



MEMORANDUM

FOR : **The Directors**
Legal Affairs Service
Policy and Planning Service
Climate Change Service

The Bureau Directors
Environmental Management Bureau
Biodiversity Management Bureau

The OIC Director
Mines and Geosciences Bureau

The Administrator
National Mapping and Resource Information Authority

All Regional Executive Directors

FROM : **The Director**
Legislative Liaison Office

SUBJECT : **INVITATION TO THE PUBLIC HEARING ON SENATE RESOLUTIONS DIRECTING THE COMMITTEE TO CONDUCT AN INQUIRY, IN AID OF LEGISLATION, ON THE FLOODING PROBLEM OF THE COUNTRY FROM THE SENATE COMMITTEE ON PUBLIC WORKS**

DATE : 08 August 2023

In reference to the electronic mail received by our Office on the same date, the Committee on Public Works will conduct a Public Hearing on **09 August 2023, Wednesday, 10:00 AM**, at the **Sen. Pecson Room, 2nd Floor, Senate of the Philippines, Pasay City** to discuss the following legislative measures:

- **P.S. Res. No. 52 - RESOLUTION DIRECTING THE APPROPRIATE SENATE COMMITTEE TO CONDUCT AN INQUIRY, IN AID OF LEGISLATION, ON THE STATUS AND CONTINUING VIABILITY OF THE COUNTRY'S EXISTING FLOOD CONTROL MASTER PLAN AND PENDING FLOOD CONTROL PROJECTS UNDER THE DIRECT IMPLEMENTATION OF THE DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS (DPWH) AND METRO MANILA DEVELOPMENT AUTHORITY (MMDA), WITH THE END IN VIEW OF ENSURING A COMPREHENSIVE AND COST-EFFICIENT SOLUTION TO THE FLOODING PROBLEM THAT WOULD IMMEDIATELY BRING RELIEF TO THE PUBLIC AND IDENTIFY URGENT INTERVENTIONS TO IMPROVE MITIGATION EFFORTS OF ADVERSE EFFECTS TO THE COMMUNITIES, AND PREVENT**

SIMILAR DISASTERS IN THE FUTURE (By. Sen. Ramon Bong Revilla Jr.)

- **P.S. Res. No. 693** - RESOLUTION DIRECTING THE APPROPRIATE COMMITTEE/S OF THE SENATE TO CONDUCT AN INQUIRY, IN AID OF LEGISLATION, ON THE PLANS AND PROGRAMS OF THE GOVERNMENT TO IMPROVE THE URBAN DRAINAGE SYSTEM AND FLOOD PROTECTION OF METRO MANILA AND OTHER VULNERABLE AREAS OF THE COUNTRY (By Sen. Joel Villanueva)
- **P.S. Res. No. 717** - RESOLUTION DIRECTING THE APPROPRIATE SENATE COMMITTEE TO CONDUCT AN INQUIRY, IN AID OF LEGISLATION, ON THE ADEQUACY AND EFFECTIVENESS OF THE NATIONAL GOVERNMENTS EXISTING FLOOD CONTROL SYSTEM AND FLOOD CONTROL INTERVENTIONS AMIDST EXTREME WEATHER CONDITIONS BROUGHT ABOUT BY CLIMATE CHANGE, GLOBAL WARMING, AND GLOBAL BOILING (Sen. Imee R. Marcos)
- Privilege Speeches and Manifestations of Senators Joel Villanueva; and Loren Legarda on Flooding Situations in Metro Manila and Nearby Provinces.

In this regard, may we respectfully request your attendance at the aforementioned public hearing, as requested by the Committee. Further, kindly inform us of the name/s of the representative/s from your office who will participate in the meeting so we may include him/her/them as resource person/s.

Attached herewith are copies of the Letter Invitation and Senate resolutions.


ROMIROSE B. PADIN

cc: Undersecretary for Special Concerns and Legislative Affairs
Undersecretary for Integrated Environmental Science



Republic of the Philippines
CONGRESS OF THE PHILIPPINES
Senate
Pasay City

COMMITTEE ON PUBLIC WORKS
joint with the
**Committee on Environment, Natural Resources and Climate
Change**

8 August 2023

MARIA ANTONIA YULO-LOYZAGA

Secretary

Department of the Environment and Natural Resources
Diliman, Quezon City

Dear **Sec. Lozaga**:

Greetings!

The Committee on Public Works, chaired by Senator Ramon Bong Revilla Jr., will conduct a **Public Hearing** on **9 August 2023, Wednesday, 10:00 AM**, at the **Sen. G.T. Pecson Room, 2nd Floor, Senate of the Philippines, Pasay City** to discuss the following legislative measures:

