

## **AlTo Update, October 2018: Earthquake. Tsunami. Trees.**

September 28, 2018. Palu, Central Sulawesi, Indonesia:

The earth begins to shake and buckle at the Palu airport as a 7.5 magnitude earthquake hits the area. As his colleagues panic and start evacuating the air traffic control tower, a young air traffic controller instead tells them he's going to stay to help an oncoming plane to land. Moments later, the plane manages to land safely, but the young air traffic controller is killed as the tower collapses.

In Palu Bay, a young mother, concerned for her children, goes out to search for them before the tsunami hits. The children are okay, but the mother is washed away by the giant wave.

In nearby Petobo village, a witness described the earth splitting and opening, people, houses, and vehicles getting "sucked into the earth," and then the entire chasm getting "sealed over" with mud as soil liquefaction--another earthquake-associated phenomenon where wet soil turns to liquid mud--simply obliterated the entire neighborhood.

Meanwhile, 250 miles (400 km) away on Sulawesi's east coast, most of the AlTo team were having a quiet afternoon at Camp Home Sweet Home, in Tompotika. We felt the earthquake, but only lightly, and had no idea of the devastation that was just beginning on the western coast of our same island. The earthquake knocked out communications across the province, so it was several days before we had any idea of the real scale of the calamity. And now, though all AlTo team members themselves are safe, we all have relatives, friends, and acquaintances who have been affected by the disaster.

This we see regularly: frequent tectonic activity in the Ring of Fire leads to disasters for humans and other living things. The human dead in this incident number 2,000 and climbing, the displaced more than 80,000, and it is hard to fathom the fact that the images of the massive wave, crumpled buildings, and be-ribboned roadways are not a movie-goer's special effects. They are all too real, and they will have ongoing implications far into the future.

What can be done?

The truth is, there is not a thing humans can do to prevent massive destruction and loss of life when Nature unleashes earthquakes or tsunamis. We are but specks in the face of

such forces, and there is simply no escape from their awesome power. But there *are* things we can do that might make the misery of future seismic events a little bit lesser.

In 2011, for instance, urban Japan showed how strict application of building codes and an efficient public early-warning system mitigated what would otherwise have been much greater earthquake/tsunami death and destruction.



Where once stood hotels and shopping malls, a lone tree is all that is left on Palu's Talise beach. Photo: Hotli Simanjuntak/EPA

And, closer to home in Tompotika, there are a few facts that are gaining ever more traction with audiences in AlTo's outreach programs. Though being learned at the cost of misery and destruction, lately more and more people are embracing our core conservation messages.

A key one is that ***Trees Help***. In the face of landslides, which are becoming more frequent in Sulawesi due to earthquakes, prolonged climate-altered rains, or just ill-advised human building activity, forests help keep slopes stable and prevent landslides. Or floods: when heavy rains or storms hit, human habitations near forested areas fare much better than those near where forests have been cut. Even tsunamis: it is well-documented that coastal mangrove forests, if left standing and healthy, can go a long

way toward mitigating the destruction caused by giant tsunami waves. No, no number of trees will stop an earthquake or a tsunami. But trees are nature's agents of gentleness: in nearly every demonstration of her ravaging powers, a tree can soften the effects.

In Sulawesi, human suffering is enormous right now. The hollow eyes of the bereaved, the mass graves filling up with bodies, the anguish of those still searching for loved ones bespeak the magnitude of the losses. We wish that the message did not have to hit home at such cost. But all the more so these days, our message is penetrating, and it is about hope. We humans can live differently. We can live better and less vulnerably on this earth, while making life better for non-human creation as well. Trees are our allies; they can help if we let them stand.

Twelve-year-old Riswan needs no convincing of this fact. He was praying in the local mosque when the tsunami hit. As the great wave washed away his neighbors, he managed to survive by clinging to a tree.

Riswan made it. He, and his tree, are our future.

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