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SENATE

S.B. No. 591

RECEIVED BY: 

INTRODUCED BY SENATOR RISA HONTIVEROS

**AN ACT
ESTABLISHING THE NATIONAL COASTAL GREENBELT PROGRAM, PROVIDING
FUNDS THEREFOR, AND FOR OTHER PURPOSES**

EXPLANATORY NOTE

In 2013, super-typhoon Yolanda (Haiyan) hit Eastern Visayas and felt in other parts of the country as it left 6,201 killed and four million people lost their homes. It was estimated that over 14 million people were affected over 46 provinces. In 2020, a similar deadly Super Typhoon Rolly battered the Bicol Region and neighboring areas that killed at least 20 people, of which 14 were from Albay and 6 from Catanduanes, based from the report of the Office of Civil Defense. It also damaged agricultural crops and infrastructure worth Php6 billion as estimated by the Department of Agriculture and Department of Public Works and Highways.

Previous storms, Ondoy, Pablo, Sendong and Odette in 2021 have wrought havoc to other cities and provinces in the past half-decade, crippling the economic and social development of the Filipino people. In Typhoon Odette alone, the total number of affected fisherfolk reached 41, 176 and the total damage and losses amounted to Php3,969,118.09 based from the Damage and Losses Assessment by the Department of Agriculture-Bureau of Fisheries and Aquatic Resources.

The Philippines is battered by more than 20 typhoons a year, with an increasing number in the super-typhoon category. These could bring as much damage as Yolanda and Rolly. The losses attributed were caused by storm surges and strong winds coming from the open ocean, particularly in the Eastern Pacific Seaboard. In the age of global climate change, this has unfortunately become the new normal.

The poor coastal communities' natural exposure to storm surges and lack of resources for preparation and recovery make them most vulnerable.

It is imperative to think of innovative, sustainable and cost-efficient ways for Filipinos to protect themselves, their properties and communities from the devastating impacts of natural disasters.

The Philippines is taking great strides in disaster preparedness. Recent laws created the Climate Change Commission through Republic Act No. (R.A.) 9729 and strengthened the National Disaster Risk Reduction and Management Council through R.A. No. 10121. In addition, the People's Survival Fund through R.A. No. 10174 was created to support adaptation activities of local governments and communities to increase their resilience.

Disaster preparedness comprises a whole suite of items, such as early warning systems, elevated shelters, hard engineering (e.g., breakwaters) and green engineering/infrastructure.

The establishment of greenbelts of mangroves and beach forests along coastlines is a proven green engineering intervention. Coastal greenbelts particularly mangroves plays an essential role in mitigating climate change and its impacts. Collectively termed as blue carbon ecosystem along with salt marsh and seagrass meadows have been regarded as powerhouse of carbon sequestration. The role of blue carbon ecosystems, particularly mangroves, are now being incorporated in the climate change mitigation modalities particularly in the Reducing Emission from Deforestation and Forest Degradation or REDD (IUCN 2012).

Nature-based solutions for climate such as coastal greenbelt protection and management, harness the power of nature to reduce greenhouse gas emissions and also help us adapt to the impacts of climate change and reduce disaster risks. They are win-win solutions that involve protecting, restoring and sustainably managing ecosystems to address society's challenges and promote human well-being. It also addresses our biodiversity crisis. Globally, around a million animal and plant species are now threatened with extinction - more than ever before in human history because of mangrove destruction.

As the Philippines' 36,000 km coastline is among the longest in the world, coastal greenbelts effectively mitigate the damaging impacts of waves and storm surges. Some of the scientifically proven benefits are:

- Wave height of wind and swell waves can be reduced by 13-66% over 100m of mangroves;
- Storm surge attenuation of 5-50 cm per kilometer width of mangroves;
- Surface wind waves can be reduced by more than 75% over one kilometer of mangroves;
- 50% reduction in storm surges by a 7-km band of mangroves.