- **P.S. Res. No. 52** - RESOLUTION DIRECTING THE APPROPRIATE SENATE COMMITTEE TO CONDUCT AN INQUIRY, IN AID OF LEGISLATION, ON THE STATUS AND CONTINUING VIABILITY OF THE COUNTRY'S EXISTING FLOOD CONTROL MASTER PLAN AND PENDING FLOOD CONTROL PROJECTS UNDER THE DIRECT IMPLEMENTATION OF THE DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS (DPWH) AND METRO MANILA DEVELOPMENT AUTHORITY (MMDA), WITH THE END IN VIEW OF ENSURING A COMPREHENSIVE AND COST-EFFICIENT SOLUTION TO THE FLOODING PROBLEM THAT WOULD IMMEDIATELY BRING RELIEF TO THE PUBLIC AND IDENTIFY URGENT INTERVENTIONS TO IMPROVE MITIGATION EFFORTS OF ADVERSE EFFECTS TO THE COMMUNITIES, AND PREVENT SIMILAR DISASTERS IN THE FUTURE (By. Sen. Ramon Bong Revilla Jr.)
- **P.S. Res. No. 693** - RESOLUTION DIRECTING THE APPROPRIATE COMMITTEE/S OF THE SENATE TO CONDUCT AN INQUIRY, IN AID OF LEGISLATION, ON THE PLANS AND PROGRAMS OF THE GOVERNMENT TO IMPROVE THE URBAN DRAINAGE SYSTEM AND FLOOD PROTECTION OF METRO MANILA AND OTHER VULNERABLE AREAS OF THE COUNTRY (By Sen. Joel Villanueva)
- **P.S. Res. No. 717** - RESOLUTION DIRECTING THE APPROPRIATE SENATE COMMITTEE TO CONDUCT AN INQUIRY, IN AID OF LEGISLATION, ON THE ADEQUACY

AND EFFECTIVENESS OF THE NATIONAL GOVERNMENTS EXISTING FLOOD CONTROL SYSTEM AND FLOOD CONTROL INTERVENTIONS AMIDST EXTREME WEATHER CONDITIONS BROUGHT ABOUT BY CLIMATE CHANGE, GLOBAL WARMING, AND GLOBAL BOILING (Sen. Imee R. Marcos)

- **Privilege Speeches and Manifestations of Senators Joel Villanueva; and Loren Legarda on Flooding Situations in Metro Manila and Nearby Provinces.**

For confirmation of your attendance, kindly inform the undersigned Committee Secretary or Ms. Sherry Garcia on or before **8 August 2023, Tuesday, 5:00 p.m.** at 8552-6601 locals 3317, 3318 and 3321, or 8552-6750.

As part of the Senate health and safety protocols, please present proof of **FULL** vaccination prior to entry within the premises. Failure of the guest/resource person to present such document shall be **DENIED** from entering. The Secretariat is required to submit a copy of the guest list to the Office of the Sergeant-At-Arms at least a day before the scheduled hearing. Those who are not on the list will be **DENIED entry**.

We look forward to your active participation in the hearing. Thank you very much.

Very truly yours,

FOR THE CHAIRPERSON:
SEN. RAMON BONG REVILLA, JR.



MARIA GINA P. DELLOMES
Legislative Committee Secretary

Hindi po makatarungan ang paulit-ulit na pagbaha hindi lamang po sa Bulacan kundi maging sa mga karatig probinsya at sa National Capital Region. Bilang Bulakenyo, nakakagalit po na parating ganito nalang ang sinasapit ng ating mga kababayan kapag may bagyo o malakas na pag-ulan.

Sa huling datos po na ating nakalap mula sa PDRRMO, nasa 100,695 mga pamilya ang apektado at mahigit 700-milyong piso na ang halaga ng perwisyo sa agrikultura at imprastruktura dahil sa pagbaha sa lalawigan pa lamang po ito ng Bulacan. Paano pa po ang ibang mga bayan? This needs to end now.

- Based on the latest report of the National Disaster Risk Reduction and Management Council (NDRRMC), Typhoon Egay left in its wake 25 fatalities and has affected 654,837 families or 2,397,336 persons in 4,111 barangays, including 13,828 families or 50,987 individuals sheltered in 737 evacuation centers. Estimated damage to agriculture was P1.96 billion and to infrastructure was P3.5 billion.¹
- Dumalaw po tayo ngayong araw sa tatlong bayan ng Bulacan – Paombong, Calumpit at Hagonoy.

1. Kailangan nating magkaroon ng kongkreto at integrated flood management program.

For this year alone, DPWH has a total budget of around P183 Billion for flood management program, of which P1.75 Billion has been allotted for the province of Bulacan. However, despite this much budget, parang walang nangyari. [we will flash pictures of various towns of Bulacan that were flooded]

We want to emphasize the importance of having an integrated flood control management program, especially in areas that have been identified as prone to flooding, like Bulacan.

- One study noted that **Bulacan** is one of the top flood-prone provinces in the country. The Mines and Geosciences Bureau (MGB) Geohazard

¹ July 31, 2023. NDRRMC: Death toll from Egay, 'habagat' onslaught rises to 25. Philippine News Agency. Available at <https://www.pna.gov.ph/articles/1206769> (Accessed on July 31, 2023).

Assessment in Region 3 published on its website in 2012² found that many of the barangays in Bulacan are susceptible to flooding.³

- Another study noted that flooding in **Marilao** is due to **high tide** and overflowing of Marilao River caused by excess **rainwater**.⁴ **Calumpit, Bulacan** is also described as one of the most flood-prone municipalities in the Pampanga River Basin (PRB).⁵
 - In September 2022, we even adopted a Resolution honoring the heroism of five (5) members of the Bulacan Provincial Disaster Risk Reduction Management Office who died in the line of duty during the onslaught of Super Typhoon “Karding”.⁶
 - Hindi lang po nag-iisa ang Bulacan sa sitwasyong ito. In July 2022, low-lying areas in Dagupan City, and Pampanga and Bataan provinces were submerged in flood for at least four days due to high tide and heavy rains. Tulad ng Bulacan, nararanasan rin po nila ngayon ang matinding pagbaha.
2. Kailangang magkaroon ng isang malinaw na polisiya tungkol sa pagpapakawala ng tubig sa mga dams. Marami sa mga residente ng Bulacan ang nagsasabi na ang patuloy na pag-release ng tubig mula sa dam ang nagpalala sa tubig baha.

