

BioEd<sup>SM</sup>

A Storm Named

# YOLANDA



Second Edition

Gregory Vogt and Martha Young

Baylor  
College of  
Medicine

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# BioEd<sup>SM</sup>

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Characters in this book are fictitious and are not based on any person living or deceased. *A Storm Named Yolanda* was designed to be used with *Operation Rescue Teacher's Guide*, but also may be used as a stand-alone reading and language arts activity.

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# Contents



<b>Preface</b>	<b>iv</b>
<b>1. The View from Above</b>	<b>1</b>
<b>2. The Arroyo Residence</b>	<b>3</b>
<b>3. The Storm is Named</b>	<b>5</b>
<b>4. Typhoon Alert</b>	<b>6</b>
<b>5. Preparing for Yolanda</b>	<b>7</b>
<b>6. A Way Home</b>	<b>10</b>
<b>7. A Welcome Message</b>	<b>14</b>
<b>8. First Landfall</b>	<b>15</b>
<b>9. Surviving Yolanda</b>	<b>16</b>
<b>10. A Country in Need</b>	<b>22</b>
<b>11. Dr. Arroyo Arrives</b>	<b>23</b>
<b>12. The News Spreads</b>	<b>26</b>
<b>13. A Different View</b>	<b>29</b>
<b>Epilogue</b>	<b>30</b>
<b>Sources</b>	<b>32</b>



# Preface



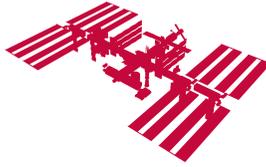
The flag depicted above is the official flag of the Republic of the Philippines. The sun emblem represents the strides made toward progress and civilization by the Filipino people.

But in 2013, a storm was headed toward the nation of islands, which would challenge their courage and strength to persevere.

A storm formed in the northern Pacific Ocean in early November 2013. Swirling across the warm water for almost a week, it grew rapidly into possibly the most powerful storm in recorded history. The typhoon was given two names. The Japan Meteorological Agency named the storm Haiyan, which is Chinese for a type of seabird. The Philippine Atmospheric Geophysical and Astronomical Services Administration subsequently gave the storm a local name, Yolanda.

By the time Yolanda made its first landfall, in the Philippine village of Guiuan, wind speeds topped 315 kilometers/195 miles per hour, with gusts up to 378 km/235 miles per hour. Before the storm finally dissipated over southern China, it had made landfall several times, crushing hundreds of thousands of homes, paralyzing cities, wiping out forests and killing thousands of people.

This fictional account is based on events that took place before, during, and after Super Typhoon Yolanda made landfall in Tacloban City.



# The View From Above



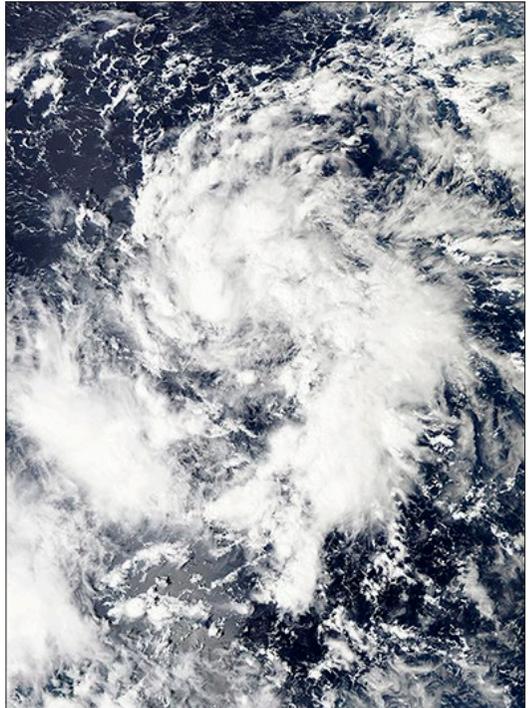
**November 3**

**International Space Station (ISS)**

**ISS:** “Houston. This is the ISS.  
Can you read us? Over.”

**Houston:** “ISS, this is Houston.  
Loud and clear.”

**ISS:** “We see something big  
brewing over the Pacific. Clouds  
are really building up. It appears  
to be in a spiral shape. The  
center is roughly about  
158° East by 7° North. Over.”



**Houston:** “We see it too. The  
Japanese Meteorological Agency

A satellite image of the tropical storm was released on November 3, 2013.

has upgraded the system to a tropical depression. Their computer models predict it will become a dangerous typhoon and indicate landfall to occur in the Philippines. Keep an eye on it the next time you cross over.”

**ISS:** Roger that.

# The Philippines

The island nation of the Philippines consists of more than 7,600 islands in southeast Asia, which have been organized into three primary administrative groups: Luzon (blue), Visayas (red) and Mindanao (gold). Some cities serve as the political, cultural and economic centers of the island groups: Manila in Luzon, Cebu in Visayas, and Davao in Mindanao.

Some islands remain independent administrative regions with control over their culture and economy. Though it is part of the Visayas group, Tacloban City is one of those areas.



In 2013 Tacloban had an estimated population of more than 222,000 people; Guiuan more than 52,000 people; and the entire Philippines a population of more than 98 million people.



# The Arroyo Residence



**November 4**

**Tacloban City, The Philippines**

***Early morning...***

“Máximo!” Papa called. “You’re going to be late.” Papa turned to Edita.

