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# The Findings of an Empirical Study of the Application of Criminal Law in Non-Terrorist Disasters and Tragedies ©2017

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## HIGHLIGHTS

- 48 criminal prosecutions have been brought in non-terrorist disasters and tragedies involving loss of life prior to 2000. 152 have occurred as of September 2016 in the New Millennium.
- Over 60% of the New Millennium cases are in Asia and the Pacific Islands, with India and China in the vanguard.
- The cases arise in both civil law and common law jurisdictions.
- Most cases involve structural problems and maritime accidents.
- Many include government officials among the defendants.
- 33 engineers and one architect have been prosecuted in cases in the New Millennium versus only eight preceding 2000.

Professor Binder has been teaching law for 45 years and involved with legal liability issues regarding infrastructure for 4 decades.

His study shows a dramatic increase in criminal prosecutions in the New Millennium for both natural and human caused disasters and tragedies resulting in loss of life. A large percent of the cases are in Asia and the Pacific Islands. Also sharply increasing are government officials and employees for corruption and derelictions in duty and also engineers and architects.

The world's attention was riveted on Savar, Bangladesh on April 24, 2013 when the eight-story Rana Plaza collapsed, killing 1,136 and injuring over 2,000. Almost all the victims were textile workers. The causes of the collapse were the addition of an unpermitted, poorly engineered four stories coupled with substandard building materials. The building's owner and factory operators ignored an engineer's warning of dangerous cracks in the structure the day before the collapse. Instead, workers were ordered back into the building.

The aftermath witnessed the arrests of 42 individuals, including the owner of the building, five factory owners, and a dozen national and local officials, including Savar's mayor.<sup>1</sup>

The Bangladesh arrests of those responsible for the Rana Plaza tragedy raise the legal issue of criminal prosecutions in disasters and tragedies arising from both natural and human causes. I noticed in the aftermath of the Rana Plaza collapse an increasing application of criminal law in these incidents, giving rise to several theses:

- 1) A substantial increase globally in criminal prosecutions in non-terrorist disasters and tragedies in the New Millennium;
- 2) A high percent of the incidents are in Asia and the Pacific Islands;
- 3) Several cases include the prosecution of government officials and employees for corruption and other derelictions of duty;<sup>2</sup> and
- 4) The surge in prosecutions may be prompted by the ubiquity of smart phones, tablets, and social media.

A plausible hypothesis is the increase in hand held digital cameras and cell phones coupled with the advent of social media to globally disseminate incidents, disasters, and tragedies. The New Millennium ushered in smart phones, Google, and the Internet. Popular knowledge and reaction to tragedies prompts a call for action, resulting in prosecutors taking action.<sup>3</sup>

This paper presents an analysis of the results of the study. It lays out the need for criminal prosecutions, followed by the methodology. It summarizes the findings, and discusses a few situations which stand out. It also looks at the special case of South Korea, which has been most proactive in responding to incidents, not only with criminal prosecutions, but also with changes in government and society. The full 56-page list at [denisbinder.com](http://denisbinder.com) contains thumbnail sketches of each incident.<sup>4</sup>

## I. The Significance of Criminal Prosecutions

### A. Compensatory Damages

Criminal prosecutions are the best legal means of ensuring culpable parties are held to account. For example, corporations and governments may be accused of committing wrongful acts, but the actual decisions and acts are undertaken by people. Someone made the decision, committed the act, or failed to act when they should have acted. The culpable persons may escape liability if

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<sup>1</sup> Syed Zain Al-Mahmood, *Bangladeshi Police Charge 42 With Homicide for 2013 Garment Factory Collapse*, Wall St. J. (June 2, 2015), <http://www.wsj.com/articles/bangladeshi-police-charge-42-with-homicide-for-2013-garment-factory-collapse-1433181270>.

<sup>2</sup> The one exception to the initiation requirement is the commencement of administrative and party sanctions in China because of the unique role of the Communist party in China. Party discipline can effectively result in the end of the accused's career.