This is not the first time that Bulacan residents were affected by flooding from the release of water from the dams. In January 2023, **more than 2,000 residents in Norzagaray, Bulacan** were brought to evacuation centers due to flooding as water was released from Angat, Bustos, and Ipo Dams due to continuous rain.⁷

² MGB Region 3 – Summary of Geohazard Assessment in Region 3. <https://region3.mgb.gov.ph/75-geology-and-geohazards/geohazard-assessment/69-summary-of-geohazard-assessment-in-region-3> (Publish date November 19, 2012).

³ Summary Report. Result of the MGB Geohazard Assessment Covering Twenty-Four (24) Municipalities / Cities in the Province of Bulacan. Available at https://region3.mgb.gov.ph/mgb_rol/files/pdf/Geohazard_Assessment_Map/bulacan_exec-summar.pdf.

⁴ Floodplans: Landscape plan for a flood resilient municipality of Marilao, Bulacan, Philippines. Available at <https://iopscience.iop.org/article/10.1088/1755-1315/879/1/012015/pdf> (2021).

⁵ Flood Risk Assessment in Asian Flood Prone Area with Limited Local Data – Case Study in Pampanga River Basin, Philippines. Available https://www.jstage.jst.go.jp/article/jdr/11/6/11_1150/pdf (2016).

⁶ Adopted Resolution No. 19. <https://legacy.senate.gov.ph/lisdata/3949935882!.pdf>.

⁷ January 8, 2023. Floods displace thousands as Bulacan dams spill. PhilStar. Available at <https://www.philstar.com/nation/2023/01/08/2236117/floods-displace-thousands-bulacan-dams-spill>.

3. Kailangan na rin po natin ng isang Department of Water na isa ring prayoridad ng Pangulong Marcos.

For this purpose, we filed **Senate Bill No. 2013 also known as the “National Water Act”** which seeks to create the Department of Water Resources that will be primarily responsible for the formulation, recommendation, and implementation of national policies, plans, programs for a systematic and efficient water management, and ensure the availability of water for specific purposes in the country. More specifically, this bill mandates the Department to formulate and implement a National Water Resources Management Plan that adheres to an integrated water resources management framework, and includes a water infrastructure development program. In addition, this bill mandates the creation of a Water Regulatory Commission that shall absorb the regulatory functions of local water districts, the regulatory offices of the Metropolitan Waterworks and Sewerage System (MWSS), among others.

4. Lastly, we filed Senate Resolution No. 693, or a Resolution Directing the Appropriate Committee/s of the Senate to Conduct an Inquiry, in Aid of Legislation, on the Plans and Programs of the Government to Improve the Urban Drainage System and Flood Protection of Metro Manila and Other Vulnerable Areas of the Country.

Marami na pong mga ginawa at ginagawang plano ang gobyerno para masolusyonan ang pagbaha. Ngunit parang wala o kakarampot lamang ang nagiging epekto nito.

- In 2004, Japan International Cooperation Agency’s (JICA), in coordination with the Department of Public Works and Highways (DPWH), conducted a study on enhancing capabilities in flood control. It recommended the preparation of a comprehensive flood control project implementation plan, the establishment of data or information management system, the implementation of information and education campaign, and the creation of a Principal River Flood Control Project Committee, among others;⁸
- In 2015, JICA and the Metro Cebu Development and Coordination Board (MCDCB) issued a final report on the Roadmap Study for Sustainable Urban Development in Metro Cebu, which identified the

⁸ September 25, 2022. 71 · MMDA pumping stations 100% operational. Philippine News Agency. Available at <https://www.pna.gov.ph/articles/1184558> (Accessed on June 22, 2023); May 29, 2023. Zamora: Metro Manila readies for Typhoon Betty; 423 low-lying areas being monitored. Available at <https://newsinfo.inquirer.net/1776159/zamora-metro-manila-ready-for-typhoon-betty-423-low-lying-areas-being-monitored#ixzz85Lmmr6dK> (Accessed on June 22, 2023).

conduct of a Comprehensive Study for a Metro Cebu Integrated Flood and Drainage System Master Plan as one of the next steps to address flooding in the area;⁹

- Last year, JICA, DPWH, the National Economic and Development Authority (NEDA), and the Department of Finance (DOF) held discussions for the proposed Parañaque Spillway Project, wherein an underground drainage channel will be constructed to catch overflowing flood water from Laguna Lake before pumping out to Manila Bay;¹⁰

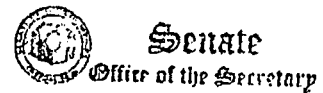
Thus, there is really a need to review the policies and revisit the programs and plans of DPWH, MMDA, DENR, and other relevant agencies on flood mitigation to ensure comprehensive solutions that will safeguard lives, minimize damages, and preserve the environment.

Thank you and may God bless us all.

⁹ July 2015. The Roadmap Study for Sustainable Urban Development in Metro Cebu. Available at <https://openjicareport.jica.go.jp/pdf/12235529.pdf> (Accessed on July 11, 2023).

¹⁰ August 9, 2022. PH Govt. – JICA Held Discussions on Parañaque Spillway Project. Department of Public Works and Highways. Available at <https://www.dpwh.gov.ph/DPWH/news/27440>. (Accessed on June 22, 2023).

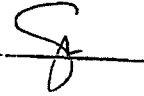
NINETEENTH CONGRESS OF THE)
REPUBLIC OF THE PHILIPPINES)
First Regular Session)



'22 JUL 18 P1:17

SENATE

P.S. Res. No. 52.