“Edita, would you please go wake your brother? I will not have him be late again for school.”

Six-year-old Edita jumped up from the breakfast table. She was wearing her blue plaid jumper and white blouse with the puffed shoulders. Her long black hair was tied in braids. Edita darted down the hall to her brother’s room. Máximo, who was 10 years old, usually tried to sleep until the last possible moment. But today, he was already dressed in his black pants, white shirt and blue school tie. He was texting his friends about the soccer match this weekend.

“Máximo!” Edita shouted.

“Come on!”

“I’ll be there in a minute.”

“No!” Edita shouted again. “Now.”

Edita was upset because Papa was going away. Dr. Emilio Arroyo



The map above shows the approximate geographic size of the Philippines (in orange), compared to the size of the continental U.S.

was forty-ish, with early graying hair and a broad smile. He was tall for a Filipino, which he attributed to his grandfather, an American serving in the Philippines during World War II.

Dr. Arroyo had gone to medical conferences before, but each time Mama had been home to watch over Edita and Máximo. She'd passed away last summer, so this time she would not be there. Instead Mrs. Rosales, their part-time housekeeper, would be staying with them while Papa was away. The children loved Mrs. Rosales, but she wasn't Mama.

Outside their school, Papa hugged Máximo and Edita. Máximo quickly pulled away and checked to see if any of his friends had watched his father hugging him. Edita, on the other hand, hung on to Papa as long as she could.

Dr. Arroyo gave Máximo and Edita the usual instructions they had heard many times before. "Do your homework, brush your teeth, do what Mrs. Rosales says, and no playing on the computer after 9:00."

With exaggerated speech, Máximo and Edita replied, "Yes, Papa."

As they walked toward the school, Dr. Arroyo drove off to the airport to fly to Manila.



# The Storm is Named



**November 4**

**International Space Station**

**Commander Oleg Kotov:** “Koichi, come look at this.”

Flight Engineer Koichi Wakata floated over to the Earth-facing cupola windows at the clouds below.



**Wakata:** “That looks bad. I just received an email from the Japanese meteorologists. They have upgraded the tropical depression to a tropical storm status. The Japanese named it Haiyan. The Filipinos are calling it Yolanda. They say wind speeds have rapidly increased to 195 kilometers per hour. Storm warnings have been issued.”

The Japanese Meteorological Agency is designated one of the Regional Specialized Meteorological Centers of the World Meteorological Organization. It is responsible for forecasting, naming, and distributing warnings for tropical cyclones in the Northwestern Pacific region, which includes the Philippines.

**Kotov:** “It looks like it’s heading straight towards the Philippines.”

**Wakata:** “There is talk that it will grow to become a super typhoon with winds over 300 kilometers per hour. Scary.”



# Typhoon Alert



**November 5**

**Japan Meteorological Agency, Tokyo**

\*\*\*\*\* Typhoon Haiyan/Yolanda Alert \*\*\*\*\*

Haiyan has strengthened to Super Typhoon status. Wind speeds range from 215 to 260 kilometers per hour. Maximum wind-blown wave height is 14 meters. The storm is expected to strengthen further. Haiyan will make landfall early morning at the Philippine city of Guiuan on Samar Island. Residents are strongly urged to evacuate to high ground.

\*\*\*\*\* Typhoon Haiyan/Yolanda Alert \*\*\*\*\*



# Preparing for Yolanda



**November 6**

**Tacloban City, The Philippines**

***Late morning...***

A line of cars had formed outside the school to pick up students early. Mrs. Rosales, a stout woman of 63 with her hair tied in a loose bun, waited in her red car. She was third in line, making mental notes about things to get done. Frown lines made her face look more wrinkled than normal. She was a widow with grown children living in Manila, and she loved caring for Máximo and Edita. But today Mrs. Rosales was worried. When she saw Edita and Máximo, she waved at them and tooted the car's horn.

As the children reached the car, Mrs. Rosales said briskly, "Hurry. We have to go."

The children jumped into the car, and Mrs. Rosales began driving as soon as they had fastened their seat belts.

"What's going on?" Máximo asked.

Mrs. Rosales glanced his direction. "There's a storm coming—a big storm. We have to get ready."



An elementary school in Tacloban, before the storm.

Edita could sense the fear in Mrs. Rosales’s voice. With Papa away on his trip, she began crying.



Hurricanes, cyclones and typhoons are all the same weather phenomenon. They are named differently depending on where the storm occurs on Earth. In the Atlantic and Northeast Pacific, the term “hurricane” is used. The same type of disturbance in the Northwest Pacific, including the Philippines and Japan, is called a “typhoon.” “Cyclones” occur in the South Pacific and Indian Ocean. A Category 5 Hurricane is the same thing as a Super Typhoon. *Source: NOAA.*



Máximo, on the other hand, clapped his hands and said, “Astig!”

“Máximo, use English!” Mrs. Rosales said.

“Okay, cool!”

“It’s not cool,” scolded Mrs. Rosales. “They say it could be a super typhoon. People will die. Look, you made your sister cry.”

Edita began wailing.

***A short time later...***

On the way home from school, Mrs. Rosales stopped at the market to pick up extra supplies for the storm. The store was packed with other shoppers who had the same idea. Many shelves already were empty. Flashlight batteries were sold out. Still, she found some snack bars, canned fruit and a couple of candles. The crowd made it difficult to get into and out of the store, especially with the two children.

