SUPPLEMENTARY DOCUMENT 6:
TYPHOON YOLANDA-AFFECTED AREAS AND AREAS COVERED BY THE KALAHI–CIDSS NATIONAL COMMUNITY-DRIVEN DEVELOPMENT PROJECT

1. The KALAHI–CIDDS National Community-Driven Development Project (KC-NCDDP) spans the whole archipelago, reaching 15 regions, 63 provinces, and 900 municipalities. Poor municipalities covered by the program abound the most in Region V (Bicol) and Region VIII (Eastern Visayas) which are along the country's eastern seaboard often visited by typhoons. The 900 municipalities do not include yet the 104 poor municipalities in the Autonomous Region in Muslim Mindanao (ARMM). The NCDDP will include the ARMM, with the development partners supporting the required capacity building for program implementation and the government providing grants for community subprojects. The new regions in the program are Regions I, II, and III, which have small number of poor municipalities.

2. Of particular concern are the provinces that have been affected by Typhoon Yolanda (international name: Haiyan) in 8 November 2013: Eastern Samar, Western Samar, Leyte, Southern Leyte, Cebu, Iloilo, Capiz, Aklan, and Palawan, and by the Visayas earthquake of 15 October 2013: Bohol and Cebu. Table 1 is a list of areas targeted under the proposed Emergency Assistance Loan.

Table 1: Yolanda-affected areas and KC-NCDDP Covered Areas

Regions	Provinces covered	Total Municipalities and Cities	Municipalities covered (cities not covered)	Number of Barangays	Population in 2010 (persons)	Average poverty incidence of Municipalities (based on NSCB SAE 2009)
9	**39**	**797**	**554**	**14,139**	**18,564,087**	**37.3%**
IV-A	1					
	Quezon	41	17	548	775,119	21.5%
IV-B	5		62		2,112,388	
	Marinduque	6	6	218	227,828	30.3%
	Occidental Mindoro	11	11	162	452,971	33.1%
	Oriental Mindoro	15	14	364	661,429	36.6%
	Palawan	24	16	267	505,777	28.6%
	Romblon	17	15	193	264,383	43.7%
V	6		92		3,815,480	
	Albay	18	7	258	404,121	37.5%
	Camarines Norte	12	11	267	519,011	36.2%
	Camarines Sur	37	33	977	1,506,902	44.0%
	Catanduanes	11	11	315	246,300	35.2%
	Masbate	21	16	397	553,547	44.2%
	Sorsogon	15	14	477	585,599	40.1%
VI	6		117		4,543,072	
	Aklan	17	17	327	535,725	39.8%
	Antique	18	18	590	546,031	40.2%

Regions	Provinces covered	Total Municipalities and Cities	Municipalities covered (cities not covered)	Number of Barangays	Population in 2010 (persons)	Average poverty incidence of Municipalities (based on NSCB SAE 2009)
	Capiz	17	16	426	563,488	23.3%
	Guimaras	5	5	98	162,943	31.5%
	Iloilo	44	42	1670	1,725,913	24.6%
	Negros Occidental	32	19	340	1,008,972	34.2%
VII	4		72		2,599,308	
	Bohol	48	29	762	770,524	47.8%
	Cebu	53	29	582	1,309,198	38.4%
	Negros Oriental	25	13	282	499,562	42.1%
	Siquijor	6	1	18	20,024	39.5%
VIII	6		136		3,173,305	
	Biliran	8	8	132	161,760	31.8%
	Eastern Samar	23	22	536	364,420	47.5%
	Leyte	43	40	1301	1,273,943	34.2%
	Northern Samar	24	24	569	589,013	48.1%
	Samar (W. Samar)	26	24	737	466,282	43.8%
	Southern Leyte	19	18	430	317,887	38.3%
X	3		7		130,693	
	Bukidnon	22	1	11	22,880	61.4%
	Camiguin	5	5	58	83,807	43.6%
	Lanao Del Norte	23	1	13	24,006	49.5%
XI	3		10	200	551,705	
	Compostela Valley	11	4		287,728	32.7%
	Davao Del Sur	16	1	30	109,568	63.8%
	Davao Oriental	11	5	68	154,409	56.0%
Caraga	5		41		863,017	
	Agusan Del Norte	12	5	77	143,518	43.8%
	Agusan Del Sur	14	1	27	70,986	39.7%
	Dinagat Islands	7	7	100	126,803	53.4%
	Surigao Del Norte	21	18	264	287,828	53.0%
	Surigao Del Sur	19	10	146	233,882	42.0%

Source: Asian Development Bank.

