

# STATUS UPDATE MEMORANDUM for

# Bamboo Energy I Investors

# Overview

On 7-8 November 2013, Typhoon Haiyan (known in the Philippines as Yolanda) struck the Philippines, causing widespread physical devastation and loss of life. Unofficially the supertyphoon, which recorded winds in excess of 315 km/h, is the largest typhoon ever to make landfall – anywhere in the world.

The destruction of communications infrastructure by the typhoon has prevented authorities from obtaining a fully updated and reliable estimate of loss, both physical and human. But the most severely impacted areas were those facing the Pacific Ocean, including Samar and Leyte Islands. The images of destruction in those provinces are reminiscent of the aftermath of the Battle for Leyte in WWII.

Manila and the National Capital Region were spared all but heavy winds and moderate rain from the supertyphoon. This good fortune has left national emergency response facilities intact, but the absence of logistical access to the most seriously damaged areas of the country has prevented delivery of essential food, water and medicine to those most in need.

The arrival of the US Navy's George Washington aircraft carrier battle group, the same task force that supported rescue operations during the 2004 Asian tsunami, will provide much needed logistical support to local authorities. In particular, access to helicopters will facilitate delivery of desperately needed supplies.

Despite its brutal intensity, the typhoon had widely divergent impacts on the regions through which it passed. Certain areas under the center of the typhoon were left relatively unscathed, while others, such as those mentioned above, were completely leveled.

This memo seeks to clarify for Bamboo Energy I investors the nature and extent of the typhoon's impact on the corporate activities and assets representing their biomass investments in the Philippines, viz. the Beema Bamboo plantation on Tablas Island in Romblon Province, and the Napier Grass plantation in Toledo City, Cebu Province.

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# Typhoon Haiyan (Yolanda) Impact Assessment

## Movement of the Typhoon & Location of Bamboo Energy I Assets

To understand the impact of the supertyphoon on the two key assets of Bamboo Energy I and its contractual project partner, it is necessary to understand the course taken by the storm as it made its way westward from the Pacific Ocean to the South China Sea. **Table 1**, below, provides a map of the Central Visayas region of the Philippines. This is the location of both the Romblon and Cebu plantations and the main area impacted by the storm. The two plantations are indicated in green circles on the map.



### Table 1. Central Visayas Region of the Philippines

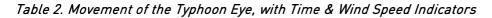
The path of the storm, with the locus of intensity, is illustrated in **Tables 2 and 3**, below. **Table 2** shows the movement of the eye of the typhoon with wind speed and time indicators. **Table 3** shows on a

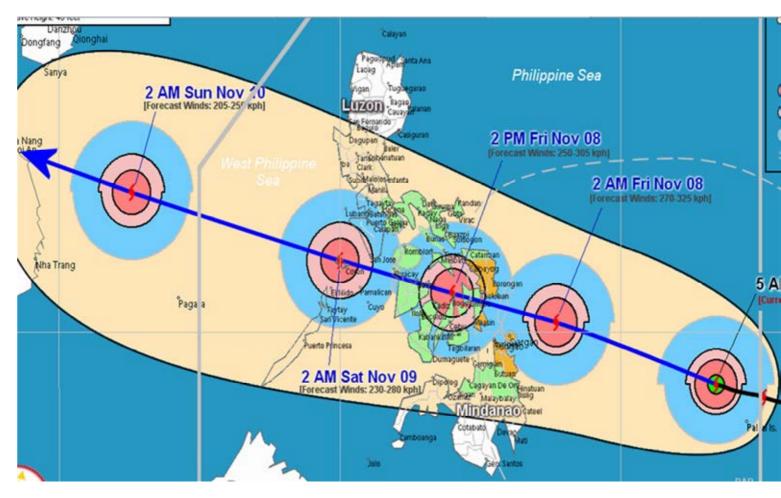
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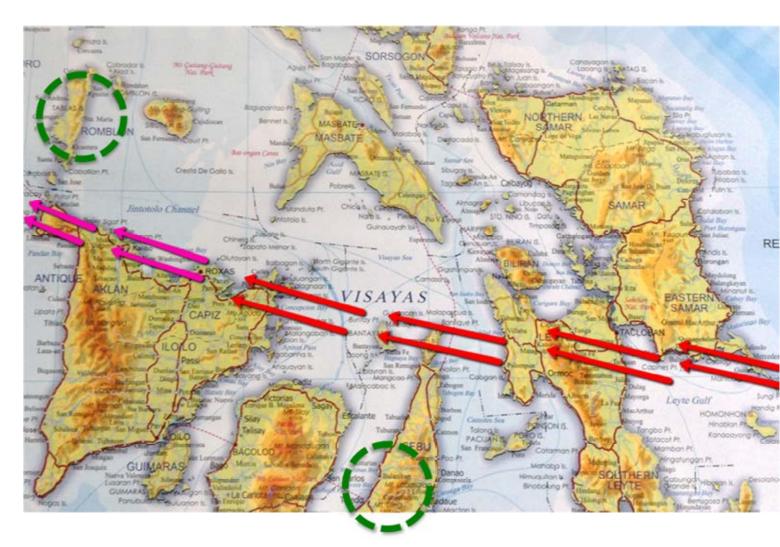
higher relief map the path of greatest storm intensity during Typhoon Haiyan's time in the Philippines. In both maps, Romblon and Cebu are clear visible.