Once they arrived at home, Mrs. Rosales put Edita and Máximo to work. TV news reporters were telling people how to prepare for the storm, “Collect water, food, a can opener, medical supplies, blankets, flashlights, batteries, a radio, clothing, toilet paper, and cell phones. Find a safe place in your home to shelter.”



The three spent all afternoon getting ready. They pulled out spare blankets and picked a back room as a shelter. Mrs. Rosales had Máximo clean, then fill the bathtub with water. If the local water supply was shut off, water in the tub could be used for drinking and to flush the toilet. Edita and Máximo collected first aid supplies from the cabinet in Papa’s room, cans of food and bottles of water from the cupboards, and the snack bars and canned fruit from the store. They placed everything in a large plastic storage container, snapped the lid shut, and dragged the container into their shelter. Edita packed a small bag with some clothes and her favorite doll.



After an emergency, you may need to survive on your own for several days because there may be no electricity or gas, and pipes can break, stopping the fresh water and sanitation systems. Grocery stores, pharmacies, and hospitals may be closed — and roads may become impassable.

Being prepared means having your own water, food, can opener, medicine, clothing, toiletries and other supplies to last for at least 72 hours. A disaster supplies kit is a collection of basic items you may need in the event of an emergency. Don’t forget the special needs of seniors, anyone in your family with a disability, and pets.

*Source: FEMA.*



**Late evening...**

The children and Mrs. Rosales finally sat down to supper. Mrs. Rosales had prepared one of her special tortas, a kind of omelet filled with vegetables and longoniza sausage, with rice on the side. They finished the meal with some mango slices. After dinner, all three were very tired. Even Máximo was ready for bed.

Keeping busy had helped keep Edita from crying. Máximo tried to call Papa on his cell phone, but the phone system was jammed with tens of thousands of people trying to call at once. He couldn’t get through. Mrs. Rosales put on a brave face, but she was just as much afraid as Edita. Dr. Arroyo was scheduled to come home that afternoon. Where was he?



# A Way Home



**November 6**

**Manila, The Philippines**

Dr. Arroyo was furious. The conference had ended the night before, and he had planned to catch a Philippines Airline flight to Tacloban City this morning. He should have been home by now, but all flights east were canceled. After several hours, he still was waiting at the airport, growing more anxious with each news update about the storm. To make matters worse, telephone circuits were jammed, so he couldn't even call to warn Mrs. Rosales of his delay.



Inside the Ninoy Aquino International Airport, Manila, 2013.

Dr. Arroyo tried to charter a float plane (aircraft with pontoons for taking off and landing on water), but no pilot would fly to Tacloban until the storm had passed. Large storm-driven waves in Cancabato Bay next to Tacloban City would make a safe landing impossible. A charter boat also was out of the question. Weaving around the Philippine islands would add another hundred miles to the trip home. It would take two days to get there and by then, Typhoon Yolanda would be in full force. The boat captains he spoke with thought he was crazy for asking. Like the float plane pilots, no captain would consider traveling into a Super Typhoon.

Dr. Arroyo left the airport and went to the hospital where he had interned years ago. He still knew some people there; maybe they could help. He quickly located Dr. Riza Rivera, a short smiling dark-haired woman who supervised his emergency room training. She was glad to see Dr. Arroyo. After he explained his situation, Dr. Rivera said she had a solution for both of their problems.

“What’s your problem?” he asked Dr. Rivera.

She replied, “I am organizing a team of volunteers to bring medical aid to storm victims, of which

there will be many. I need more doctors to volunteer. Why don’t you join my team?”

Dr. Arroyo thought about the request. “I’d be happy to help,” he said, “but I really have to get home to Tacloban. My children need me.”



The University of Santo Tomas Hospital in Manila is 875 km from Tacloban City. In good weather, without damaged roads, it can take more than 20 hours to travel by car from the hospital to Tacloban City. By air, it takes approximately an hour and fifteen minutes.



Relieved by this good news, Dr. Arroyo agreed to join Dr. Rivera’s team. He wouldn’t make it home as soon as planned, but at least he’d get there.