<sup>3</sup> I cannot prove this premise though, but the Rana Plaza tragedy resulted in Bangladesh not only bringing criminal prosecutions, but a strengthening of safety standards.

<sup>4</sup> The study has a date of September 26, 2016.

attention is solely focused on the corporate or government entity. Criminal liability can pierce the corporate veil or government entity to reach the individual wrongdoers.

Civil liability developed Tort Law to compensate the victims, usually through compensatory damages assessed against the wrongdoer, commonly referred to as a tortfeasor. Compensatory damages are intended to place victims in the condition they were in before the accident. It can usually only be done through money damages.

However, three limitations exist on individual culpability such that the wrongdoer escapes liability. First, if the tortfeasor is an employee, then the employer will also often be liable through vicarious liability. Under the doctrine of vicarious liability, often referred to as respondent superior, the employer is also liable for the wrongful conduct committed in the scope of employment by an employee. Individual employees remain liable in theory, but the victim will normally seek compensation from the defendant with “deeper” pockets, the employer. The employee will effectively be relieved of liability.

The second exception is when insurance will cover the loss. In situations when defendants are personally responsible for causing an accident, such as a typical automobile accident, insurance, up to the policy limits, may cover the damages. Liability insurance may effectively serve as a functional limit on liability.

Assuming vicarious liability and insurance do not relieve the defendant of liability, a third means exists of escaping liability, personal bankruptcy, if the defendant lacks the resources to fully compensate the victims.

The reality therefore is that even in a country with a strong compensation system, whether in a common law or civil law system, personal liability may be lacking. Potentially responsible parties, having escaped liability, may not feel the need to change conduct.

## B. Punitive Damages

A fourth consideration is that if the projected damages are small in comparison to the potential profits, then the defendant might well consider the damages as a cost of doing business and not therefore engage in safety improvements. Roughly 7 billion humans inhabit the planet. The “value” of a human life is very low in much of the world. Assuming a victim’s compensation system exists in these countries, the actual compensation will be low, thereby not serving as an economic deterrent for engaging in such conduct.

The common law then developed punitive damages, whose purposes are to punish defendants and to deter parties from engaging in such conduct. Punitive damages send a message that this type of conduct is unacceptable.

The standards for punitive damages are higher than compensatory damages based on negligence, which is the failure to exercise reasonable care under the circumstances. Punitive damages are awarded in intentional torts. They can also be awarded for willful, wanton, and

reckless disregard of the rights of another. The conduct is viewed as unacceptable to society, but the damages go to the victims.

Liability insurance will not usually be available to cover punitive damages, but once again the presence of vicarious liability and the possibility of bankruptcy can limit personal liability, which leaves criminal liability as the most effective means for society to seek justice and deter others from engaging in such conduct.

### C. Criminal Prosecutions

Criminal prosecutions, as with punitive damages, are intended to punish and deter. Here though the prosecution will be brought directly against the responsible parties, both employers and employees, who cannot legally hide behind the corporate shield. The employer may assume civil liability for a wrong, but not criminal liability.

We recognize, of course, that the initiation of a criminal prosecution does not necessarily result in a conviction or imprisonment. However, the initiation of criminal proceedings has a much greater personal impact on a defendant than the risk of damages or even loss of employment. The Sword of Damocles may be hanging over the defendant's head with the fear of imprisonment, substantial fines, probation, shame and embarrassment, loss of employment, loss of reputation, and substantial legal costs, which may not be covered by insurance or an employer. Thus, even with an acquittal, the threat and costs of a criminal prosecution can have a deterrent effect.

## II. The Methodology

The first step was to determine the search criteria, followed by identifying the incidents. The initial factor was limited to disasters and tragedies, whether of natural or human origin, involving a loss of human life. The few exceptions were largescale environmental disasters, such as the Exxon Valdez grounding which devastated the marine environment in Prince William Sound, Alaska.

The second factor was the initiation of criminal process, such as an arrest or indictment since the outcome of these cases is often unavailable online.