Furthermore, coastal forests can reduce the force, depth and velocity of a tsunami, lessening damage to property and reducing loss of life. In addition, mangrove root growth pushes the soil upward, resulting in a higher soil level. These processes can allow mangroves to keep pace with rising sea levels. Some mangroves sit on top of deep layers of mangrove peat that may be 6 meters deep or more, that were built up over thousands

of years as sea levels rose. These mangrove soils grew vertically at rates of up to 10 mm per year in sites from Australia to Belize, suggesting that mangroves may be able to keep up with similar rates of sea level rise into the future, where local conditions allow. While not all mangroves may be able to fully “keep up” with rising seas, even a small increase in soil surface height over time may help to reduce the impact of sea level rise on coastal areas. Mangroves may be able to colonize landward areas if space is available, and thus, continue to provide coastal defense services against waves and storms.

Coastal greenbelts are also cost-effective for disaster preparedness in the long term. The total valuation of mangroves is estimated at US\$14,000-16,000 per hectare, of which about 80% is for coastal protection value. The cost of establishing coastal greenbelts to protect against storm surge and tsunami would only be a fraction of the damages that could be brought by the yearly battering of typhoons.

A number of existing laws, policies and regulations on mangroves have been issued over the years resulting in a fragmented and conflicting policy environment. This bill aims to come up with a strategic program to rationalize the development of mangroves and beach forests for coastal protection; it is anchored on a comprehensive policy framework that addresses the fragmented approach in the past.

Establishing the National Coastal Greenbelt Program shall provide appropriate agencies and government instrumentalities the mandates, funding, and general guiding principles for implementing a science-based and cost-effective program. The proposed National Greenbelt Program mandates establishment of 100-meter protection zones, initially for the Eastern Pacific seaboard, where typhoons make landfall. This Program can also reap added benefits. The establishment of science-based coastal greenbelts is expected to protect biodiversity, improve fisheries productivity, and enhance the tourism and livelihood potential of the area. Transforming vulnerable coastal villages into highly resilient and sustainable communities is a step towards a nation that is inclusive for all.

In view of the foregoing, the approval of this bill is earnestly sought.


RISA HONTIVEROS
Senator

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AN ACT
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Be it enacted by the Senate and the House of Representatives of the Philippines in Congress assembled:

1 SECTION 1. *Title.* – This Act shall be known as the “National Coastal Greenbelt
2 Act.”

3 Sec. 2. *Declaration of Policy.* – The State shall ensure the protection of the rights
4 of the people to a healthful and balanced ecology as enshrined in our 1987 Philippine
5 Constitution. Consistent with the Climate Change Act of 2009 (R.A. No. 9729), as
6 amended by R.A. No. 10174, the State shall encourage the participation of the national
7 government, local governments, businesses, nongovernment organizations, local
8 communities and the public to prevent and reduce the adverse impacts of climate change.
9 The State shall also recognize that climate change and disaster risk reduction and
10 management are closely interrelated. The State shall incorporate a gender-sensitive, pro-
11 children and pro-poor perspective in all plans of disaster risk reduction and management
12 and applies the Ecosystem-Based Adaptation to climate change. These principles shall be
13 further integrated into climate change programs and initiatives. Taking into account the
14 effects of climate change and the need to conserve and develop the conditions of our
15 environment, the State shall take appropriate measures to protect the lives and property
16 of the people from the impacts in coastal areas of typhoons, tsunamis and similar natural
17 events.

18 Sec. 3. *Definition of Terms.* – As used in this Act, the following terms shall mean:

19 a. *Coastal greenbelts* – a strip of natural or planted coastal vegetation, stretching
20 at least 100 meters in width from the sea towards land, primarily of mangrove
21 and beach forest species, which are designed to prevent coastal erosion, and
22 mitigate the adverse impacts of natural coastal hazards on human lives and
23 property.

