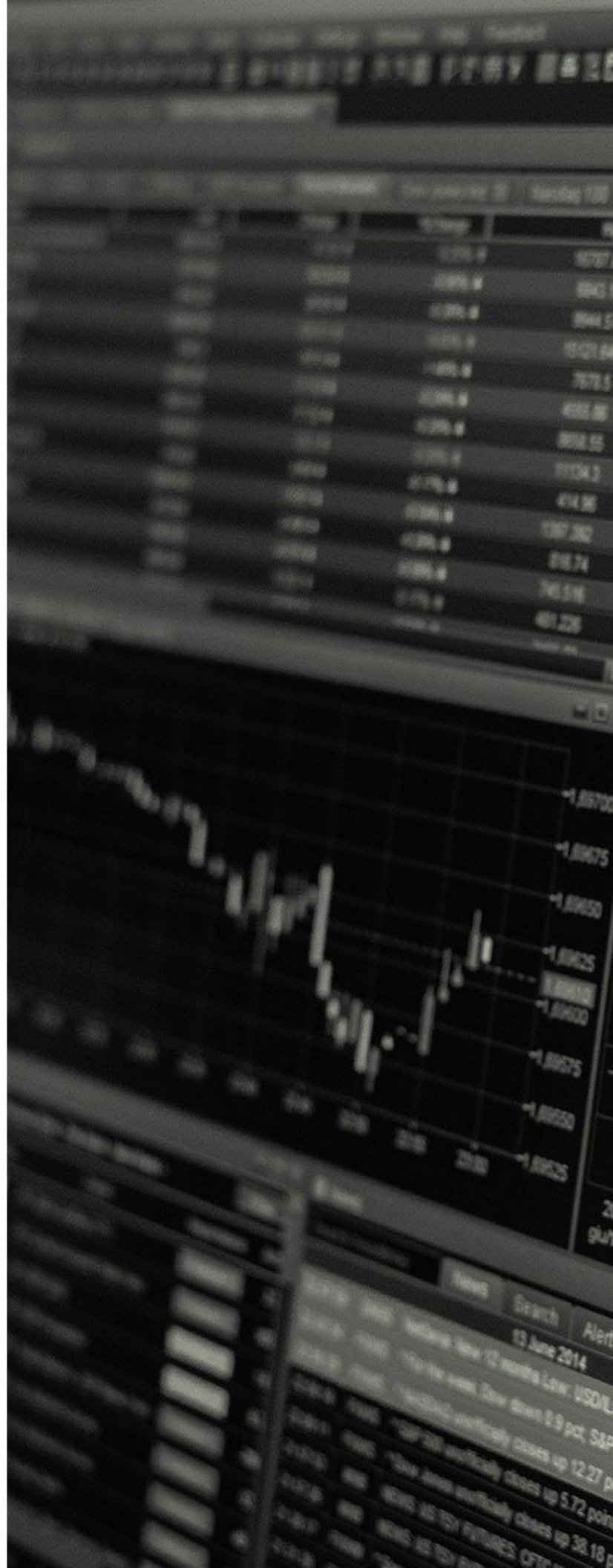
• Manila Bay is considered as one of the **major fishing grounds for sardines**, based on the National Sardine Management Framework Plan 2019-2024 by BFAR. The reclamation project of the aerotropolis will not only **displace communities**, but also **drive away animal species** who depend on the environment for subsistence, **leading to lower ecological and livelihood productivity**. This means lower food and natural products resource. Crops, houses, and establishments are more likely to be destroyed due to worsened effects of climate change aggravated by low ecological productivity. Economic benefits provided by mangroves will also deplete.

• The economy of Bulacan is dominated by agriculture, aquaculture, and agribusiness. Based on the Bulacan LGU website, **agricultural lands span 37% of the provincial total land area**, almost covering the western half of Bulacan. The impending increase in flood hazard risk brought about by the Project will **destroy farmlands and damage crops** especially palay and corn, **resulting to great losses**.