RECEIVED BY: 

Introduced by SENATOR RAMON BONG REVILLA, JR.

RESOLUTION

DIRECTING THE APPROPRIATE SENATE COMMITTEE TO CONDUCT AN INQUIRY, IN AID OF LEGISLATION, ON THE STATUS AND CONTINUING VIABILITY OF THE COUNTRY'S EXISTING FLOOD CONTROL MASTER PLAN AND PENDING FLOOD CONTROL PROJECTS UNDER THE DIRECT IMPLEMENTATION OF THE DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS (DPWH) AND METRO MANILA DEVELOPMENT AUTHORITY (MMDA), WITH THE END IN VIEW OF ENSURING A COMPREHENSIVE AND COST-EFFICIENT SOLUTION TO THE FLOODING PROBLEM THAT WOULD IMMEDIATELY BRING RELIEF TO THE PUBLIC AND IDENTIFY URGENT INTERVENTIONS TO IMPROVE MITIGATION EFFORTS OF ADVERSE EFFECTS TO THE COMMUNITIES, AND PREVENT SIMILAR DISASTERS IN THE FUTURE

1 **WHEREAS**, Article II, Section 9 of the Constitution provides that the State shall
2 "promote a just and dynamic social order that will ensure the prosperity and
3 independence of the nation and free the people from poverty through policies that provide
4 adequate social services, promote full employment, a rising standard of living, and an
5 improved quality of life for all";

6
7 **WHEREAS**, Article II, Section 16 of the same "underscores that the State shall
8 protect and advance the right of the people to a balanced and healthful ecology in accord
9 with the rhythm and harmony of nature";

10

1 **WHEREAS**, in the landmark case of *Oposa v. Factoran* (G.R. No. 101083; July 30,
2 1993), the Supreme Court elucidated that the two (2) aforementioned rights concern
3 “nothing less than self-preservation and self-perpetuation”;

4
5 **WHEREAS**, in the same case, the Supreme Court stressed that Executive Order
6 No. 292 or the Administrative Code of 1987, the Department of Public Works and
7 Highways (DPWH), as the “engineering and construction arm of the national
8 government”, shall be responsible for the planning, design, construction and maintenance
9 of infrastructure facilities, especially national highways, flood control and water resources
10 development systems, and other public works in accordance with national development
11 objectives. The Supreme Court added that in Metro Manila, the Metro Manila
12 Development Authority (MMDA), is authorized by Sec. 3(d) of Republic Act No. 7924,
13 which created it and defined its powers and functions, to perform metro-wide services
14 relating to “flood control and sewerage management which include the formulation and
15 implementation of policies, standards, programs and projects for an integrated flood
16 control, drainage and sewerage system”;

17
18 **WHEREAS**, the DPWH and the MMDA are tasked to implement the Flood
19 Management Master Plan for Metro Manila and Surrounding Areas Project in close
20 coordination with local governments and key shelter agencies;

21
22 **WHEREAS**, DPWH has reported completion of 13,224 flood control structures
23 nationwide in the last 6 years,¹ and MMDA claimed that pumping stations in the National
24 Capital Region (NCR) are ready and at “100 percent” capacity for the coming rainy season
25 during their last televised Laging Handa Briefing;²

26

¹ <https://www.dpwh.gov.ph/dpwh/news/25606>

² De la Cruz, R. (21 June 2022). NCR flood pumps 100% ready for rainy season: MMDA
Retrieved 16 July 2022, from: [NCR flood pumps 100% ready for rainy season: MMDA | Philippine News Agency \(pna.gov.ph\)](https://www.pna.gov.ph)

1 **WHEREAS**, World Bank’s Global Subnational Atlas of Poverty and Global
2 Monitoring Database estimates around 1.47 billion people globally are directly exposed
3 to the risk of intense flooding with more than one third, almost 600 million, are poor;
4

5 **WHEREAS**, the Philippines is one of the most cyclone-prone countries in the
6 world, lying on the ‘typhoon belt’, with approximately 20 typhoons entering the Philippine
7 Area of Responsibility annually, with 7-9 reaching landfall³;
8

9 **WHEREAS**, the Philippines is highly exposed to flooding, as a consequence of
10 these severe cyclones and heavy rainfall, exacerbated by unabated urbanization and
11 logging, directly affecting an estimated 176,000 Filipinos, and incurring an average of
12 \$625 million in damages to infrastructure and agriculture annually;
13

14 **WHEREAS**, the country has repeatedly witnessed catastrophic flooding of
15 communities, and tragically in a number of cases in the recent decade, the complete
16 devastation of these areas directly affected the living conditions and livelihood and led to
17 long-term negative impact on health and economy;
18

19 **WHEREAS**, the National Disaster Risk Reduction and Management Council
20 (NDRRMC) constantly reminds the public to be more vigilant and take precautions against
21 flash floods and landslides caused by inclement weather⁴;
22

23 **WHEREAS**, despite the flood control management master plan of the government
24 and the annual budget allotted for the same under the administration of the DPWH and
25 MMDA, flooding and its adverse effects continue to challenge many communities
26 nationwide especially during the rainy season;
27

³ [Philippines - Vulnerability | Climate Change Knowledge Portal \(worldbank.org\)](https://www.worldbank.org/philippines/vulnerability)

⁴ Nepomuceno, P. (11 July 2022) *Brace for rainy season, NDRRMC warns public*
Retrieved 16 July 2022, from: [Brace for rainy season, NDRRMC warns public | Philippine News Agency \(pna.gov.ph\)](https://www.pna.gov.ph/brace-for-rainy-season-ndrrmc-warns-public)

