

MEMO

To: Provincial Mayor of Cagayan, Mr. Manuel Mamba
From: Myron Bañez
Date: February 23, 2022
Re: Baha Center, Cagayan's Flood Inundation Modeling & Planning Center



Dear Provincial Governor of Cagayan, Mr. Manuel Mamba:

Situated between the Pacific Ocean and Sierra Madre mountain range and home to many rivers, the province has become prone to deadly flooding in the Philippines. As the northernmost province, Cagayan is vital to the Philippine economy for its use in maritime trading and cargo. Therefore it is crucial that a Flood Inundation Modeling & Planning Center be created to mitigate the effects of flooding from exacerbating the livelihoods of Cagayanos, the economy, and land. Cagayan is in a constant state of calamity. Haiyan, Ulysses, Rai, Quinta, Ramon, and many other typhoons are the markers that indicate Cagayan's vulnerability to flooding. After all, Cagayan translates to rivers.

There are many stakeholders involved in order to create the Cagayan Flood Inundation Modeling & Planning Center or what is proposed, the *Baha Center*, using the Tagalog term for flood. The Baha Center must function in operation under the Province of Cagayan's Disaster Risk Reduction Management Office, as this office would house the most resources and knowledge to conduct pressing matters related to the health and safety of the province. Coordination is also required with national government organizations such as the Department of Environmental and Natural Resources (DENR), Department of Science and Technology (DST), and Department of National Defense (DND), to provide in equipping the center with access to research and experimentation, technological infrastructure, and emergency relief.

Staffing within the Baha Center requires environmental scientists to conduct thorough analyses and data collection on the environment, data scientists to conduct various analyses and reports, and planners and architects to support in creating resilient communities. Data collection should incorporate information from Cagayan and neighboring provinces such as Ilocos Norte and Isabela to garner a greater set of sample data. With the peak of the typhoon season being from July to October, timing is crucial and data should be collected at the beginning, middle, and end of the season to ensure results are produced months prior to July that will allow for adequate time to plan. By collecting and tracking typography, soil type, average rainfall, as well as atmospheric and ocean data primarily during the peak typhoon season, the Baha Center can begin running various flood simulation models and predictions using hydrology tools such as ArcGIS and creating geospatial predictions to determine a plan of action. The results and work produced by the Baha Center should be regularly updated every month displayed as a dashboard and interactive simulation that allows everyone to understand the severity of flood risks in the province. Moreover, actionable intelligence can be manifested by ensuring the data be produced to allow for proper planning on behalf of the Department of Planning & Development to create a resilient action plan as well as for relief services to understand when support must be deployed.

The political barriers that stand in the way of agency for the Baha Center is the accountability in environmental policy at the national level. In the current state of the environment for example, President Rodrigo Duterte has made commitments to creating a more sustainable country by decreasing coal mining. However he has retracted those commitments by more than doubling coal production in the country. The death of 22 Cagayanos in the 2020 wrath of Typhoon Ulysses is one too many. With the lack of accountability at the national level, the Baha Center may not receive the sustained support of the national government. However, you have the power to create a better future for Cagayanos. Mr. Manuel Mamba, you govern a resilient province full of resilient people. You must exercise your power and display your resiliency in fighting for the land and people under your care. The establishment of the Baha Center to conduct flood inundation modeling and planning would result in protecting the citizens of the province and ensure that province is prepared for what will come in the future.

With utmost urgency,
Myron Bañez