- 1 b. *Designated area for coastal greenbelts* – site-specific stretch of vegetation in
2 the coastal zone, defined in relation to risk factors and vulnerability to coastal
3 hazards, and reserved for protection and maintenance under the National
4 Coastal Greenbelt Action Plan. The area may undergo rehabilitation,
5 reforestation or afforestation with locally appropriate species. Designated areas
6 with abandoned fishponds require the reversion of these fishponds to
7 mangroves through natural regeneration or replanting with locally appropriate
8 species. Designated areas with illegal structures (such as breakwaters,
9 permanent residential/ commercial structures, and the like) require removal of
10 such structures.
- 11 c. Ecosystem-Based Adaptation-is an approach to address climate change
12 through the use of biodiversity and ecosystem services as part of an over-all
13 adaptation strategy to help people to adapt to the adverse effects of climate
14 change (Convention on Biological Diversity, 2009)
- 15 d. *Local Coastal Greenbelt Action Plan (LCGAP)* – the local action plan shall be
16 based on the NCGAP. It shall contain the specific goals and targets for the
17 implementation of the program set in the NCGAP.
- 18 e. *National Coastal Greenbelt Action Plan (NCGAP)* – the operational plan that
19 shall serve as the guide for the Local Greenbelt Action Plan (LCGAP). It shall
20 contain the implementing guidelines on how to go about Section 4 of this Act.

21 *Sec. 4. National Coastal Greenbelt Action Plan (NCGAP).* – The Climate Change
22 Commission shall, within six (6) months, identify and convene all national government
23 agencies and instrumentalities responsible for foreshore management, mangrove and
24 beach forest protection and utilization, coastal land and sea-use planning, coastal tourism
25 development, social welfare of coastal communities, and other relevant mandates, to
26 prepare an National Coastal Greenbelt Action Plan (NCGAP). The NCGAP will provide input
27 to the National Climate Change Action Plan (NCCAP) and the Nationally Determined
28 Contributions that the Philippines will submit to the United Nations Framework Convention
29 on Climate Change (UNFCCC) as part of its commitment to the Paris Agreement.

30 The NCGAP, at the minimum, contain the following:

- 31 a. Spatial representation, or if feasible, quick/ rapid inventory of the status of
32 coastlines and foreshores, including the status of mangroves, beach forests,
33 settlements, structures and fishponds at least within 100 meters therein;
- 34 b. Assessment of priority areas to be declared as coastal greenbelts, for each
35 coastal province, city and municipality, to protect by means of mangroves and
36 beach forests, based on vulnerability to storm surges, waves, tsunami and the

1 like. The Action Plan shall indicate that the assessment of priority areas shall
2 be completed within twelve (12) months from the adoption of the NCGAP. The
3 CCC through its National Panel of Technical Experts shall determine the criteria
4 for selection for the priority areas under the NCGAP;

- 5 c. Designation of priority areas for coastal greenbelts that are already included as
6 either a protected area under the National Integrated Protected Areas System
7 (R.A. No. 7586), or Expanded NIPAS (R.A. No. 11038) or as a fish refuge or
8 sanctuary under the Fisheries Code of 1998 (R.A. No. 8550, as amended by
9 R.A. No. 10654), or as a local marine protected area or fish sanctuaries as may
10 be declared by municipalities and cities through ordinances. The designation
11 shall be completed within six (6) months from the completion of the
12 assessment. Designation shall also be done through a proposal to the
13 appropriate agency, municipality or city as may be deemed necessary. If an
14 area is designated as a priority area, no structure shall be allowed in said area
15 unless it is approved by the DENR or BFAR, as may be appropriate;
- 16 d. Operational Plan for the rehabilitation, reforestation or afforestation of
17 designated priority coastal greenbelts with ecologically appropriate mangrove
18 and beach forest species, at least one hundred (100) meters in width. Existing
19 forests or plantations greater than the minimum width shall not be reduced.
20 The program for rehabilitation, reforestation or afforestation shall be
21 community-based, long term and implemented through the municipality or city
22 government. The Operational Plan shall indicate that the program for
23 rehabilitation, reforestation and afforestation must cover a minimum target
24 area of twenty percent (20%) of the designated priority areas in the first five
25 (5) years for maximum protection of the most vulnerable communities in the
26 city or municipality. The remaining priority areas must be completed within ten
27 (10) years the designation of the priority area. When necessary, the plan shall
28 be complemented and/or combined with simple engineer solution to support
29 rehabilitation, reforestation or afforestation initiatives and provide additional
30 services such as avoiding further coastal erosion, provide coastal protection
31 from wind waves and storm surges if possible.
- 32 e. Operational Plan for the reversion of all abandoned fishponds to mangroves
33 through natural regeneration or replanting with locally appropriate species. The
34 NCGAP shall indicate that the identification and recovery of possession from
35 delinquent fishpond lease agreement holders shall be completed within twelve
36 (12) months from the adoption thereof. All fishpond areas to be reverted to