3. **Natural Hazards.** The Philippines is particularly prone to natural hazards. According to the database of the Centre for Research on the Epidemiology of Disasters, the country has recorded 373 disaster events resulting from natural hazards over 1905–2006. That makes for an average of 4 incidents a year.[1] In 1978, 15 disasters struck the country.

4. The Philippines is beset by tropical cyclones because of its location at the western edge of the Pacific Ocean, which regularly produces monsoons, thunderstorms, and typhoons. High winds, heavy rain, and floods affect residents. The sea zone known as the Philippine Area of Responsibility is hit by an average of 20 typhoons per year. Being among the world's largest archipelagos, the country has a long coastline vulnerable to storm surges and tsunamis. In 1997–2007, the country was hit by fully 84 tropical storms.[2]

5. Compounding this are the threats from climate change. The mainstream scientific view is that climate change will result in more frequent typhoons and floods, thus making low-lying areas more vulnerable. According to the Fourth Assessment Report of the Inter-Governmental Panel for Climate Change (IPCC), coastal communities will likely be more harmed by the rise in temperatures and sea levels. Climate change projections for the Philippines suggest an increase in temperature and high variability in rainfall intensity.[3] With about 60% of the country's municipalities and cities located along the coast, impacts of sea level rise due to both climate change and local land subsidence are expected to be severe.

6. The country also happens to lie on the geologically restive Pacific Ring of Fire, and is vulnerable to earthquakes, tsunamis, and volcanic eruptions. The Philippines has 220 volcanoes, and a tenth of them are known to be active. Of world note is the eruption of Mount Pinatubo in 1991, which took more than 6,000 lives. Earlier, the Luzon earthquake of 1990 killed some 2,000.

7. An estimate by the National Disaster Coordinating Council puts the number of deaths from typhoons at 500 annually over the years 1970 to 2002. There were 36,019 deaths caused by natural disasters from 1980 to 2006. There was also an increase in deaths from these hazards in the 1990s and 2000–2006 compared to the 1980s.[4]

8. Typhoons cut an average of 0.7% to 1% from gross domestic product (GDP) growth every year. Larger impacts were seen in the 1991 Pinatubo eruption (0.9) and the 1990 Luzon earthquake (1.2). Disasters squeeze the national budget, shifting resources from development investments to the cost of rehabilitation. The National Economic and Development Authority notes that a PhP1 billion calamity fund in 2007 could have been used to build 2,500 elementary school classrooms, or 161 kilometers of farm-to-market roads or 20,000 core resettlement units (footnote 4).

9. **Disaster Risk Management.** Given the nation's vulnerability to natural hazards, disaster risk management (DRM) is prominent in development priority. The Government has formulated the National Disaster Risk Reduction and Management Plan (NDRRMP) 2011–2028. This

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[1] International Disaster Database, Centre for Research on the Epidemiology of Disasters. http://www.cred.be

[2] National Disaster Risk Reduction and Management Council .

[3] The Millennium Development Goal Achievement Fund 1656 Joint Programme on Strengthening the Philippines' Institutional Capacity to Adapt to Climate Change as one of its outputs produced climate change projections using A1B and A2 emission scenarios using the PRECIS regional climate model.

[4] NEDA-UNDP-EU. 2008. *Guidelines on Mainstreaming Risk Reduction in Sub-national Development Land Use/Physical Planning in the Philippines*. Pasig City, Philippines: National Economic and Development Authority.

follows Republic Act No. 10121 of 2010 which acknowledges the need to "adopt a disaster risk reduction and management approach that is holistic, comprehensive, integrated, and proactive." The document was crafted and is implemented by the National Disaster Risk Reduction Council through the Office of Civil Defense.

