

# Foreword

## Communicating Disasters: A Century of Lessons

By Sir Arthur C Clarke

Disasters have been a favourite element of story tellers over millennia – and we science fiction writers have used more than our fair share, sometimes involving calamities beyond our home planet.

In my own novels and short stories, I have imagined many and varied disasters that happen at the most inconvenient moments, just when everything is going according to plan. A tsunami arrives towards the end of the story in *Childhood's End* (1953). In *The Ghost from the Grand Banks* (1990), an ambitious plan to raise the *Titanic* is wrecked by a massive storm in the north Atlantic. And *The Songs of Distant Earth* (1986) suggested a planetary rescue plan for the ultimate disaster: the end of the world when our Sun explodes.

In real life, however, I have been enormously lucky not to be in the wrong place at the wrong time when Nature unleashes her fury, or humans bungle matters on their own.

But two tragedies that happened 92 years apart have left deep impressions in my mind: they illustrate how communications failures can compound the impact of a disaster.

I was born five years after the biggest maritime disaster the world had known: the sinking of the 'unsinkable' *HMS Titanic* while on her maiden voyage. My home town Minehead, in Somerset, was not more than a couple of hundred kilometres from Southampton, from where the *Titanic* set off. All my life, I have been intrigued by the *Titanic* disaster. In fact, one of the earliest short stories I wrote (now mercifully lost) was about a spaceship that collides with a large chunk of ice (a comet). No prizes for guessing what I called that doomed spaceship.

I have been particularly interested in what happened to the *Titanic's* distress call after she hit the iceberg at 11.40 pm on the night of 14 April 1912. When Captain Smith gave the order to radio for help, first wireless (radio) operator Jack Phillips used the Morse Code to send out "CQD" six times, followed by the *Titanic* call letters, "MGY". It was the second wireless operator, Harold Bride, who suggested half-jokingly, "Send SOS – it's the new call, and this may be your last chance to send it." Phillips, who perished in the disaster, then began to intersperse SOS with the traditional CQD call.<sup>1</sup>

As things turned out, responses to this distress call came too late to save the ship's 1,500 passengers and crew who perished. A series of unfortunate factors compounded the disaster. The most ironic among them was that the wireless operator on the *Californian*, located closest to the *Titanic*, had shut down for the day just 30 minutes before the first distress call was sent out. Had the *Californian* been listening, it could have responded hours before the *Carpathia*, the eventual rescue vessel.<sup>2</sup>

Official enquiries into the disaster also revealed that the wireless operators on the *Titanic* had, in fact, received alerts from other ships about massive icebergs in the vicinity. But the operators, overworked transmitting private messages of the ship's wealthy passengers, failed to pass that vital information on to the bridge.

The *Titanic* disaster prompted the shipping community to introduce a 24-hour radio watch on all ships at sea. It also consolidated the role of maritime radio in distress signalling and rescue operations. We can only guess how many thousands of lives at risk have since been saved thanks to timely warnings or distress calls.

But the absence of a timely warning once again characterised the second disaster to touch my life. Arriving 10 days after my 87<sup>th</sup> birthday, the Asian Tsunami of December 2004 left a massive trail of destruction in my adopted country Sri Lanka and several other countries bordering the Indian Ocean. (While Colombo, where I live, did not suffer any damage, two thirds of Sri Lanka's coastline were battered, killing nearly 40,000 people and causing much damage.)

Astonishingly, a full century after the invention of radio, the Tsunami arrived without any public warning. The disaster's death toll could have been drastically reduced if its occurrence – already known to scientists – was disseminated quickly and effectively to millions of coastal dwellers living on its predictable path. Even a half hour's notice would have allowed people to run away from the coast, and in many affected locations there was just enough time to get to safety. But alas, that didn't happen – and tens of thousands perished.

It was appalling that our sophisticated local and global communications systems completely failed us that fateful day. The communications satellites that I invented, and the global Internet that one of my stories inspired, could have spread the warning, with the hundreds of radio and television channels across coastal Asia amplifying it.

What happened, how and why has been analysed repeatedly since then. It is now known that the failures were human, not technological. To ensure better results next time, we need to achieve an optimum mix of technology, management systems and community preparedness – not just for tsunamis, but for many other hazards that we live with. We have to remember that delivering credible early warnings to those who are most at risk is both an art and a science.