1 mangroves shall form part of the minimum target for the first year of
2 implementation of the Action Plan. In addition the plan should also include a
3 comprehensive study of carbon sequestration capacity of mangroves or carbon
4 stock assessment in the country.;

5 f. Operational Plan for the removal of illegal structures (such as breakwaters,
6 permanent residential/ commercial structures, and the like), in the identified
7 priority coastal greenbelts. The NCGAP shall indicate that the declaration of and
8 notice to persons responsible for removal of illegal structures shall be
9 completed within twelve (12) months from the adoption thereof. The removal
10 of illegal structures in and start of rehabilitation, reforestation or afforestation
11 of these areas shall form part of the minimum target for the first year of
12 implementation of the Action Plan.

13 g. Monitoring and evaluation plan, with quantitative and qualitative targets
14 consistent with (d), (e) and (f) above, appropriate indicators and reasonable
15 means of verification. The plan shall become an integrated part of the Action
16 Plan and Annual Report to Congress.

17 The Climate Change Commission (CCC) shall be responsible for consolidating the
18 NCGAP not later than twelve (12) months from the date this Act takes effect.

19 *Sec. 5. Key Implementing Agencies.* – The following agencies shall take the lead
20 in implementing components of the Program and Action Plan that are relevant to their
21 mandates:

22 a. The Climate Change Commission (CCC) shall be responsible for the
23 congregation of relevant government agencies, facilitation of public
24 participation in the preparation of the NCGAP, integration of the NCGAP into
25 Local Coastal Greenbelt Action Plans and the preparation of the integrated
26 report to Congress especially with regard to the expenditure of the
27 appropriation and other pertinent matters under Section 8 of this Act;

28 b. The Department of Environment and Natural Resources (DENR), through its
29 relevant offices, shall be responsible for (a), (b), (c), (d), (e), and (f) of Section
30 4 of this Act in line with existing laws and mandates, and it shall provide the
31 CCC all relevant information to aid in the monitoring and evaluation of the
32 NCGAP. In particular, the DENR shall identify the Designated Areas that will
33 need to be expropriated by the government and to recommend the
34 expropriation plan to the CCC;

35 c. The Bureau of Fisheries and Aquatic Resources (BFAR) of the Department of
36 Agriculture (DA) shall coordinate with the DENR for (e) in Section 4 above or

1 the Operational Plan that provides for the reversion of all abandoned fishponds
2 to mangroves through natural regeneration or replanting with locally
3 appropriate species in line with existing laws and mandates, and it shall provide
4 the CCC all relevant information to aid in the monitoring and evaluation of the
5 NCGAP'

- 6 d. The Department of Interior and Local Government (DILG) through its relevant
7 offices, shall provide technical guidance for provinces, cities and municipalities
8 to develop Local Coastal Greenbelt Action Plans, design and implement
9 community-based and ecologically appropriate rehabilitation, reforestation and
10 afforestation programs, and monitor and evaluate their programs. In particular,
11 the Local Inter Agency Committee (LIAC) shall coordinate with the Local
12 Government Unit in implementing the action plans.

13 In addition, the National Housing Authority (NHA) shall provide appropriation
14 for the relocation of the families or individuals who will be affected by the
15 implementation of the NCGAP and the LCGAP. The other agencies that
16 participated in the preparation of the Action Plan shall implement their
17 commitments, as provided therein. The actions required of implementing
18 agencies are immediately executable, based on the agreed NCGAP, and on
19 other existing mandates, programs and budgets that are aligned with the
20 NCGAP, without need for formulating implementing guidelines, rules and
21 regulations for this Act.

22 *Sec. 6. National Panel of Technical Experts.* – Consistent with R.A. No. 9729, the
23 National Panel of Technical Experts shall provide scientific guidance to the CCC in the
24 design, implementation and evaluation of actions under the NCGAP.