1 **WHEREAS**, the DPWH and MMDA have a combined annual allocations of more
2 than P 125 Billion pesos for flood control management program in the 2022 General
3 Annual Appropriations;⁵⁶

4
5 **WHEREAS**, the Commission on Audit (COA) reported in their Annual Audit Report
6 that twenty (20) flood control projects of the MMDA were unfinished and 39 others were
7 not completed within the contract period as of end-2021, and brought about by the
8 inadequate planning and coordination among agencies concerned, undermining the
9 welfare of the people in the capital;⁷

10
11 **WHEREAS**, MMDA has clarified that the flood control projects flagged by the COA
12 were substantially completed as of 2022 and furthered that the agency's flood mitigation
13 projects are operational;⁸

14
15 **WHEREAS**, the Climate Change, among other factors, has led to fast changing
16 weather patterns globally, hence, may have affected the design, construction and
17 maintenance of the existing flood control management system and pending national and
18 local flood control projects. Moreover, the dismal failure for timely implementation the
19 flood management mechanism and related public works, including but not limited to
20 dredging of silted rivers and the establishment of flood control systems, will continue to
21 put the lives and and livelihood of the affected communities in great peril;

22
23 **WHEREAS**, just recently, residents of Metro Manila were surprised when parts of
24 the Metro were swamped with flash floods after only a few hours of heavy downpour.⁹

⁵ 2022 DPWH Budget [DPWH.pdf \(dbm.gov.ph\)](#)

⁶ 2022 MMDA Budget [A.pcf \(dbm.gov.ph\)](#)

⁷ Aurelio, J. (July 2022) *59 MMDA flood control projects delayed - COA*. Retrieved 16 July 2022, from <https://newsinfo.inquirer.net/1620514/59-mmda-flood-control-projects-delayed-coa/amp>

⁸ Villanueva, R. (04 July 2022). *MMDA: Flood control projects completed*. Retrieved 16 July 2022, from: <https://www.msn.com/en-ph/news/national/mmda-flood-control-projects-completed/ar-AAZ9iHX>

⁹ Cerezo, A. (16 July 2022) *Flash floods swamped parts of Metro Manila*. Retrieved 17 July 2022, <https://news.abs-cbn.com/news/07/16/22/flash-floods-swamp-parts-of-metro-manila>

1 Many roads remained unpassable for a few hours, and some streets became too unsafe
2 for both vehicles and pedestrians to traverse. This is the unfortunate reality which this
3 representation now seeks to urgently address. Our people have suffered far too long, the
4 government should thus be quick in its action especially when this issue has repeatedly
5 caused menace to the Filipinos;

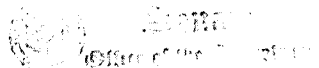
6

7 **NOW, THEREFORE, BE IT RESOLVED, AS IT IS HEREBY RESOLVED BY**
8 **THE SENATE**, to direct the appropriate Senate Committee to conduct an inquiry, in aid
9 of legislation, on the status and continuing viability of the country's existing flood control
10 master plan and pending flood control projects under the direct implementation of the
11 Department of Public Works and Highways (DPWH) and Metro Manila Development
12 Authority (MMDA), with the end in view of ensuring a comprehensive and cost-efficient
13 solution to the flooding problems that would immediately bring relief to the public and
14 identify urgent interventions to improve mitigation efforts of adverse effects to the
15 communities, and prevent similar disaster in the future.

16

17 *Adopted,*


RAMON BONG REVILLA JR.



**NINETEENTH CONGRESS OF THE)
REPUBLIC OF THE PHILIPPINES)
Second Regular Session)**

23 JUL 24 19:28

SENATE

RECEIVED

P. S. RES. NO. 693

Introduced by Senator JOEL VILLANUEVA

RESOLUTION

DIRECTING THE APPROPRIATE COMMITTEE/S OF THE SENATE TO CONDUCT AN INQUIRY, IN AID OF LEGISLATION, ON THE PLANS AND PROGRAMS OF THE GOVERNMENT TO IMPROVE THE URBAN DRAINAGE SYSTEM AND FLOOD PROTECTION OF METRO MANILA AND OTHER VULNERABLE AREAS OF THE COUNTRY

WHEREAS, Section 17, Article II of the Constitution provides that “[t]he State shall protect and advance the right of the people to a balanced and healthful ecology in accord with the rhythm and harmony of nature”;

WHEREAS, Section 2(e) of Republic Act No. 10121 or the Philippine Disaster Risk Reduction and Management Act of 2010 provides the State’s policy to “[d]evelop, promote, and implement a comprehensive National Disaster Risk Reduction and Management Plan (NDRRMP) that aims to strengthen the capacity of the national government and the local government units (LGUs), together with partner stakeholders, to build the disaster resilience of communities, and to institutionalize arrangements and measures for reducing disaster risks, including projected climate risks, and enhancing disaster preparedness and response capabilities at all levels”;

WHEREAS, based on the data of the Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAG-ASA), most tropical cyclones (TCs) enter the Philippine Area of Responsibility (PAR) at an average of eight to nine TCs yearly. From July to October, the country experiences the peak of the typhoon season as almost 70% of typhoons develop during this period. This year, 11 to 14 typhoons are expected to land in the Philippines from June to November 2023;¹

¹ Tropical Cyclone Information. Philippine Atmospheric, Geophysical and Astronomical Services Administration. Available at <https://www.pagasa.dost.gov.ph/climate/tropical-cyclone-information> (Accessed on June 21, 2023).