Shortly after the Boxing Day Tsunami, I was reminded that, I had, in fact, written about another tsunami that happened more than 120 years earlier. My first book about Ceylon, *The Reefs of Taprobane* (1957), contains this description:

"One August day in 1883, the water suddenly started to drain out of Galle harbour. Within a few minutes, the sea bed was exposed for hundreds of feet from shore. Myriads of fish were flopping around in their death agonies, and many wrecks, from small fishing boats to large iron steamers, were miraculously uncovered by the water that had concealed them for years.

"But the inhabitants of Galle did not stop to stare and wonder. They knew what to expect, and rushed to high ground as quickly as they could. Fortunately for the town and its people, the sea did not return in the usual tidal wave; perhaps because Galle was on the far, sheltered side of the island, it came back smoothly and without violence, like a swiftly incoming tide.

"It was many days before the people of Galle learned why the sea had so suddenly deserted their harbour, when they heard for the first time the doom-laden name of Krakatoa."

Half a century later, I can no longer locate my original notes, but one thing baffles me: *how did the people of Galle in 1883 know big waves were coming up soon after the sea receded? What made them rush to high ground?*

In contrast, in twenty-first century Sri Lanka, most people simply did not know this fact. (An exception was the village of Galbokka, where a retired sailor recognised the tell-tale signs and rushed the entire community to safety.<sup>3</sup>) Hundreds of men, women and children were killed because they had rushed out to see the spectacle of a suddenly receding sea.



THE AP image archive

Referring to the Krakatoa-inspired tsunami, I had written: "It was a moment unique in recorded history, and one which will probably never come again. I would have given anything to have been present then with a camera, but would probably have been too terrified to use it."

Well, never say never. On 26 December 2004, many holiday-makers on affected beaches were armed with video cameras, and it was their 'amateur' images that later showed us the full force and fury of the unfolding disaster. Because it was distributed over a large area and occurred during peak holiday season, the Asian Tsunami was probably the most widely filmed disaster in history. And we shall never know how many others were consumed by the very waves whose onset they started filming.

It was hours later that professional journalists and camera crews arrived at the multiple scenes of disaster. Then something remarkable happened. Concerned ordinary people continued to offer first hand narratives and personal perspectives to a world anxiously following the unfolding humanitarian crisis. Relief workers, volunteers and other public-spirited individuals turned to the Internet where they kept publishing their own personal web logs. These blogs developed a wide following among those who wanted a counterpoint to the fleeting coverage -- or helicopter journalism -- coming out in some sections of the mainstream media. In some cases, bloggers went where no news reporters or camera crews could reach, partly because so many locations had been affected.



TVEAP image archive

This was not the first disaster that 'citizen journalists' covered, but it marked a turning point in the growing phenomenon enabled by information and communications technologies (ICTs). The post-Tsunami coverage showed that the professional and amateur divide had now blurred; there is a clear (and complementary) role that each can play.

The Tsunami also reminded us how disasters can make our information society vulnerable. When electricity and telephone services -- both fixed and mobile -- went down in the worst affected areas, a century old technology came to the rescue: amateur radio enthusiasts restored the first communication links with the outside world, sometimes using the Morse Code to economise the power of car batteries. Courageous and resourceful 'radio hams' were at the forefront of relief efforts in the Andaman and Nicobar Islands in India, and Hambantota in Sri Lanka. In those early hours and days, Marconi's faithful followers helped save lives and allowed a rapid appraisal of damage. As the President of the Radio Society of Sri Lanka remarked, "When all else is dead, short wave is alive."

Communicating disasters -- before, during and after they happen -- is fraught with many challenges. Today's ICT tools enable us to be smart and strategic in gathering and disseminating information. But there is no silver bullet that can fix everything. We must never forget how even high tech (and high cost) solutions can fail at critical moments. We can, however, contain these risks by addressing the cultural, sociological and human dimensions -- aspects that this book explores in some depth and detail, from the perspective of both media professionals and disaster managers.

The lessons of history are clear: if we are not careful, we can easily lull ourselves into the same kind of false confidence that doomed the *Titanic*.

*Colombo, Sri Lanka*  
27 June 2007

Endnotes:

- 1 In fact, SOS had been adopted internationally in 1908 as the new distress call, but was not widely used by British wireless operators.
- 2 A good account of wireless in the Titanic disaster, written by Allan Brett, is found at: <http://jproc.ca/radiostor/titanic.html>
- 3 <http://www.azcentral.com/specials/special11/0114victor.html>