My original intent was not to include categories, such as workplace accidents, which are all too common. However, if a major incident occurs, such as the Mecca crane collapse with 111 deaths,<sup>5</sup> then I chose to include other crane incidents with fatalities. My decision point for "major" incidents was if the incident resulted in multiple fatalities to third party victims.

The list therefore excludes most workplace accidents even if, as in one case in the United States, a tragic accident resulted in worldwide commentary and the improvement of laboratory safety

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<sup>5</sup> A 1,350 ton crane collapsed onto the Grand Mosque during strong winds on September 11, 2015, killing 111 and injured hundreds. Fourteen employees of the construction company were charged with negligence, damaging public property, and violation of safety rules, <http://www.dw.com/en/saudi-arabia-tries-14-over-mecca-crane-collapse/a-19468884>.

standards. A graduate research assistant at the University of California Los Angeles mishandled a highly flammable chemical on December 29, 2008. She died 18 days later from severe burns. The student had not been properly trained in handling these volatile chemicals; she was even wearing a sweatshirt at the time of the accident rather than a safety lab coat.<sup>6</sup> UCLA and her supervising professor pled guilty to violations of health and safety provisions.

The challenge was compiling the list of incidents. I started with the widely known incidents which received extensive media coverage, such as Bhopal, India and the BP Gulf Blowout. Media coverage often raised earlier incidents.

The next step was a literature search seeking comprehensive lists of criminal arrests in these incidents, such as “criminal prosecutions in disasters.” A few lists exist for specific areas, such as airplane crashes, or countries,<sup>7</sup> but no comprehensive list exists.<sup>8</sup> The study would thereby have to be conducted through extensive literature searches online, often following clues and links in reported incidents.<sup>9</sup>

I then proceeded with general searches, such as “criminal prosecutions in disasters.” These searches provided some leads, but not many. The next step was to refine the searches, both by category and country. These searches could include “Criminal prosecutions in bridge collapses” or “Criminal prosecutions for building collapses in India.” Variations could include “Arrests” or “Indictments.” These searches were very productive.

The methodology thereby involved extensive searches on the internet, mostly through Google. There are very few countries and places today where a disaster or tragedy will not quickly appear on the internet, often through social media. The ubiquity of smart phones makes it difficult to conceal, downplay or cover-up disasters and tragedies in much of the world today. The digital age makes it easy to transmit photos and videos.

The determination of an incident is based on its location. For example, if an incident in Turkey occurred in Anatolia, then it is listed under Asia rather than Europe.

### III. The Limitations of the Study

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<sup>6</sup> Kim Christensen, *Deadly UCLA Lab Fire Leaves Haunting Questions*, **L.A. TIMES** (Mar. 1, 2009), <http://articles.latimes.com/2009/mar/01/local/me-uclaburn1>, Kim Christensen, *UCLA Professor Strikes Deal in Lab Fire Case, Avoids Prison*, **L.A. TIMES** (June 20, 2014, 5:45 PM), <http://www.latimes.com/local/education/la-me-ucla-lab-fire-plea-20140621-story.html>.

<sup>7</sup> For example, a list up to 2013 of human caused disasters in India can be found at *Human Induced Disasters in India?*, [https://in.answers.yahoo.com/question/index;\\_ylt=A0LEVkDPdCpXUn4AtDYPxQt;\\_ylu=X3oDMTBybGY3bmpvBGNvbG8DYmYxBHBvcwMyBHZ0aWQDBHNIYwNzcg--?qid=20140114013200AAuLici&p=2013%20list%20of%20human%20caused%20disasters%20in%20india](https://in.answers.yahoo.com/question/index;_ylt=A0LEVkDPdCpXUn4AtDYPxQt;_ylu=X3oDMTBybGY3bmpvBGNvbG8DYmYxBHBvcwMyBHZ0aWQDBHNIYwNzcg--?qid=20140114013200AAuLici&p=2013%20list%20of%20human%20caused%20disasters%20in%20india).

<sup>8</sup> However, these lists often did not indicate which incidents involved criminal prosecutions.

<sup>9</sup> Wikipedia was often helpful in providing links to similar incidents, but never served as a primary search engine. I would then do an independent internet search on these incidents.

