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SENATE  
S.B. No. 2179

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Introduced by: Senator Paolo Benigno "Bam" A. Aquino IV.

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#### EXPLANATORY NOTE

Last year, super-typhoon Yolanda (Haiyan) hit Eastern Visayas and left thousands of people dead. Millions more became homeless and now, are struggling to cope with the loss of loved ones, life savings and livelihood.

Previous storms, Ondoy, Pablo and Sendong have wrought havoc to other cities and provinces in the past half decade, crippling the economic and social development of the Filipino people. 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. The losses attributed were caused by storm surges and strong winds coming from the open ocean. 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 (R.A. No. 9729) and strengthened the National Disaster Risk Reduction and Management Council (R.A. No. 10121). In addition, the People's Survival Fund (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.

An establishment of greenbelts of mangroves and beach forests along coastlines is a proven green engineering intervention. 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. 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 the agency 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.



Paolo Benigno A. Aquino IV



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

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

*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 Act  
2 of 2014."

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

16           **SECTION 3.-Definition of Terms.**

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

22           b. Designated area for coastal greenbelts - site specific stretch of vegetation in  
23 the coastal zone, defined in relation to risk factors and vulnerability to  
24 coastal hazards, and reserved for protection and maintenance under the  
25 National Coastal Greenbelt Action Plan. The area may undergo rehabilitation,  
26 reforestation or afforestation with locally appropriate species. Designated

1 areas with abandoned fishponds require the reversion of these fishponds to  
2 mangrovesthrough natural regeneration or replanting with locally  
3 appropriate species. Designated areas with illegal structures (such as  
4 breakwaters, permanent residential/commercial structures, and the like)  
5 require removal of such structures.

6 c. National Coastal Greenbelt Action Plan (NCGAP)- the operational plan that  
7 shall serve as the guide for the Local Greenbelt Action Plan (LCGAP). It shall  
8 contain the implementing guidelines on how to go about Section 4 of this  
9 Act.

10 d. Local Coastal Greenbelt Action Plan (LCGAP)- the local action plan shall be  
11 based on the NCGAP. It shall contain the specific goals and targets for the  
12 implementation of the program set in the NCGAP.

13 **SECTION 4.-National Coastal Greenbelt Action Plan (NCGAP).**The Climate  
14 Change Commission shall, within six (6) months, identify and convene all national  
15 agencies responsible for foreshore management, mangrove and beach forestprotection  
16 and utilization, coastal land and sea-use planning,coastal tourism development, social  
17 welfare of coastal communities, and other relevant mandates, to prepare an integrated  
18 National Coastal Greenbelt Action Plan (NCGAP).

19 The NCGAP shall, at the minimum, contain the following:

20 a. Spatial representation, or if feasible,quick/rapid inventoryof the status of  
21 coastlines and foreshores, including the status of mangroves, beach forests,  
22 settlements, structures and fishponds within 100 meters therein;

23 b. Assessment of priority areas to be declared as coastal greenbelts, for each  
24 coastal province, city and municipality,to protect by means of mangroves and  
25 beach forests, based on vulnerability to storm surges, waves, tsunami and  
26 the like. The Action Plan shall indicate that the assessment of priority areas  
27 shall be completed within twelve (12) months from the adoption of the  
28 NCGAP;

29 c. Designation of priority areas for coastal greenbelts that are already included  
30 as either a protected area under the National Integrated Protected Areas  
31 System (R.A. No. 7586), or as a fish refuge or sanctuary under the Fisheries  
32 Code of 1998 (R.A. No. 8550), or as a local marine protected area as may be  
33 declared by municipalities and cities through ordinances. The designation  
34 shall be completed within six (6) months from the completion of the  
35 assessment. Designation shall also be done through a proposal to the  
36 appropriate agency, municipality or city as may be deemed necessary. If an  
37 area is designated as a priority area, no structure shall be allowed in said  
38 area unless it is approved by the DENR or BFAR, as may be appropriate;

39 d. Operational Plan for the rehabilitation, reforestation or afforestation of  
40 designated priority coastal greenbelts with ecologically appropriate  
41 mangrove and beach forest species, not less than one hundred (100) meters  
42 in width. Existing forests or plantations greater than the minimum width shall  
43 not be reduced. The program for rehabilitation, reforestation or afforestation  
44 shall be community-based, long-term and implemented through the  
45 municipality or city government. The Operational Plan shall indicate that the  
46 program for rehabilitation, reforestation and afforestation must cover a

1 minimum target area of twenty percent (20%) of the designated priority  
2 areas in the first five (5) years for maximum protection of the most  
3 vulnerable communities in the city or municipality. The remaining priority  
4 areas must be completed within ten (10) yearsthe designation of the priority  
5 area;

6 e. Operational Plan for the reversion of all abandoned fishponds to mangroves  
7 through natural regeneration or replanting with locally appropriate species.  
8 The NCGAP shall indicate that the identification and recovery of possession  
9 from delinquent fishpond lease agreement holders shall be completed within  
10 twelve (12) months from the adoption thereof. All fishpond areas to be  
11 reverted to mangroves shall form part of the minimum target for the first  
12 year of implementation of the Action Plan;

13 f. Operational Plan for the removal of illegal structures (such as breakwaters,  
14 permanent residential/commercial structures, and the like), in the identified  
15 priority coastal greenbelts. The NCGAP shall indicate that the declaration of  
16 and notice to persons responsible for removal of illegal structures shall be  
17 completed within twelve (12) months from the adoption thereof. The  
18 removal of illegal structures in and start of rehabilitation, reforestation or  
19 afforestation of these areas shall form part of the minimum target for the  
20 first year of implementation of the Action Plan;

21 g. Monitoring and evaluation plan, with quantitative and qualitative  
22 targetsconsistent with (d), (e) and (f) above, appropriate indicators and  
23 reasonable means of verification. The plan shall become an integrated part  
24 of the Action Plan and Annual Report to Congress.