10. The plan aims for safer, adaptive, disaster-resilient communities. It involves a paradigm shift, from a reactive to a proactive stance in cutting disaster risks. Communities are trained to be more aware of hazard threats and impacts and upgrade their skills for coping with the impacts of disasters. Local as well as national preparedness and response systems are installed. The NDDRM plan has 4 priority areas (i) disaster prevention and mitigation; (ii) disaster preparedness; (iii) disaster response; and (iv) rehabilitation and recovery. It covers 14 objectives, 24 outcomes, 56 outputs, and 93 activities.[5]

11. The Government has identified the following as the 27 most vulnerable provinces. These 27 were subject to hazard mapping for the READY Project funded by the Asian Development Bank, the Australian Government, and the United Nations Development Programme. The disaster risk assessment looked primarily at these threats: floods, storm surges, tsunamis, landslides, ground shaking, ground rupture, liquefaction. The most disaster-prone provinces are[6]: La Union, Pangasinan, Cagayan, Isabela, Bataan, Bulacan, Nueva Ecija, Pampanga, Tarlac, Zambales, Laguna, Quezon, Albay, Camarines Sur, Sorsogon, Capiz, Negros Oriental, Bohol, Leyte, Southern Leyte, Zamboanga del Sur, Bukidnon, Davao Oriental, North Cotabato, Surigao del Sur, Surigao del Norte, and Maguindanao.

12. The Philippine Development Plan identifies enhanced resilience of natural systems and improved adaptive capacities of human communities to cope with environmental hazards including climate change-related risks as a priority goal in the chapter on Conservation, Protection and Rehabilitation of the Environment and Natural Resources. Under this goal, three outputs, each with detailed activities, are identified: (i) strengthened institutional capacities of national and local governments for climate change adaptation (CCA) and disaster risk reduction and management (DRRM); (ii) enhanced resilience of natural systems; and (iii) improved adaptive capacities of communities. Other chapters e.g., the ones on agriculture and energy, identify specific measures to adapt the sector to climate change.

13. The passage of the DRRM Act of 2010 or Republic Act (RA) No. 10121 and its implementing rules and regulations supported by the Climate Change Act of 2009 (RA 9729) have significantly strengthened the institutional foundation for DRM and CCA. The DRRM Act emphasizes the need for a coherent, comprehensive, integrated, and proactive approach to DRRM across levels and sectors of government, and among vulnerable communities. It shifts the focus from a purely reactive approach to include risk management and preparedness and establishes links to CCA.

14. The Climate Change Act of 2009 (RA 9729) envisions the Philippines to be a climate risk-resilient country that proactively implements cost-effective and nationally approved mitigation actions. The Act provides overarching policy direction to national and local actions on climate change and includes provisions for attracting foreign funds for CCA and DRR projects. Executive Order No. 881 authorized the Climate Change Commission (CCC) to coordinate climate change activities including efforts to reduce emissions from deforestation and forest degradation (REDD++). As a complementary initiative, the National Framework Strategy and

[5] Department of Interior and Local Government primer.
[6] World Bank. 2009.*Typhoons Ondoy and Pepeng: Post Disaster Needs Assessment*.

Program on Climate Change was signed in April 2010, providing a basis for the national program on climate change that defines key result areas to be pursued. Other laws related to climate change are the Agriculture and Fisheries Modernization Act (1997), Philippine Clean Air Act (1999), Ecological Solid Waste Management Act (2000), Philippine Clean Water Act (2004), Biofuels Act (2006), and Renewable Energy Act (2008), which direct appropriate agencies to consider climate change.

15. Typhoon Yolanda stands among the most powerful storms in history, with peak winds of 270 kilometers per hour during landfall. It was a Category 5 cyclone; for comparison, Hurricane Katrina was a Category 3 at landfall. In terms of casualties, it is among the deadliest typhoons that have hit the Philippines.[7] Typhoon Yolanda has left more than 5,600 dead[8], 1,700 missing, and 26,000 injured in central Philippines. The cyclone has affected more than 13 million people in 44 provinces. It has damaged more than a million houses. The estimate cost of replace damaged houses is $2 billion.

