
THE TSUNAMI TRAGEDY ITS CAUSES AND CONSEQUENCES

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Precisely at this time my wife had woken up from her sleep and whispered to me, "Ossie, did you feel a moment ago a slight tremor of your bed?" "Oh, go back to sleep Joyce, you must have been probably dreaming." "But I distinctly felt a very slight tremor," she insisted. "Oh, go back to sleep, I exclaimed in exasperation.

Soon after Joyce switched on the television. It was with a sense of horror that we learned that a massive earthquake had occurred a few minutes before Joyce had felt the tremor of her bed. This had apparently occurred close to the island of Sumatra. We had heard from time to time of disastrous earthquakes in different parts of the world. Now, earthquakes are normally measured on what is known as the Richter scale (a scale established by Dr. Charles F. Richter many many years ago). The earthquakes we had hitherto heard of were of the order of 4 to a maximum of 8 on the Richter scale. However, we learned that the Sumatra earthquake measured 9.3 on the Richter scale. By any standards, this was indeed a massive quake. The Richter scale, though built up according to a series of successive numerals, was not additive in character. Between any two successive numerals the interval was very large. In fact it was more exponential in its nature. Thus it can be understood that the Sumatran earthquake, measuring 9.3 on the Richter scale, was massive on a world historical scale.

We later learned that the quake had actually occurred on the deep seabed adjoining Sumatra. The vertical movement of the seabed, resulting from the quake, had flung the waters of the sea almost 60 or more feet up. This had created an enormous wave on the sea which moved in a westerly direction because of land obstructions on the eastward side. I will describe later the consequences of this wave, known as the Tsunami, on coastal regions to the west affecting large stretches of coastline on the Asian continent where 11 to 12 countries had been affected. It finally stopped on the African coastline, devastating Somalia and a part of Kenya.

Next to Sumatra and coastal areas of Indonesia the worst affected was the Province of Aceh, where it is estimated that nearly 70% of the population perished in the waters of the Tsunami.

I have already mentioned that my wife had felt a tremor of her bed around 7.10 a.m. that morning. This was obviously the last stages of the Sumatran earthquake which had sped over sea and land in our direction, exposed as we were to the waters of the Indian Ocean

traveling from the east. We were glued to the television and it was only at about 9 or 9.30 a.m. that we saw the Tsunami waves travelling to our island. While the tremors of the earthquake had taken only a few minutes to reach our land, the Tsunami waves had taken over two hours to travel from its epicentre in Sumatra along the ocean to the island of Sri Lanka. The giant sea waves generated by that Tsunami earthquake were now speedily moving in a westward direction. The southern coast of Malaysia had already been affected and inundated. Wave upon wave of the Tsunami proceeded westward. The southern region of Thailand, including the luxury island of Phuket, were also very badly affected. Thousands in Thailand were missing or their dead bodies discovered near the shore and even on the roofs of buildings which had barely survived the disaster. Over a thousand foreign visitors from Sweden, Germany, France, England and a few from the USA were missing. It must be remembered that these waves were originally generated by the movement of the seabed near Sumatra which clearly lay within one of the earthquake belts of our world. In Sri Lanka people carried on their normal morning routine without any knowledge of the horror that was to come. Hundreds of frail fishing boats, all along from the north, eastern and southern coastline, had already put out to sea in the very early hours of the morning. In a few hours they were due to return to the coast where they would unload their catch. However, on this particular day, long before they could turn their oats homewards, they sensed the tragedy that was approaching our region. Two massive waves were coming in their direction. All their efforts to change the sails of their boats and head towards land were of no avail, particularly in the south and eastern regions of Sri Lanka. Tragically, most of these fishermen were engulfed by the deadly waves. Their boats were shattered and 1,000 fishermen, despite their prowess in swimming, lost their lives. As the massive waves passed on, all that was left upon the sea were floating human bodies who once worshipped the sea for their livelihood and provided the island's fish for the day.

Sri Lanka was in the direct path of the Tsunami and it is not strange therefore that it was the southern and eastern coastlines, facing the oncoming waves, that were most affected. Having done its damage to Sri Lanka, the Tsunami continued its journey westwards. Certain portions of the deadly waves were deflected to the west coast of the island as well. Up to the coastline of Negombo and somewhat further a certain amount of damage was done. However, being a deflected wave, the damage was not anywhere near that experienced by the southern and eastern coastlines of the inland. The main Tsunami which continued in a westward direction was only stopped by the African continent.