25 *Sec. 7. Local Coastal Greenbelt Action Plan.* – Each coastal municipality and city in
26 the identified priority coastal greenbelt areas in the Action Plan shall prepare a Local
27 Coastal Greenbelt Action Plan (LCGAP) or its equivalent or from its local climate change
28 action plan (LCCAP) to facilitate the implementation of mandated actions in the NCGAP.
29 The roles of the municipality or city, particularly the Municipal/City Agriculture Offices and
30 the Municipal/City Planning Development Office as provided in the LCGAP shall be to:

- 31 a. Facilitate the implementation of the mandates of the national agencies under
32 Section 4, by providing local data and other supporting measures;
- 33 b. Implement complementary programs to assist local communities and local
34 businesses that are affected by the actions under Section 4, such as relocation
35 sites with basic services such as livelihood and transportation programs, zoning

1 or re-zoning of the priority coastal greenbelt areas, as appropriate, and the
2 like;

- 3 c. Provide the actual inventory of affected families in Designated Areas and to
4 ensure that a just and humane processes of relocation is done;
- 5 d. Lead in the actual implementation of rehabilitation, reforestation and
6 afforestation, through the coastal barangays;
- 7 e. Integrate the identified coastal greenbelts in the Comprehensive Land-Use
8 Plan;
- 9 f. Provide data and qualitative feedback to the Key Implementing Agencies as
10 may be relevant.

11 The provincial government shall provide technical and budgetary support to
12 component coastal cities and municipalities, and ensure consistency across contiguous
13 cities and municipalities sharing a common priority coastal greenbelt area.

14 *Sec. 8. Enforcement Actions. –*

- 15 a) In addition to the penalties provided under existing law, any person who
16 obstructs the DENR in the removal of illegal structures, or BFAR in the process
17 of reversion of abandoned fishponds, shall be liable to that agency for an
18 administrative fine of fifty thousand pesos (P50,000) per day that the agency
19 is prevented from performing its function.
- 20 b) No structure shall be built within the identified coastal greenbelts without a
21 permit from DENR or BFAR, consistent with their mandates. Any person who
22 violates this prohibition shall be liable to the agency for an administrative fine
23 of fifty thousand pesos (P50,000) per day from the time the structure was built
24 until its removal.
- 25 c) Proceeds from administrative fines under this Section shall be retained by the
26 agency imposing such fines and used exclusively for the implementation of its
27 mandate under this Act.
- 28 d) Funds from the enforcement actions under this Act shall be pooled for the
29 management and protection of Coastal Greenbelts; and
- 30 e) Legal actions filed in the exercise of rights and enforcement of obligations
31 under this Act shall be covered by the Rules of Procedure for Environmental
32 Cases.

33 *Sec. 9. Incentives to Local Government Units. –* The CCC in coordination with the
34 DA-BFAR and the DENR shall design an incentive award system for LGUs that have
35 finalized their evidence-based LCGAP and have supported the establishment of coastal
36 greenbelts in their areas.

1 Section 10. *Annual Report to Congress.* – The Key Implementing Agencies shall
2 report to Congress on their progress in meeting the quantitative and qualitative targets
3 under the Action Plan for each fiscal year. The reports shall be consolidated by the Climate
4 Change Commission for presentation to the appropriate Committee in Congress at a
5 meeting called for the purpose.

6 Sec. 11. *Implementing Rules and Regulations.* – Within sixty (60) days from the
7 effectivity of this Act, the CCC, in consultation with the stakeholders, shall promulgate
8 the necessary rules and regulations for the effective implementation of this Act.

9 Sec. 12. *Appropriations.* – The Key Implementing Agencies shall draw from their
10 existing programs and budgets to implement their responsibilities under the Action Plan
11 and subject to additional funding in the annual national appropriations, to meet the
12 targets agreed in the Action Plan.

13 Sec. 13. *Separability Clause.* – Should any provision of this Act is declared
14 unconstitutional, the same shall not affect the validity of the other provisions of this Act.

15 Sec. 14. *Repealing Clause.* – All laws, decrees, orders, rules, and regulations or
16 other issuances or parts inconsistent with the provisions of this Act are hereby repealed
17 or modified accordingly.

18 Sec. 15. *Effectivity.* – This Act shall take effect fifteen (15) days after publication
19 in the Official Gazette and in two (2) newspapers of general circulation in the Philippines.

Approved,