**Mid-morning...**

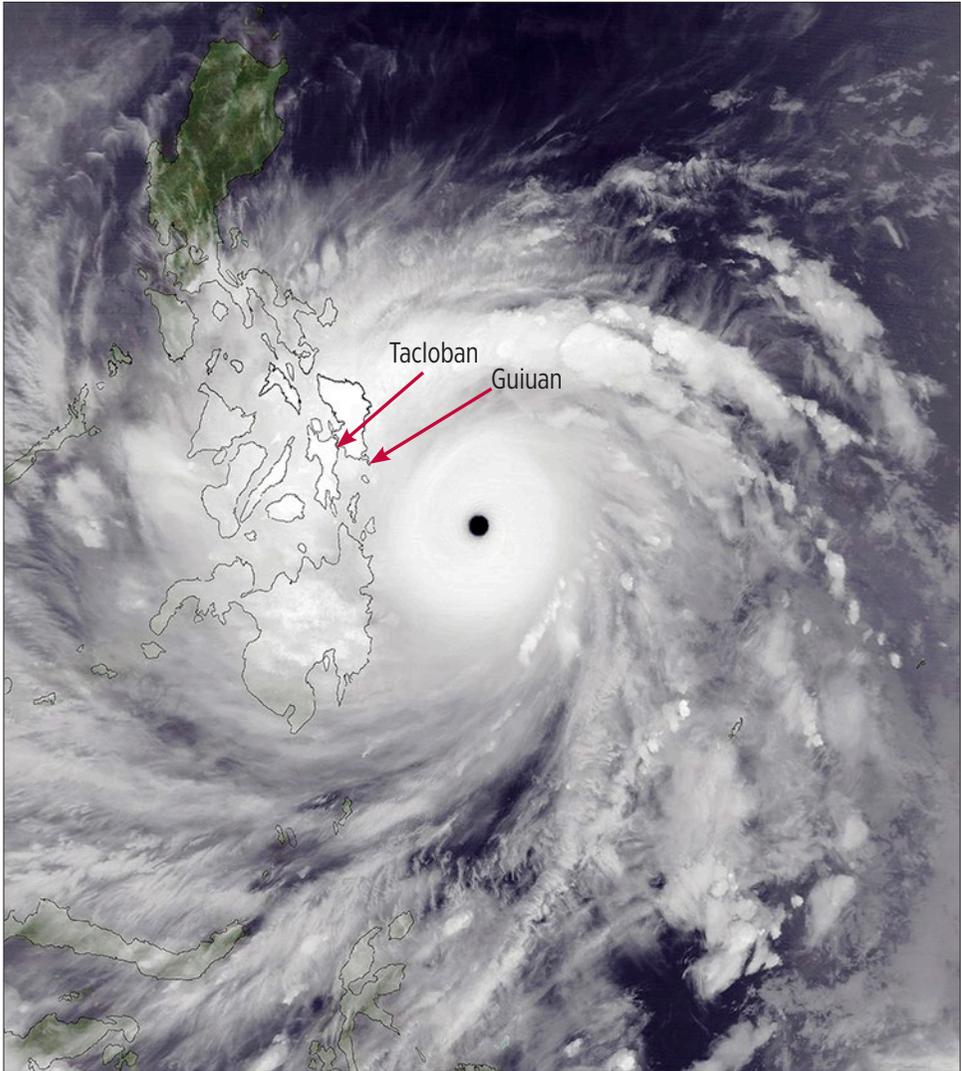
“Let’s come to order,” said Dr. Riza Rivera, as she turned on a projector. A



The University of Santo Tomas Hospital, Manila, 2013.

Dr. Rivera nodded her head. “Yes, I understand your concern. But you see, we have priority military air transport for our team and supplies. We’ve been assigned to provide aid to Tacloban as soon as the storm passes. We’ll get you home.”

satellite image of Typhoon Yolanda appeared on the screen. The swirling cloud mass all but obscured the Philippines. “This is our latest satellite picture of the storm. It’s heading for Guiuan, and then Tacloban, where our efforts will be concentrated.”



Satellite image of Super Typhoon Yolanda as it approached the Philippines on November 7, 2013.

Dr. Riza’s relief team included nurses, technicians and doctors, including Dr. Emilio Arroyo. During the next hour, they discussed logistics, procedures and the kinds of injuries and infectious diseases they were likely to encounter.

As the meeting wore on, Dr. Arroyo’s thoughts drifted back to his children. He was deeply upset that he couldn’t be home to protect them during the storm. A nurse seated near him noticed the distress on his face and asked what was wrong.

When Dr. Arroyo explained the situation, a radiology technician across the table said, “I can help with one of your problems. Inter-island phones may not be working, but short wave radio is.”

The technician promised to contact a friend. “He’s a ham radio operator. He can reach another radio operator in Tacloban City, who can relay your message.”



Amateur radio operators, often called ham operators, are licensed to operate radio transmitters for private, non-commercial, experimental, self-training, and emergency use. Anyone wishing to use or own amateur radio equipment must pass tests and be certified. Operators can help communicate critical information when telephones and the Internet are not working.





# A Welcome Message



**November 6**

**Tacloban City, The Philippines**

***Late evening . . .***

Edita was the first to hear the pounding. Strong winds echoed through the house. Tree branches were thumping the walls. But this sound was different and coming from the front door. Máximo and Mrs. Rosales now heard it too.

“Stay here, children,” Mrs. Rosales said. She opened the door to find a woman dressed in a clear plastic raincoat.

“Mrs. Rosales?” the stranger asked.

Surprised to see a visitor on such a bad night, Mrs. Rosales just nodded and mumbled, “Yes.”

“Here, this is for you.” The woman turned, ran to the street and jumped on her motor scooter. She was gone before Mrs. Rosales could utter “thank you.”

Mrs. Rosales looked at the envelope with her name on it. Still a bit confused, she returned to the living room, sat down, turned on a lamp and opened the letter.

**Edita, Máximo and Mrs. Rosales. I cannot get back to you before the typhoon hits. Flights are cancelled. I'll be there as soon as I can.**

**Stay away from windows.  
Drink only bottled water. Do not go out. Avoid animals.  
They may pass on diseases.  
Use mosquito spray.**

**Do what Mrs. Rosales says. I have to go. I love all of you very much.**



# First Landfall



**November 7**

**Guiuan Province, Samar Island, The Philippines**

**4:40 a.m., local time . . .**

Many of the nearly 50,000 residents in Guiuan went to bed thinking Typhoon Yolanda would be just another big storm. Typhoons are common in the Philippines and locals were used to “riding them out.” They did not realize that Yolanda was much bigger and more powerful than anything they had yet experienced.