WHEREAS, in 2022, the Philippines ranked No. 1 out of 193 countries that are prone to natural disasters, such as tsunamis and coastal and river floods, according to the World Risk Index. Due to its high risk, exposure, vulnerability, and lack of coping mechanisms, the country received an index score of 46.86 out of 100, with higher scores denoting higher risks;²

WHEREAS, the National Capital Region (NCR), which has a land area of 619.54 square kilometers,³ is located in a semi-alluvial floodplain with Manila Bay on the west and Laguna De Bay on the south-east. As such, it now forms a sizable urbanized drainage system, frequently inundated by the overflow of river and storm waters, even with the existence of *esteros*;⁴

WHEREAS, despite studies⁵ claiming that reclamation increases the risk of flooding, there are 52 reclamation projects in the country, 22 of which are in Manila Bay, based on the data from the Philippine Reclamation Authority;⁶

WHEREAS, despite the fact that all 71 pumping stations in the NCR are 100% operational to mitigate flooding, the Metropolitan Manila Development Authority (MMDA) and the Department of Environment and Natural Resources (DENR) - Mines and Geosciences Bureau (MGB) still identified 423 low-lying barangays in Metro Manila to be at risk of flooding;⁷

WHEREAS, flooding continues to be a perennial problem, not only in highly urbanized areas but in rural areas as well;

WHEREAS, in North Luzon, low-lying areas in Dagupan City, and Pampanga and Bataan provinces were submerged in flood for at least four days due to high tide and heavy rains in July 2022;⁸

² October 6, 2022. PH most disaster-prone country in the world—study. Inquirer. Available at <https://newsinfo.inquirer.net/1676227/ph-most-disaster-prone-country-in-the-world-study> (Accessed on June 22, 2023); October 10, 2022. No. 1 in World Risk Index 2022. Inquirer. Available at <https://opinion.inquirer.net/158015/no-1-in-world-risk-index-2022> (Accessed on June 22, 2023).

³ August 26, 2021. Highlights of the National Capital Region (NCR) Population – 2020 Census of Population and Housing (2020 CPH). Philippine Statistics Authority. Available at <https://rpsoncr.psa.gov.ph/article/highlights-national-capital-region-ncr-population-2020-census-population-and-housing-2020> (Accessed on June 22, 2023).

⁴ July 2003. Vulnerability and Flooding in Metro Manila. International Institute for Asian Studies. Available at https://www.ilia's.Asia/sites/default/files/2020-11/IIAS_NL31_11.pdf (Accessed on June 21, 2023).

⁵ September 1, 2006. Coastal communities face greater threat of flooding due to land reclamation. Available at <https://www.cam.ac.uk/research/news/coastal-communities-face-greater-threat-of-flooding-due-to-land-reclamation> (Accessed on June 22, 2023); July 17, 2018. Impact of reclamation on the environment of the lower mekong river basin. Journal of Hyrdology: Regional Studies. Available at <https://www.sciencedirect.com/science/article/pii/S2214581817301891> (Accessed on June 22, 2023); August 18, 2021. Long-Term Dynamic of Land Reclamation and Its Impact on Coastal Flooding: A Case Study in Xiamen, China. Land. Available at <https://www.mdpi.com/2073-445X/10/8/866> (Accessed on June 22, 2023).

⁶ March 13, 2023. Gov't urged to stop all reclamation, quarrying in Manila Bay. Inquirer. Available at <https://newsinfo.inquirer.net/1741850/govt-urged-to-stop-all-reclamation-quarrying-in-manila-bay#ixzz85LbcvUv5> (Accessed on June 22, 2023).

⁷ September 25, 2022. 71 MMDA pumping stations 100% operational. Philippine News Agency. Available at <https://www.pna.gov.ph/articles/1184558> (Accessed on June 22, 2023); May 29, 2023. Zamora: Metro Manila ready for Typhoon Betty; 423 low-lying areas being monitored. Available at <https://newsinfo.inquirer.net/1776159/zamora-metro-manila-ready-for-typhoon-betty-423-low-lying-areas-being-monitored#ixzz85Lmmr6dK> (Accessed on June 22, 2023).

⁸ July 15, 2022. High tide, floods swamp low-lying areas in Central, North Luzon. Inquirer. Available at <https://newsinfo.inquirer.net/1628309/high-tide-floods-swamp-low-lying-areas-in-central-north-luzon#ixzz872pMYfkZk> (Accessed on July 10, 2023).

WHEREAS, several studies also noted that Bulacan is one of the top flood-prone provinces in the country and that majority of its barangays are susceptible to flooding.⁹ For example, in January 2023, the release of water from the Angat, Busto, and Ipo Dams amid persistent rain caused severe flooding, forcing more than 2,000 people from Barangays Matictic, San Mateo, and Poblacion of Norzagaray, Bulacan to be evacuated;¹⁰

WHEREAS, 17 people lost their lives in the first two weeks of January 2023 due to rains, floods, and landslides in the different regions in the south, including Lanao del Norte and Zamboanga City, which adversely affected 121,950 families or 523,991 persons. Damage to the agriculture sector reached more than P252.6 Million, while infrastructure damage was at P165.7 Million;¹¹

WHEREAS, in Cebu City, about 20 barangays were inundated in July 2022 during days of intense rain. The following month, a series of landslides and the overflowing of many of its major rivers caused damage to property and infrastructure worth roughly P600 million in Metro Cebu. The accumulation of trash in the city's major rivers, and clogged and poorly maintained drainage systems also contributed to the flooding;¹²