In a cursory manner I shall endeavour here to refer to the scientific basis of the tragedy that hit the continent of Asia.

Geologists are well aware of the fact that the crust of the earth, mainly of a rocky nature and extending to depths of several miles, is a dynamic system. Its motions can sometimes be estimated to last from a short displacement to several thousands of miles. Some years ago, a new science was established known as "Plate Tectonics", which estimated from ancient historical accounts to the present time the dynamics of the earth's crust. Earthquake belts of the earth's crust are also associated with these movements.

One particular instance is worth mentioning at this stage. If a map of the earth is carefully perused and the outlines of South America and Africa are cut out and brought together they would seem to fit in a singular manner. This seems to indicate that many millions of years ago, South America and the African continent constituted a single contiguous landmass, which due to tectonic effects perhaps separated over the millions of years, that geologists directed their attention to even our little island of Sri Lanka and the various islets known as Adam's Bridge seem to show that Sri Lanka was once part of India.

The earth's crust scientifically referred to as plates, number between 3 to 5. Once what was known as the Indo plate comprising India and some of its adjacent land was linked to what is known as the Australian plate, forming a large contiguous landmass. Certain geologists and geophysicists are today of the opinion that the vast section of this earth crust underwent a crack in the neighbourhood of Sumatra forming two plates close to one another. Any friction between these two plates or even collisions could lead to the phenomenon of earthquakes. When this occurred we do not know, but it could well be that it was either the friction or the collision between the Indo plate and the Australian plate that might have been responsible for the massive underwater earthquake close to Sumatra. This, however, has yet to be established.

In Hawaii, which is part of the USA there is a Tsunami warning system. However, in the entire Indian Ocean and the continent of Asia there is no such warning system. The result is that country after country of the Asian region was taken unawares by the Tsunami tragedy. The damage done to the coastal regions of Sri Lanka are of such a magnitude that a mere article like this could not possibly do justice to it.

One event arising from the ignorance of our people was that after the first Tsunami wave had done its damage it receded far back into the ocean. The seashore was clear and many people ventured to the shore collecting fish and other natural artifacts left behind, by the waves. Many were drowned, and only a handful of people wounded and in despair survived the second Tsunami wave. The towns of Kalutara stretching down to Galle, Hambantota and Matara were destroyed beyond our comprehension. So too were the towns along the eastern coastline including large parts of the well known cities of Batticaloa and Trincomalee. Also close to the eastern

coastline the region of Amparai was completely devastated. The number of deaths that occurred here could hardly be estimated. The town of Galle, in particular, was a tragedy. Beautiful as it was in its historical setting it was now a scene of utter destruction. Galle was the remaining masterpiece of the Dutch settlers who occupied the land in the 17th century. Fortunately the imposing Dutch Fort was mostly untouched by the waves dating from the protected many residential houses as well as the well-known New Oriental Hotel which was the favourite of foreign visitors to the town of Galle.

The beautiful cricket grounds which had been built some years ago did not seem to exist. It seemed to be now a sea of water. Many a test match in cricket had been played for several years upon these grounds. It was admired and loved by foreigners, visitors and cricket commentators who described the cricket matches played upon it from time to time. Part of the coastline of Galle was enclosed by stone ramparts built originally by the Dutch rulers of our land.

The Tsunami waves rushed along the island's eastern coast, ravaging towns such as Trincomalee, Batticaloa and Mullaitivu. These towns were shown on television. They were horrifying to human eye. Everywhere lay dead bodies of people caught and surprised in their morning routine. Galle and Matara were principally occupied by Sinhala settlers. Trincomalee was a town consisting of a mixture of races such as Tamils, Sinhala and Muslims. Batticaloa and Mullaitivu were principally Tamil in their composition. The cruel Tsunami waves made no distinction of race of community or of religion. Human beings in Galle, Matara and the entire east coast of Sri Lanka were equally devastated irrespective of their racial, ethnic or religious background.