As Yolanda made landfall, wind speeds topped 315 kilometers per hour, (195 miles per hour), with wind gusts of 380 km/h (235 mph). Huge waves whipped up from the ocean and smashed through town. A massive storm surge of up to 7 meters (23 feet) rose terrifyingly fast.

When the storm finally moved past, not a building in Guiuan was left undamaged. Most were totally destroyed. Coconut trees, a major source of income for the area, were wiped out. Water, electricity and telecommunication services were knocked out, and trees and debris blocked roads. Many people were killed and countless others missing.

Yolanda continued its movement towards Tacloban City.



# Surviving Yolanda



**November 8**

**Tacloban City, The Philippines**

**7:00 a.m., local time . . .**

Mrs. Rosales, Edita and Máximo huddled under blankets in the small back bedroom. They had pushed a mattress against the window, but the wind



Typhoon Yolanda strikes Leyte on November 7, 2013.

with a stinging spray of rain. Edita and Máximo began screaming, and Mrs. Rosales led them, crawling, into the hall. The hallway had become a rushing stream as water flowed through a gaping hole where the front

roared outside like a jet engine and shook the house. Windows rattled. Trees cracked and crashed. Metal roofs screeched as they were peeled from nearby buildings. The alarms of cars on the street could barely be heard over the din. Edita, and even Máximo, clung tightly to Mrs. Rosales. Edita was too scared to cry.

Suddenly, a heavy wind gust blew in the bedroom window. Glass shards and large splinters of the wooden window frame pierced the mattress like spears. The mattress fell away from the window and the room filled

door once stood. Edita, Máximo and Mrs. Rosales scrambled under the large dining room table and clung to its legs the house began to collapse around them. The noise was so loud they couldn't even hear their own screams.



Flooding from the storm surge in Tacloban, with debris and floodwaters inundating the city.

### **Mid-day . . .**

Edita, Máximo and Mrs. Rosales

had clung tightly to each other through the terror. Now they were cold, wet and frightened. Most of the house had been destroyed. No one wanted to leave their hiding place. But then, rays of sunlight pierced the clouds. Through a crumpled wall, sun fell on their faces. They felt its warmth. Mrs. Rosales decided it was time for action.

“Let’s get up children,” she said. “Be careful of where you step and what you touch.”

Mrs. Rosales went off to find their emergency supplies. But the tub of snack bars, bottled water, food cans and first aid supplies was gone. Looking out through holes in the walls where windows had once been, she realized it would be dangerous to search for the supplies outside. There were mountains of debris, and downed power lines that still could be live.

But looking around the wrecked house, Mrs. Rosales said, “We can’t stay here.”

“Where will we go?” asked Edita.

“There is a place that has withstood many storms. It will give us shelter.”

“Where is that?” asked Máximo.

Mrs. Rosales smiled. “We’re going to the church.”

Before they left the house, Mrs. Rosales left a note in an empty soda

bottle she found floating outside. The note told Dr. Arroyo where they were going. She inverted the bottle and slipped it over the broken end of a bougainvillea branch near the missing front door.

The walk to church was very slow. The children wanted to take Mrs. Rosales' car, but she pointed out the downed trees and power lines that blocked the road. Máximo asked, "Where is your car?"

She nodded toward the red Civic, half submerged in a nearby ditch.

In low spots of the road, the water was knee deep. Plastic bottles, Styrofoam™ plates and cups, branches, paper scraps, and more debris were

swirling about. The three survivors had to be careful not only of the things they could see, but also of whatever might be hidden in the murky brown water.

Mrs. Rosales led the way, with the children following directly behind. Edita was in the middle,

Survivors walk carefully through waters with hidden dangers.

trudging through water up to her waist. She held Mrs. Rosales hand to the front and Máximo's hand to her back. But with one false step, she slipped sideways into an unseen hole and sunk completely in the water. Máximo pulled her up quickly, but Edita was muddy from head to foot. Mrs. Rosales told Edita to spit out as much of the muddy water as she could.

"The water is dirty," she said. "We don't want you to catch any germs."

"I didn't swallow any water," said Edita.

"I don't care. Spit and keep spitting until I tell you to stop."



Máximo said, “Can I spit too?”

“You can spit if you fall in like Edita did.”

Máximo looked at the dirty water and decided not to fall in.

Mrs. Rosales checked Edita carefully for cuts or scratches. She was waterlogged, but unhurt. All the while, Edita continued spitting.

Mrs. Rosales couldn’t help but laugh at the silly sight. “Okay, you can stop now.”

As they continued on, the water began to drain from the road. Walking became easier, but they still had to be very careful. Mrs. Rosales made sure the children avoided electrical wires, broken glass, boards with nails and any other dangerous objects. A simple scratch could cause an infection of tetanus or maybe something worse.



Tacloban is a modern city of a quarter of a million people. Super Typhoon Yolanda left it in ruins. Thousands of buildings were damaged or smashed. Trees were uprooted and power lines downed. Overturned cars were floating in floodwaters. By the time the storm moved beyond the city, more than 2,300 people were known to have died and many more were missing.

Almost two hours into their trek, they reached a high stretch of open ground. Suddenly, Edita broke away from Mrs. Rosales’s grip. “Come back, Edita!” she called as Edita ran straight to a large debris pile. “Edita, now!”