16. Typhoon Yolanda caused the most visible destruction in Tacloban city, the capital of Leyte province. The storm affected most of Eastern Visayas or Region VIII, the nation's 3rd poorest region, with poverty incidence of 45.5 percent of the population, as of the 1st semester of 2012. Most of the casualties came from Region VIII. The other areas hit were the provinces of Cebu, Iloilo, Capiz, Aklan, and Palawan.

17. Yolanda devastated the provinces with strong winds, heavy rain, and 10-meter storm surges. Fatalities were reported as having drowned, hit by falling trees and debris, electrocuted, and crushed by collapsing walls. Water supply, electricity, phone connections, and access to ports were cut off temporarily, but these have been restored in varying degrees across the areas. Some municipalities in the provinces of Antique, Capiz, and Iloilo, do not have functioning water systems. Nearly 2,000 electricity transmission facilities were damaged, including backbone transmission lines, steel poles, and converter stations. Power outages still continue in some municipalities in 5 regions. Cellphone signals have returned to the provinces of Leyte and Samar.

18. On 11 November 2013 President Benigno Simeon Aquino III declared a state of national calamity, with the intention of fast-tracking relief work. Tacloban city has become the center of relief operations, and people from the rural areas have been walking to it. However, operations in Tacloban airport are still limited.

19. Over 20 countries have pledged to provide humanitarian assistance. More than 32,000 foreign and local personnel have been deployed for response and related operations. Almost 2,000 foreign and local medical personnel have been mobilized as well.[9] Early relief efforts were impeded by fallen trees and debris, which blocked roads.

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[7] Data in this note are taken from the Situation Reports of the National Disaster Risk Reduction and Management Council, as of December 1, 2013.

[8] Typhoon Yolanda (international name: Haiyan) has thus broken the record of deaths (5,080) brought about by Typhoon Uring (international name Thelma) in 1991, according to the Philippine Atmospheric, Geophysical and Astronomical Services Administration.

[9] United Nations Office for the Coordination of Humanitarian Affairs (OCHA). Philippines: Typhoon Yolanda Situation Report Number 6 (as of 12 November 2013).

Table 2: Impact of Typhoon Yolanda

Affected Areas	44 provinces, 589 municipalities, 57 cities, 12,076 barangays
Dead	5,632
Still missing	1,757
Injured	26,136
Families affected	2,376,217 families
People affected	11,236,054 individuals
Displaced	892,493 families, 4,114,183 persons
Damaged or Destroyed houses[a]	1,168,958 582,841 damaged totally and 586,117 damaged partially
Damage to infrastructure (roads, bridges, irrigation, flood control, health and school facilities)	P 15,620,130,890
Damage to agriculture	P 15,026,036,681

[a] Estimated cost of replacement for damaged and destroyed houses is $2 billion.[10]

Source: National Disaster Risk Reduction and Management Council Situation Report as of 1 December 2013.

20. Weeks after the Typhoon Yolanda disaster, the present concern has shifted from response to recovery. Disasters not only kill people and destroy property, they also wipe away livelihoods and threaten the future of the residents. This is particularly true when a working member of the family loses his/her life or is disabled. The short-term shock may lead to long-term vulnerability, and such conditions worsen poverty, marginalization, and conflict. Among the most vulnerable are communities subject to recurring hazard events, whose residents have to turn to regular relief, and who live stuck in cyclical recovery. They endure constant food insecurity.[11]

21. Hence, recovery programs must be coupled with national and local development plans so as to be effective. Planners should know the social conditions that lay before the disaster struck. These conditions may have contributed to the vulnerability that morphed a hazard event into a disaster. The conditions may affect, as well, the choice of correct recovery strategies. Indeed, defective understanding may result in poor targeting and ill-chosen assistance. Reconstruction may be warped, as in the case of schools built after disasters that lacked adequate maintenance costs.

[10] The core shelter program of the DSWD uses a unit cost of $1,750.00

[11] World Bank. 2009. Building Resilient communities: Risk Management and Response to Natural Disasters through Social Funds and Community-Driven Development Operations.