One feature that emerged from the Tsunami disaster in Sri Lanka was the virtual wiping out, at least for the time being, of all ethnic and religious conflicts which had been the bane of our island for at least the past 20 years or so. Never in the history of Sri Lanka, as far as I myself know it, have I seen people rising up irrespective of community or religious differences to help the victims of this tragedy. The government of Sri Lanka consisting of certain parties headed by the SLFP used every means at its disposal to assist the victims. Not only were dry rations distributed but clean water as well. This is the reason why, unlike in many other countries, epidemics did not occur in Sri Lanka due to a tragedy of this magnitude. Thousands and thousands of victims were given temporary shelter in schools or other government institutions. Religious organizations of every creed such as Buddhists, Christians, Hindus and Muslims willingly gave shelter to those whose homes had been wiped away. Despite the troubles of the recent past, I as a Sri Lankan felt proud of our people on this occasion.

Despite political differences our country has with imperialism and its allies, aid both in kind and in massive financial terms began to pour into our land from countries of the west and rich countries like Japan and China. Many countries even reduced or wiped out

Sri Lanka's national debt to them. While I retain my political views in every possible way, I join without government and the people of our land in expressing our gratitude to the richer countries of the world. Through their assistance and the determined efforts of our own people, before many more decades have past, Sri Lanka will once again be the beautiful land it was and improve its quality of life. Politics and so-called terrorism apart, it is clear that the human spirit still persists among the peoples of the world.

A Final Note: Not being a geologist or a geophysicist but only a simple physicist, if any small errors there be in my description of Plate Tectonics, I beg pardon from my readers for this.

Post Script

The massive earthquake and the accompanying Tsunami devastated about 11 or 12 countries of the Asian region. As far as possible I have mentioned some of the details of the terrible event. However, almost 3 months later in very late hours of March 28th another massive earthquake occurred in the same region, namely the sea bed near the island of Sumatra. Governments and countries throughout the Asian region prepared themselves for another possible Tsunami. However, despite their fears no such Tsunami ensued. The greatest damage nevertheless was done to

Sumatra and neighbouring island Niyas in Indonesia, as a total of over 2000 are believed to have been killed.

Nobody yet knows the exact cause of this earthquake. Broadly it is said to be an aftermath of the December 26th event. Though not a geologist myself it is my personal opinion that the earthquake of the December 26th was the result of a vertical reaction between the Indo Tectonic plate of the earth crust and the Australian plate which separated in recent times. The result was a massive column of water which proceeded as a wave towards the west. The details of this, the above article as already dealt with. It is my opinion that the March 28th earthquake was caused by horizontal movement of segments of the two broken plates. This is probably why a Tsunami wave did not result in the Indian Ocean but only in parts of Indonesia and their neighbouring islands.

Our ignorance regarding this phenomena is still very great. I agree completely with the government in setting a 100m limit against building on the coast. Arthur C. Clarke says this should be 300m; and the Indian government has in fact set a 500m limit. Much more underwater research has to be done before a proper understanding is possible. Whether the repetition of this phenomena including another possible Tsunami is likely to occur, scientists themselves are unable to predict. ■

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SUPPORT RESTORATION OF DEMOCRACY IN NEPAL EXPRESS SOLIDARITY FOR THE STRUGGLE FOR DEMOCRACY IN NEPAL

Nepal's King Gyanendra assumed absolute power on February 1, 2005, imposed state of emergency repealed many provision of the constitution of Nepal and curtailed democratic and human rights of the people of Nepal. Leaders of democratic parties have been put under house arrest and scores of journalists, human rights activist and political cadres of various democratic parties have been under illegal detention.

In the name of containing insurgency in the country, the king has actually targeted democracy and people who were slowly developing a democratic culture.

After the Feb 1st royal takeover, arbitrary arrests, illegal detention, and the use of force have been order of the day. Each day, hundreds of pro-democracy supporters are arrested from the streets. Political leaders are barred to travel to outside Kathmandu valley.

Five mainstream political parties are launching street protests, and other forms of protest for the restoration of multi-party democracy, rule of law, a sovereign parliament (by periodic election), and the inalienable human rights of Nepalese people. They represent the Nepalese opinion for democracy. Support this struggle.

The continuous protests in the streets of Kathmandu, Pokhara, Nepalganj, Janakpur, Biratnagar and other urban centres of Nepal are against the autocratic rule of the King and for release of all political prisoners, restoration of press freedom, peaceful solutions of insurrection and for mainstreaming the insurrectionary forces in the democratic polity of the country. Support this movement and help save this beautiful Himalayan nation.

Your support counts: Please show your support for this campaign with signatures or/and please join e-campaign for democracy and write to the office of the Prime Minister and council of ministers: info@pmo.gov.np ■