Edita turned. In her arms, she held a wet, frightened puppy.

“Edita, your father said to avoid animals. You could get rabies from them. Put it down.”

Mrs. Rosales held out her hand, turned toward the church again, and started walking. For the first time she could remember, Edita disobeyed Mrs. Rosales. She slipped the puppy under her damp sweater and held it there, hoping it would not make a sound. She ran a few steps and took Mrs. Rosales’s hand.

Mrs. Rosales was right. Santo Niño Church, though damaged, was still standing. It was a sturdy building with thick walls and a high bell tower at one end. Most of the church’s roof was gone, as were part of the bell tower and the big cross that once adorned it.



Santo Niño Church survived. The structure was safe for people to shelter there.

As Máximo, Edita and Mrs. Rosales stepped inside, they saw hundreds of people, all seeking shelter and hoping to find lost family members. People young and old, strangers, friends and entire families filled the pews. Priests, nuns, and volunteers moved among the crowds, giving out water and what little food they had. Many refugees, in torn and dirty clothes, had injuries. Some were bandaged. There was much crying, but laughter, too, when loved ones found each other.

Mrs. Rosales led the children toward the front of the church where she thought it would be safer. Then, she heard a muffled bark. The puppy was still hidden under Edita's jacket.

Mrs. Rosales rolled her eyes. "Let me see the puppy."

Afraid of what would happen, Edita handed the dog to Mrs. Rosales. The puppy licked Mrs. Rosales's hands. Edita watched in anxious anticipation.

The puppy could be a good thing for the children, Mrs. Rosales decided. It will give them something to play with and take care of.

With a slight smile, she told Edita, "You need to dry him off. And find some food and water." Edita was so happy she barely heard Mrs. Rosales say, "He'll need a name."

Mrs. Rosales thought to herself, Dr. Arroyo will be mad. But I think he'll like the puppy too.



# A Country in Need



Typhoon Yolanda moved swiftly westward, away from Tacloban City and the Philippines, towards Vietnam. As residents in Tacloban gradually came out of hiding, they found a shattered world. News reports revealed multiple parts of the Philippines were completely destroyed, with people and their animals living in desperate need of medical aid and medicines, drinking water, food, and shelter. Electrical and water treatment systems were down, hospitals, pharmacies and homes damaged or closed, and roads blocked by mounds of wreckage. One of the first reports is shown below.

**Survivors “walk like zombies” after Philippine typhoon kills estimated 10,000. Reuters. Sunday, 10 November 2013**

“People are walking like zombies looking for food,” said Jenny Chu, a medical student in Leyte. “It’s like a movie.”

Most of the deaths appear to have been caused by surging sea water strewn with debris that many said resembled a tsunami, levelling houses and drowning hundreds of people in one of the worst natural disasters to hit the typhoon-prone Southeast Asian nation.

The city and nearby villages as far as one kilometre (just over half a mile) from shore were flooded, leaving floating bodies and roads choked with debris from fallen trees, tangled power lines and flattened homes. TV footage showed children clinging to rooftops for their lives.



# Dr. Arroyo Arrives



**November 11**

**Romualdez Airport, Tacloban City, The Philippines**

***Early morning...***

Relief flights began arriving at Romualdez Airport, across Cancabato Bay from Tacloban City. Like the city itself, the airport sustained massive storm damage, and runways had to be cleared before supply and rescue cargo planes could land.



The Daniel Z. Romualdez Airport serves the general area of Tacloban. It was heavily damaged by Yolanda.



The airport reopened on November 11, just a few days after the storm made landfall.

One of the first planes to touch down included Dr. Arroyo and the University of Santo Tomas Hospital medical aid team. As soon as the plane came to a stop, Dr. Arroyo dashed down the ramp. He promised the team he would return as soon as possible.

A battered yellow three-wheel taxi, a kind of a rickshaw, was just arriving with passengers who hoped to leave on one of the planes. Dr. Arroyo jumped into the taxi, shoved two

100-peso notes to the driver and gave directions. The driver wanted more, so Dr. Arroyo promised another 200 pesos if he got there quickly.

The trip home was much slower than Dr. Arroyo had hoped. Storm debris was heaped across most streets and intersections. Although the taxi was small enough to find a path through the wreckage, the



ride was slow. People were picking through the piles, looking for anything that could be salvaged. Exhausted police, soldiers and fire fighters combed the wreckage, looking for survivors. Bodies of the deceased were encased in plastic bags and lined up for collection. Virtually everyone was wearing

bandages and tattered clothes.



After two hours, the taxi pulled up in front of Dr. Arroyo's home. He could hardly recognize it. Momentarily stunned, Dr. Arroyo braced for the worst and told the driver to wait. But then he spotted

the upturned bottle on a branch, with what looked like a note inside. The paper wouldn't come out, so Dr. Arroyo smashed the bottle on a rock. A big smile came across his face as he read the note.

Back in the taxi, he pushed more peso notes to the driver and told him to head to the Santo Niño Church. When he had finally arrived, it took several minutes to find the children and Mrs. Rosales among the masses of people. They were camped—scratched, bruised and dirty—in a pew near the altar. Dr. Arroyo held his excited children closely and then reached out to Mrs. Rosales. He drew her into the hug.

"You took care of my children. Thank you." The hug was interrupted when he heard small yapping coming from the pew.