WHEREAS, in Davao City, 2,600 families in 14 villages along the banks of Davao River were evacuated due to the floodwater from overflowing rivers and creeks, caused by heavy rainfall in the city's upland areas in March 2022;¹³

WHEREAS, the Philippine government agencies and international organizations have conducted several joint studies to mitigate flooding and to strengthen the flood control programs of the state;

WHEREAS, in 2004, Japan International Cooperation Agency's (JICA), in coordination with the Department of Public Works and Highways (DPWH), conducted a study on enhancing capabilities in flood control. It recommended the preparation of a comprehensive flood control project implementation plan, the establishment of data or information management system, the implementation of information and education campaign, and the creation of a Principal River Flood Control Project Committee, among others;¹⁴

⁹ Result of the MGB Geohazard Assessment Covering Twenty Four (24) Municipalities/Cities in the Province of Bulacan. Mines and Geosciences Bureau-Regional Office III (MGB-R3). Available at https://region3.mgb.gov.ph/mgb_roll_files/pdf/Geohazard_Assessment_Map/bulacan_exec-summar.pdf (Accessed on July 10, 2023); Floodplans: landscape plan for a flood resilient municipality of Marilao, Bulacan, Philippines. Available at <https://iopscience.iop.org/article/10.1088/1755-1315/879/1/012015/pdf> (Accessed on July 10, 2023).

¹⁰ May 15, 2023. Bulacan folk see no end to flooding. Inquirer. Available at <https://newsinfo.inquirer.net/1769108/bulacan-folk-see-no-end-to-flooding> (Accessed on June 29, 2023); January 8, 2023. Floods displace thousands as Bulacan dams spill. PhilStar. Available at <https://www.philstar.com/nation/2023/01/08/2236117/floods-displace-thousands-bulacan-dams-spill> (Accessed on June 29, 2023).

¹¹ January 14, 2023. Rains, floods claim 17 lives in first 2 weeks of 2023. PhilStar. Available at <https://www.philstar.com/headlines/2023/01/14/2237562/rains-floods-claim-17-lives-first-2-weeks-2023> (Accessed on June 22, 2023).

¹² February 16, 2023. Flooding: Threat to life, Cebu City's progress. SunStar. Available at <https://www.sunstar.com.ph/article/1953554/cebu/local-news/special-report-flooding-threat-to-lifecebu-citys-progress#> (Accessed on June 29, 2023).

¹³ March 09, 2022. Floods hit riverside villages in Davao City. Inquirer. Available at <https://newsinfo.inquirer.net/1565413/floods-hit-riversidevillages-in-davao#ixzz86OyC5LK8> (Accessed on July 3, 2023).

¹⁴ September 25, 2022. 71 MMDA pumping stations 100% operational. Philippine News Agency. Available at <https://www.pna.gov.ph/articles/1184558> (Accessed on June 22, 2023); May 29, 2023. Zamora: Metro Manila readies for Typhoon Betty; 423 low-lying areas being monitored. Available at <https://newsinfo.inquirer.net/1776159/zamora-metro-manila-ready-for-typhoon-betty-423-low-lying-areas-being-monitored#ixzz85Lmnr6dK> (Accessed on June 22, 2023).

WHEREAS, in 2015, JICA and the Metro Cebu Development and Coordination Board (MCDCEB) issued a final report on the Roadmap Study for Sustainable Urban Development in Metro Cebu, which identified the conduct of a Comprehensive Study for a Metro Cebu Integrated Flood and Drainage System Master Plan as one of the next steps to address flooding in the area;¹⁵

WHEREAS, in 2017, the World Bank and Asian Infrastructure Investment Bank partnered with the DPWH and MMDA to modernize drainage areas, minimize solid waste in waterways, resettlement of affected communities, and project management and coordination in Metro Manila;¹⁶

WHEREAS, in 2022, the Integrated Research Program for Advancing Climate Models of Japan's Ministry of Education, Culture, Sports, Science, and Technology funded a study on enhancing Davao City's flood resiliency through an Online Synthesis System for Sustainability and Resilience;¹⁷

WHEREAS, last year, JICA, DPWH, the National Economic and Development Authority (NEDA), and the Department of Finance (DOF) held discussions for the proposed Parañaque Spillway Project, wherein an underground drainage channel will be constructed to catch overflowing flood water from Laguna Lake before pumping out to Manila Bay;¹⁸

WHEREAS, there is a need to review the policies and revisit the programs and plans of DPWH, MMDA, DENR, and other relevant agencies on flood mitigation to ensure comprehensive solutions that will safeguard lives, minimize damages, and preserve the environment;

NOW, THEREFORE, BE IT RESOLVED BY THE SENATE OF THE PHILIPPINES, that the appropriate Committee/s of the Senate conduct an inquiry, in aid of legislation, on the plans and programs of the government to improve the urban drainage system and flood protection of Metro Manila and other vulnerable areas of the country.

Adopted,


JOEL VILLANUEVA *P*

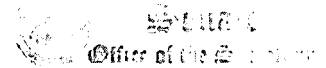
¹⁵ July 2015. The Roadmap Study for Sustainable Urban Development in Metro Cebu. Available at <https://openjicareport.jica.go.jp/pdf/12235529.pdf> (Accessed on July 11, 2023).

¹⁶ Metro Manila Flood Management Project. The World Bank. Available at <https://projects.worldbank.org/pi/projects-operations/project-detail/P153814> (Accessed on June 22, 2023).

¹⁷ 2022. Co-Design for Enhancing Flood Resilience in Davao City, Philippines. Water 2022. Available at <https://www.mdpi.com/2073-4441/14/6/978> (Accessed on July 10, 2023).