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Most parts of the Central Visayas and its surrounding areas were affected by the typhoon. Those areas with red arrows, however, are the ones directly hit by Haiyan and most adversely affected. The Bamboo Energy I plantations found themselves, in essence, on either side of the typhoon's main track, and hence received *only peripheral impact*.

### Impact of the Typhoon on Communities in Bamboo Energy I Asset Areas

The Bamboo Energy I plantations and surrounding communities in Romblon and Cebu were very fortunate. They received very little substantive damage. Neither the farmers and staff employed by, nor the Beema Bamboo and Napier Grass plantations themselves, suffered any significant loss.

No agricultural and livestock losses were recorded in Romblon and Cebu Provinces, However, **Table 4**, below provides a detailed itemization of losses to family dwellings in those two provinces. Note that all significant losses in Cebu province were in the northern half of the island, well north of the Napier Grass plantation in Toledo City. There were no significant losses anywhere in Romblon Province.

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### Table 4. Typhoon Losses of Family Dwellings in Cebu & Romblon Provinces<sup>1</sup>

### EFFECTS of TYPHOON "YOLANDA" (HAIYAN) DAMAGED HOUSES 13 November 2013, 7:00 AM

REGION	Province/Municipality	DAMAGED HOUSES					
	Province/municipanty	TOTALLY	PARTIALLY	TOTAL			
Region	Sub-Total	15,929	13,168	29,097			
	Bohol	34	29	63			
VII	Buenavista	1	1	2			
	Inabanga	30		30			
	Pres. CP Garcia		28	28			
	Ubay	3		3			
	Cebu	15,895	13,137	29,032			
	Carmen	37	134	171			
	Compostella	25	376	401			
	Medellin	10,500		10,500			
	San Francisco	806	4,688	5,494			
	Sogod	517	2,337	2,854			
	Tabogon	1,499	579	2,078			
	Tubuelan	2,215	2,631	4,846			
	Tudela	248	1,369	1,617			
	Talisay City	48	1,023	1,071			
	ROMBLON	169	432	601			
1.1.1.	Alcantara	100	85	85			
	Cajidiocan	2	12				
	Calatrava	16	21	37			
	Concepcion		16	16			
	Ferrol		90	90			
	Looc	70	3	73			
	Odiongan	69		69			
	San Agustin	4	71	75			
	San Andres	1	102	103			
	Sta. Maria	7	32	39			

A further indicator of the severity of typhoon-related damage is the presence of evacuation centers in a given area. **Table 5**, below, confirms that no evacuation of families or individuals occurred in Romblon Province, while evacuations in Cebu were limited to the northern half of Cebu Island, well north of the Toledo City plantation.