“That’s Mahal,” said Edita. “Can we keep him?”

Mrs. Rosales said, “I’m sorry. We...” But Dr. Arroyo interrupted. “Of course we can. Welcome to our family, Mahal.”

The family piled into the tiny taxi, still waiting outside the church. With Edita perched on Mrs. Rosales’s lap, Máximo sat reluctantly on Papa’s. Dr. Arroyo hugged his son (who hadn’t rode in his lap in years) and told the driver “Back to the airport, please,” handing over more pesos.



After maneuvering through the debris-covered streets, they reached the airport. Dr. Arroyo arranged to have Edita, Máximo, Mrs. Rosales and Mahal transported to Manila, where his parents lived. He knew they and his friends at the hospital would

take care of the children. Mrs. Rosales was relieved and excited to be meeting her own children there.

As they walked up the loading ramp into the bay of a huge cargo plane returning to Manila for more supplies, Dr. Arroyo hugged Edita and Máximo again. Edita had more tears, but this time she was not frightened. Mrs. Rosales got a hug, too, and Mahal got an ear scratching.

“I have to stay here for now. Many people need medical attention, and the relief team got me home. I want to help them. You’ll be alright. We’ll be together again soon and start rebuilding our home. I promise.”



Many survivors boarded C-130 military transport planes to get out of Tacloban. There were not enough seats, so people had to sit on the floor of the plane with sturdy ropes to hold on to for take-offs and landings.



# The News Spreads



**Mapping the destruction of Typhoon Haiyan. *The New York Times*. Tuesday, 12 November 2013**

The typhoon decimated Tacloban, destroying many of the residential and commercial buildings in this once bustling city of 220,000. Buildings near the fishing port were leveled by the storm surge, which sent water over half a mile inland in some places. Homes all along the coast were completely destroyed. According to the Philippine Census Office, about one third of homes in the city have wood exterior walls, and one in seven have grass roofs.

**In Tacloban, desperate residents beg for help, by Calum MacLeod, USA Today. Tuesday, 12 November 2013**

Boats lie tossed on the shore here. Whole roofs and trees smother cars and rickshaws. Streets look more like garbage dumps, piled high with split wood, broken glass, concrete chunks.

But it is the small belongings that stand out. A teddy bear here, a toy fishing net there, all swept into the streets by Typhoon Haiyan, also called Yolanda.

**Damage “worse than World War II” says mayor of typhoon-hit Tacloban, by Thin Lei Win, Reuters. Wednesday, 13 November 2013**

Five days after the typhoon made landfall, few buildings in Tacloban are standing, the stench of unburied corpses is overwhelming and access to some neighbourhoods is still blocked by debris, hindering relief efforts and

slowing clean-up operations. There is no electricity, little food or water, and much of the city of 220,000 has no communications.

**Ravaged by typhoon, Philippines faces threat of serious diseases, by Rick Gladstone, *The New York Times*. Thursday, 14 November 2013**

The aftermath of the Philippines typhoon is now threatening the country with outbreaks of debilitating and potentially fatal diseases, including some thought to have been nearly eradicated, because of a collapse in sanitation, shortages of fresh water and the inability of emergency health teams to respond quickly in the week since the storm struck, doctors and medical officials said Thursday.

Illnesses including cholera, hepatitis, malaria, dengue fever, typhoid fever, bacterial dysentery and others that thrive in tropical, fetid environments, where sewage and water supplies intermingle,

could form what doctors fear is the disaster's second wave. They predicted that leptospirosis, a parasitic disease endemic to the Philippines, could surge. And some said they would not be surprised to see a return of polio.