- The legislative franchise of the aerotropolis (Republic Act No. 11506) grants San Miguel Aerocity Incorporated (SMAI) a **10-year tax exemption** during its construction period. Infrawatch PH stated in October 2020 that **the government is projected to lose at least P22 billion in taxes** for the preliminary 10-year operation of the project.

- Devalin Lagos of UP Diliman's Department of Community Development noted that **unaccounted costs of reclamation should be considered** despite being excluded in discussions, since cost-benefit analysis is not required in the EIA. These would **include costs of livelihood, aid and social amelioration, health impacts, support for mental health, and loss of environmental resources, among others.**





# LEGAL AND GOVERNANCE

- The writ of kalikasan petition, however, says that **61% or 1,521 hectares** of the aerotropolis project area is either **permanent forest land or under forest land classification**, based on analyses conducted using the National Mapping and Resource Information Authority data. It also states that fishponds in mangrove areas are classified as forest lands, and that **a portion of the project site is part of the Bulacan Fishing Reservation under Republic Act No. 4701**. These findings mean the land is **public domain**.

- The **Manila Bay Sustainable Development Master Plan (MBSDMP)** is a guide developed by the government for decision-makers in evaluating projects and activities within and in areas affecting Manila bay. In the August 2020 MBSDMP updated action plan, **NEDA stated that land subsistence rate and sea level rise** in areas along Manila Bay could **hamper implementation of "any flood protection measure or development project"** and render it **"dysfunctional in the next decades."**

- There are **existing reclamation and environmental protection laws, legal frameworks, and constitutional provisions** made to protect Manila Bay and other critical habitats that should be enough reason to prohibit the project from commencing, such as (but not limited to):

- o Constitution II, Article 16 enshrines the State to **protect and advance the right of the people to a balanced and healthy ecology** in accord with the rhythm and harmony of nature.

- o Administrative Order 16 on “Expediting the rehabilitation and restoration of the coastal and marine ecosystem of the Manila Bay and creating the Manila Bay Task Force. Section 2(g) cites that concerned agencies and LGUs must undertake appropriate measures to businesses, persons, and establishments **violating environmental laws.**

- o Presidential Decree No. 1152 or the Philippine Environment Code, with the purpose to **protect and manage the environment, including but not limited to plant and animal life.**

- o G.R. No. 133250 May 6, 2003 FRANCISCO I. CHAVEZ vs PUBLIC ESTATES AUTHORITY and AMARI COASTAL BAY DEVELOPMENT CORPORATION, one of its resolutions declared that **“submerged areas of**

**Manila Bay remain inalienable natural resources of the public domain” and “outside the commerce of man.”**

- o Republic Act no. 9275 The Philippine Water Act Section 2(c) recognizing that **water quality management issues cannot be separated from concerns about water sources, ecological protection, water supply, public health, and quality of life;** and Section 22(c) for **improvement and restoration of marine life of the Manila Bay** in order to manage its fisheries and aquatic resources.

- o NHCP Resolution no. 19 S/2012 declared Manila Bay including its waterfront as a **“National Historical Landmark.”** The Cultural Heritage Act of 2009 (RA 10066) and the Philippine History Act (RA 10086) mandate **“cultural properties” to be protected by the government.** The proposed reclamation would alter the bay’s appearance.

# CALLS TO ACTION



Declare Manila Bay a Protected Area or at least a No-Reclamation Zone to protect its habitats as well as ensure ecological productivity, and sustainability. All extractive and ecologically-destructive projects should be prohibited within Environmentally Critical Areas (ECA).



More transparency in the issuance of Environmental Compliance Certificates (ECCs). Accessible data (reports and documents) and disclosure to the public especially on science-based predictions of negative impacts of reclamation projects.



SMC may look for an alternative unpopulated project site where people and the environment would not be compromised.



Reduction of the project scale to prevent large-scale consequences.



Require a more integrative cost-benefit analysis in EIAs, taking into consideration ecological integrity, community welfare, disaster risk and reduction management, among others.



Support the Rights of Nature Bill for a shift in governance towards sustainable development within the nature's limits. Additionally, there is a need to use RoN lens as framework in the evaluation of development projects to ensure sustainability.

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