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<sup>&</sup>lt;sup>1</sup> \*Source: Nat'l Disaster Risk Reduction & Management Council as of Nov. 13, 2013; 7am report. <u>www.ndrmmc.gov.ph</u>

### Table 5. Typhoon-Related Evacuations by Selected Regions

#### Effects of Typhoon "YOLANDA" (HAIYAN) AFFECTED POPULATION As of 13 November 2013, 7:00 AM

Region/Province/ Mun/City	AFFECTED		No. of Evac	Inside Evacuation Centers		Outside Evacuation Centers		TOTAL SERVED - CURRENT (Inside + Outside)		
mutruny	Brgys	Families	Persons	Centers	Families	Persons	Families	Persons	Families	Persons
GRAND TOTAL		1,387,446	6,937,229	993	59,733	286,433	72.758	305,298	127,733	582,303
REGION IV-A (CALABARZON)	168	5,415	27,076	12	174	573	63	315	237	888
BATANGAS	42	1,060	5,298	1	11	38			11	38
CAVITE	3	146	732							
LAGUNA	46	2,412	12,058	11	163	535			163	535
QUEZON	75	1,765	6,824				63	315	63	315
RIZAL	2	33	164							
REGION IV-B (MIMAROPA)	297	23,241	116,206	21	1,182	5,903			1,182	5,903
MARINDUQUE	46	1,657	8,286							
OCCIDENTAL MINDORO	47	5,170	25,850							
OPIENTAL MINDORO	73	8,008	40.041							
PALAWAN	59	5,950	29,752	21	1,102	0,903			11004	
ROMBLON	72	2,455	12,277							
REGION V (BICOL REGION)	529	65,701	328,003	231	6,070	20,240	31,100	140,471	40,001	
ALBAY	101	14,317	71,583							
CAMARINES NORTE	20	389	1,945	27	402	1,945			402	1,945
CAMARINES SUR	261	33,601	168,003	188	4,687	23,119	37,528	147,085	42,415	170,204
CATANDUANES	2	134	671		10 - 10 - 10 - 10 - 10 - 10 - 10 - 10 -	1000				
MASBATE	29	2,224	11,119	20	694	3,793	231	1,388	925	5,179
SORSOGON	116	15,036	75,182	2	95	389			95	389
REGION VI (WESTERN VISAYAS)	1,460	147,947	739,737	489	37,272	179,911	33,994	151,956	71,266	331,867
AKLAN	243	23,716	118,550	21	1,211	6,133	167	732	1,378	6,885
ANTIQUE	223	16,081	84,907	61	2,052	10,211	10,131	45,612	12,183	55,823
CAPIZ	17	2,212	11,060	32	2,483	11,763			2,483	11,763
GUIMARAS	7	126	630	3	142	659			142	650
ILOILO	772	84,426	422,131	184	14,459	69,052	23,698	105,612	38,155	174,664
NEGROS OCCIDENTAL	198	20,486	102,429	168	16,925	82,093			16,925	82,093
REGION VII (CENTRAL VISAYAS)	424	445,953	2,229,767	139	5,464	26,098	897	4,331	6,361	30,429
				-	1.000			1 224	3,630	12 130
CEBU	132	269,409	1,347,497	69	2,758	13,076			2,758	13,076
NEGROS ORIENTAL	100	20,000	100,100					-		

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## Impact of the Typhoon on Bamboo Energy I Plantation Assets

As noted above, none of the plantations representing Bamboo Energy I investor interests suffered any material losses. A summary of the impact of Haiyan on the Romblon and Cebu plantations is as follows:

- 1. Romblon (Tablas Island) Beema Bamboo Plantation:
  - 1.1. Staff House Complex:
    - 1.1.1. Roofing on staff house loosened by wind but not seriously damaged; fully restored already.
    - 1.1.2. Equipment, including tractors, trailers, off-road vehicles, saw mills, chippers, shredders, etc. not damaged.
    - 1.1.3. Trees in complex suffered loss of branches; no commercial implications; clean-up completed.
  - 1.2. Canduyong Plantation:
    - 1.2.1. Bamboo bent to the ground in some places; root structures and plants remain intact; straightening ongoing.
    - 1.2.2. No material loss of bamboo crop. In cases where mature bamboo was bent to the ground (maximum 5% of crop), plants will be harvested and replanted in Jun Carlo plantation. In all other cases, the bamboo will simply be straightened and continue to grow.
  - 1.3. Jun Carlo Plantation:
    - 1.3.1. No material loss of bamboo crop. In cases where young bamboo plants were bent to the ground by the wind, they will be straightened and continue to grow.
    - 1.3.2. Shelter hut was bent of center by the heavy winds. This will be straightened and reinforced. No significant damage.
    - 1.3.3. Fencing in some areas was displaced by the wind but not destroyed. This has been repaired already.