¹⁸ August 9, 2022. PH Govt. – JICA Held Discussions on Parañaque Spillway Project. Department of Public Works and Highways. Available at <https://www.dpwh.gov.ph/DPWH/news/27440>. (Accessed on June 22, 2023).

NINETEENTH CONGRESS OF THE)
REPUBLIC OF THE PHILIPPINES)
Second Regular Session)



23 AUG -1 P1:50

SENATE
P.S. Resolution No. 717

RECEIVED BY

Introduced by **SENATOR IMEE R. MARCOS**

RESOLUTION
DIRECTING THE APPROPRIATE SENATE COMMITTEE TO CONDUCT AN
INQUIRY, IN AID OF LEGISLATION, ON THE ADEQUACY AND
EFFECTIVENESS OF THE NATIONAL GOVERNMENT'S EXISTING FLOOD
CONTROL SYSTEM AND FLOOD CONTROL INTERVENTIONS AMIDST
EXTREME WEATHER CONDITIONS BROUGHT ABOUT BY CLIMATE CHANGE,
GLOBAL WARMING, AND GLOBAL BOILING

WHEREAS, Article II, Section 16 of the 1987 Constitution provides that, "The State shall protect and advance the right of the people to a balanced and healthful ecology in accord with the rhythm and harmony of nature";

WHEREAS, according to the World Bank, the Philippines is one of the most disaster-prone countries in the world. Located along the Pacific ring of fire, the Philippines is highly susceptible to seismic and volcanic risks and is also subject to the world record of typhoons every year. Furthermore, climate change and pandemics are exacerbating these risks;

WHEREAS, in 2022, the World Risk Index (WRI) of the United Nations Office for Disaster Risk Reduction placed the Philippines in the number one spot for the most-disaster-prone country in the world. The WRI report gave the Philippines an index score of 46.86, the highest among the top ten most-disaster-prone countries worldwide because of high risk, exposure, and vulnerability;

WHEREAS, an average of twenty (20) typhoons enter the Philippines annually, with the most intense coming between July and October, each one could bring damaging floods and landslides;

WHEREAS, on 27 July 2023, Super Typhoon Egay, the Philippines' fifth tropical cyclone for 2023, left the Philippine Area of Responsibility (PAR) battering Northern Luzon with intense rains and destructive winds and causing floods across several regions, provinces, cities and municipalities and more than a dozen rain-induced landslides;

WHEREAS, the National Disaster Risk Reduction and Management Council (NDRRMC) stated that among the regions hit hard by Super Typhoon Egay are Bicol, Calabarzon, Central Luzon, Ilocos, Mimaropa, Northern Mindanao and Soccsksargen;

WHEREAS, provinces such as Abra, Ilocos Sur, Ilocos Norte, and Cavite, among others have declared a State of Calamity due to the damages and adverse effects of the Typhoon;

WHEREAS, as of 29 July 2023, in Guiguinto, Bulacan alone, more than 17,000 families have been affected from various barangays. And that, almost 75% of the total agricultural areas are submerged with floodwater;

WHEREAS, in Pampanga, several municipalities are suffering from massive floods. Further in the municipality of Minalin, more or less 70% of the roads are not passable, with 3.5 ft. being the highest level of flood;

WHEREAS, according to the Department of Agriculture (DA), damage to agriculture due to Super Typhoon Egay has reached Php 53.1 million. DA Assistant Secretary for Operations Arnel de Mesa said the cost of damage is expected to further increase as reports are still ongoing;

WHEREAS, the Department of Public Works and Highways (DPWH) stated that the Typhoon caused an estimated Php 2.66 billion worth of damage to road infrastructure which comprised of: (a) Php 887.1 million damage to roads, (b) Php 48.20 million damage to bridges, and (c) Php 1.73 billion in flood-control structures;

WHEREAS, according to the Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA), at least eight (8) more tropical cyclones are likely to hit the country before the end of the year;

WHEREAS, according to Antonio Guterres (UN Secretary-General), the era of global warming has ended, and the era of global boiling has arrived. Scientists has set the record that July 2023 has been the hottest month, they further warn that extreme weather events such as floods and heatwaves will become more frequent and intense with every degree of warming;

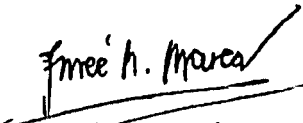
WHEREAS, the Philippine Development Plan (2023-2028) provides that the national government shall prioritize highly vulnerable, low-income local government units to access national programs and funds for disaster risk reduction, climate change adaptation, and disaster preparedness. These include flood control, coastal protection,

early warning systems, operations center, permanent evacuation centers, critical infrastructure and facilities, and climate-resilient livelihood, among others;

WHEREAS, given the abovementioned circumstances, there is a need for the national government to immediately study and review the Flood Control System and Flood Control Interventions, as well as engineering solutions of the country specifically in the areas which are prone to flooding due to rising sea levels amid climate change, global warming, and global boiling including the study on the impact of the ongoing and existing reclamation projects, silted rivers, and subsidence to protect and safeguard lives, property, and the environment;

NOW, THEREFORE, BE IT RESOLVED AS IT IS HEREBY RESOLVED, directing the appropriate Senate committee to conduct an inquiry, in aid of legislation, on the adequacy and effectiveness of the National Government's existing Flood Control System and Flood Control Interventions amidst extreme weather conditions brought about by climate change, global warming, and global boiling.

Adopted,


IMEE R. MARCOS