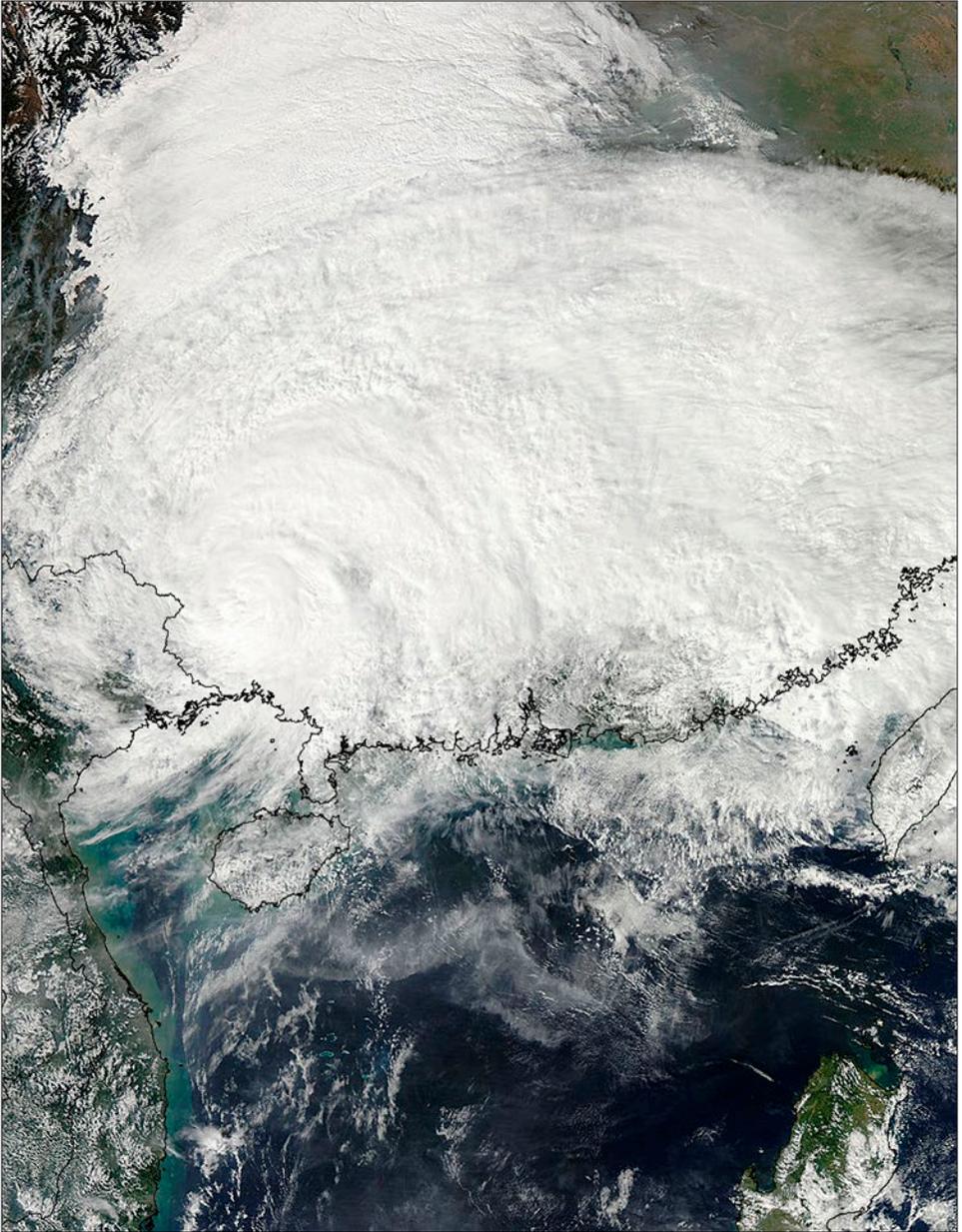
Medical aid groups on the ground in Tacloban, the city of 220,000 that was flattened when the storm made landfall a week ago and that only began to bury its dead on Thursday, have already expressed alarm over the risk of widespread tetanus infections among survivors wounded by shards of corrugated metal and splintered wood.



Relief teams had to bring medicines and vaccines, first aid supplies, food, water for drinking and sanitation, generators for power, tents for shelter, and other necessary supplies.



A relief nurse checks her supply kit of medicines.



A satellite image of what was Super Typhoon Yolanda/Haiyan as it weakened to a tropical storm over mainland China.



# A Different View



**November 12**

**International Space Station**

**ISS:** Houston, this is ISS. Do you read?

**Houston:** We read you loud and clear.

**ISS:** Have you looked at the last picture we sent, the one of Haiyan?

**Houston:** Yes. The typhoon has passed

Vietnam and now is over China. Haiyan has been downgraded to a tropical storm, though people living there continue to receive heavy rains.

**ISS:** What about the Philippines?

**Houston:** It has cleared there. But the destruction is unbelievable. Cleanup and aid has arrived, but it will take a long for them to recover. The good news is that aid is coming in from all over the world.

**ISS:** That is good news. The biggest challenge to relief efforts will be logistics — just being able to get food, water and other supplies to areas that are hard, if not impossible to reach. But the Filipinos are survivors. They will make it through this.



Significant storm surge flooded many areas in the Philippines. The dots on the map show the worst hit.



# Epilogue



## Two Years Later

### Tacloban City, The Philippines

Máximo laughed as he played with Mahal in the living room. It had taken longer for the family to get back together than they first thought. But after several months, Máximo, Edita, and Mrs. Rosales flew back to Tacloban to live in temporary housing with Dr. Arroyo. This past week, the family finally moved into a new permanent home.



The Daniel Z. Ramualdez Airport after Yolanda (left) and rebuilt (right).

“Máximo!” Papa called. “Stop playing with Mahal. Put him away and get dressed. It’s almost time to go.” Dr. Arroyo turned to Edita and said, “You look very pretty today, little one.”

Seven-year-old Edita looked up at her father. He was wearing his finest barong shirt. It was white and had a u-shaped embroidery pattern on the front. He wore it only on very special occasions.

She smiled back at him as she looked down at her own new dress. They

were going to a great gathering, but it was not a party like others. This was the anniversary of Yolanda. A new monument was being unveiled today which would stand for those who perished, and those who survived the typhoon. Her papa had told her that candles would pave the way along major streets in the city that night to show the Filipino people's grief, determination to recover, gratitude for the help they had received, and hope for the future. It would be beautiful, but sad, too.



The memorial in Tacloban was unveiled on November 8, 2015.

Máximo and Mrs. Rosales came in just then, and they left to drive to the ceremony. On the way, they passed the church where the children and Mrs. Rosales found shelter after the storm. It had a new roof and was painted a pure white. Dr. Arroyo stopped the car.



Santo Niño Church after Yolanda (left), and rebuilt later (right).

Mrs. Rosales hugged the children as they looked, and remembered what they had survived. Dr. Arroyo put the car in gear and they continued their journey to the memorial. It was time for the family to share their grief and celebrate new beginnings with their fellow Filipinos. Together they would finish rebuilding their community.

# Sources

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