25 The Climate Change Commission(CCC) shall be responsible for consolidating the  
26 NCGAPnot later than twelve (12) months from the date this Act takes effect.

27 **SECTION 5.-Key Implementing Agencies.**The following agencies shall take the  
28 lead in implementing components of the Program and Action Plan that are relevant to  
29 their mandates:

30 a. The Climate Change Commission (CCC) shall be responsible for the  
31 congregation of relevant government agencies, facilitation of public  
32 participation in the preparation of the NCGAP, integration of the NCGAP into  
33 the Local Action Plans including the power of approving putting up necessary  
34 structures in the Designated Areas, and the preparation of the integrated  
35 report to Congress especially with regard to the expenditure of the  
36 appropriation and other pertinent matters under Section 8 of this Act;

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

44 c. The Bureau of Fisheries and Aquatic Resources (BFAR)of the Department of  
45 Agriculture (DA) shall coordinate with the DENRfor (e) in Section 4 above or  
46 the Operational Plan that provides for the reversion of all abandoned

1 fishponds to mangroves through natural regeneration or replanting with  
2 locally appropriate species in line with existing laws and mandates, and it  
3 shall provide the CCC all relevant information to aid in the monitoring and  
4 evaluation of the NCGAP;

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

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

21 **SECTION 6.-National Technical Advisory Committee.** The Climate Change  
22 Commission shall convene a National Technical Advisory Committee (NTAC) composed  
23 of:

- 24 a. A technical representative from the Climate Change Commission (CCC)  
25 b. A technical representative from the Department of Environment and Natural  
26 Resources (DENR)  
27 c. A technical representatives from the Bureau of Fisheries and Aquatic  
28 Resources (BFAR)  
29 d. Two (2) known experts in mangrove and beach forest ecosystems,  
30 oceanography or other related disciplines  
31 e. A representative from a non-government organization or a people's  
32 organization that demonstrates capacity to promote the public interest and  
33 with identifiable leadership, membership and structure that has been  
34 actively involved in mangrove research and has produced actual publication  
35 in mangrove research as among the criteria that shall be set by the DENR,  
36 BFAR and CCC.

37 The National Technical Advisory Committee shall provide scientific guidance in  
38 the design, implementation and evaluation of actions under the NCGAP. The experts  
39 shall serve in the Committee without compensation, but may be reimbursed for basic  
40 expenses to attend meetings and prepare technical reports.

41 **SECTION 7.-Local Coastal Greenbelt Action Plan.** Each coastal municipality and  
42 city in the identified priority coastal greenbelt areas in the Action Plan shall prepare a  
43 Local Coastal Greenbelt Action Plan (LCGAP) to facilitate the implementation of  
44 mandated actions in the NCGAP. The roles of the municipality or city, as provided in the  
45 local LCGAP shall be to:

- 46 a. Facilitate the implementation of the mandates of the national agencies  
47 under Section 4, by providing local data and other supporting measures;

- 1 b. Implement complementary programs to assist local communities and local  
2 businesses that are affected by the actions under Section 4, such as  
3 relocation sites with basic services such as livelihood and transportation  
4 programs, zoning or re-zoning of the priority coastal greenbelt areas, as  
5 appropriate, and the like;  
6 c. Provide the actual inventory of affected families in Designated Areas and to  
7 ensure that a just and humane process of relocation is done;  
8 d. Lead in the actual implementation of rehabilitation, reforestation and  
9 afforestation, through the coastal barangays;  
10 e. Integrate the identified coastal greenbelts in the Comprehensive Land-Use  
11 Plan;  
12 f. Provide data and qualitative feedback to the Key Implementing Agencies, as  
13 may be relevant.

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

17 **SECTION 8. Enforcement Actions.-**

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

34 **SECTION 9. Appropriations.-**The Key Implementing Agencies shall draw from  
35 their existing programs and budgets to implement their responsibilities under the Action  
36 Plan, and through the People's Survival Fund, where appropriate, subject to additional  
37 funding in the annual national appropriations, to meet the targets agreed in the Action  
38 Plan.

39 **SECTION 10. Annual Report to Congress.-**The Key Implementing Agencies shall  
40 report to Congress on their progress in meeting the quantitative and qualitative targets  
41 under the Action Plan for each fiscal year. The reports shall be consolidated by the  
42 Climate Change Commission for presentation to the appropriate Committee in Congress  
43 at a meeting called for the purpose.

44 **SECTION 11. Effective Date.-**This Act shall take effect fifteen (15) days after  
45 publication in the Official Gazette and in two (2) national newspapers of general  
46 circulation.

47 Approved,