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- 1.3.4. Please refer to Table 6 (at the end of this memorandum) for photographs of the Romblon operations. These confirm the limited extent of the damage to corporate assets and operations.
- 2. Cebu (Toledo City) Napier Grass Plantation:
  - 2.1. No significant crop losses or damages were incurred to the Napier Grass at the Toledo City, Cebu plantations.
  - 2.2. Some grass was bent over by the strong winds and will be rehabilitated by straightening and re-fertilization.
  - 2.3. Some of the most recently planted grass, perhaps 10% of the total plantation stock, was washed out by strong rains, due to the shallow root structure. The cost of replanting this amount of grass is very small and in many cases the original plants can be recovered. This is a normal incident of heavy storm activity in a sloping planting environment. Remediation is already underway.
  - 2.4. Please refer to Table 6 (at the end of this memorandum) for photographs of the Cebu operations. These confirm the limited extent of the damage to corporate assets and operations.
- 3. Because the damage to crops and communities was so minimal in Bamboo Energy I's operating areas, no significant Corporate Social Responsibility activities are required. Rather, the best publicity and the most useful contribution Bamboo Energy I can make to these communities are to resume and accelerate planting, leading to harvest and commercialization of crops in 2014. We are rendering voluntary assistance to other areas of Cebu that have suffered catastrophic damage. This is part of the international and domestic relief effort that is being mobilized on behalf of the victims of Supertyphoon Haiyan.

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# Lessons Learned & Future Risk Mitigation Measures

There is a limited range of actions that can be undertaken to minimize potential loss from a catastrophic storm such as Supertyphoon Haiyan. Actions taken prior to the landfall of Haiyan included the following:

- Securing of equipment in areas with wind screens and away from trees with large overhanging branches.
- Cutting of large overhanging branches to minimize risk of damage during heavy winds.
- Stockpiling of fuel, food, medical supplies, and water.
- Removal of vegetation overhanging electrical wires.
- Planting of windbreaks in appropriate areas to minimize potential wind damage during typhoons.

One step that management had failed to finalize in advance of Haiyan was the implementation of plantation insurance from the Philippines Crop Insurance Corporation ("PCIC"). Although all papers had been submitted to PCIC for their review and approval in advance of issuing full crop insurance, the site visit by the PCIC inspectors to validate the crop status had not taken place by the time Haiyan entered the Philippines. This delay should not have occurred but it can prove difficult to move matters as quickly as one would like in the Philippines. PCIC's site visit is now confirmed before month-end November. PCIC has committed to have the policy documents ready for finalization in December before Christmas.

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# Summary

The Bamboo Energy I operations in Romblon and in Cebu are now stabilized and normal operations have resumed in full. Damage to crops and other assets is minimal and largely limited to wind-induced plant bending and partial uprooting. No injury to any personnel or to their personal homes and assets was recorded.

Our team in the Philippines is moving forward with our agreed strategy with no more than a *two-week impact* from Supertyphoon Haiyan. We look forward to strong performance on behalf of the Bamboo Energy I stakeholders in 2014.

Submitted by:

Frederick E. LaCroix Chief Executive Officer & President

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# Table 6 – Romblon & Cebu Plantation Photographs(On following pages)

### **STAFFHOUSE AREA - ROMBLON**



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### CANDUYONG PLANTATION - ROMBLON



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**General Overview of Canduyong Plantation** 



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### JUN CARLO PLANTATION - ROMBLON





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# TOLEDO PLANTATION – CEBU CITY



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