Limitations appear in the searches. First, they are in English, which is not the language of most countries. Not every internet report is available in English.

Second, the available information online is often limited. For example, a detention, arrest or indictment may appear online, but the resolution of the cases is often unavailable. This study therefore focuses on the initiation of criminal processes rather than the final resolution.

Third, the list will never be complete; both because new cases continue to arise, and because prior incidents will be discovered. Earlier incidents will become available as increasingly more past documents are posted online. Therefore, the list is not to be viewed as one with scientific accuracy, but as a work in progress which provides a general overview.

Fourth, incidents to be listed entail at least one fatality with the exception of a few environmental cases which involve substantial environmental damage.

Fifth, the study excludes terrorist attacks. Terrorist attacks globally with often be followed by countries seeking justice against the planners, preparers, and executors, if still alive, of the attacks. I have found no instances of criminal prosecutions of those responsible for inadequate preparation or response to terrorist attacks.

Finally, the cases do not tell us why some incidents resulted in criminal prosecutions while others did not.<sup>8</sup> For example, a study by the Guardian for 2012 found 2,651 persons died and another 850 were injured when 2,737 structures collapsed in India in 2012.<sup>9</sup> However, I counted only 15 building collapses resulting in criminal prosecutions in India.

#### IV. The Historical Evolution

##### A. Ancient Law

The phenomenon of applying criminal law may seem relatively new in its application to disasters and tragedies, but its history goes back to ancient times. The Code of Hammurabi provided:

“If a builder builds a house for someone, and does not construct it properly, and the house which he built falls and kills its owner, then the builder shall be put to death.<sup>10</sup>

If it kills the son of the owner, then the son of the builder shall be put to death”<sup>11</sup>

<sup>10</sup> The study does not have to means to pierce prosecutorial discretion.

<sup>9</sup> The Guardian, Data Blog, How Many People Die in Building Collapses in India? <https://www.theguardian.com/news/datablog/interactive/2013/sep/03/india-falling-2651-deaths-structural-collapse-architecture-housing>.

<sup>10</sup> Code of Hammurabi §229.

<sup>11</sup> Id. at §230.

The Old Testament provides: “An eye for an eye, a tooth for a tooth.”<sup>12</sup>

## B. Modern Cases

Modern cases start slowly until near the end of the 20<sup>th</sup> Century. The earliest case I found was the August 20, 1868 Abergale, Wales railroad accident in England. This early train crash presaged the subsequent rash of railroad accidents. The train collided with cars (wagons) on the main line. The cars contained 1,700 gallons of paraffin oil. Thirty-three deaths occurred in the crash and fire. The two brakemen were tried and acquitted of negligence.<sup>13</sup>

The next three cases, all spectacular, arose in the United States. Two were maritime disasters. The General Slocum Steamship caught fire in New York Harbor ½ hour after casting off from the dock on June 15, 1904. 1,021 deaths, mostly women and children, occurred in the tragedy. 35 of the 50 crew members survived. The crew never practiced fire drills. The life jackets were weighed down with iron weights,<sup>14</sup> causing the users to sink to the bottom of the harbor and drown. The vessel had been rated “safe” four weeks before the tragedy by the United States Steamboat Inspection Service.

Prosecutions were brought against the ship’s captain, 2 inspectors, 2 pilots, and the president, secretary, and commodore of the steamship company. The managers of the life preserver company were indicted, but not convicted. Only the captain was convicted. He served 3½ years of a 10-year hard labor sentence.

A result of the tragedy was that the state and federal government improved safety standards for passenger vessels. President Theodore Roosevelt fired the chief inspector of the United States Steamship Inspection Service.<sup>15</sup>

The second maritime case occurred 11 years later on July 24, 1915 when the SS Eastland capsized at the dock in Chicago after embarking 2,572 passengers. 840 passengers and 4 crew members died. The captain, chief engineer, and other crew members were arrested. Blame was placed on the chief engineer, who died during the proceedings. Charges were dropped against the remaining defendants.<sup>16</sup>

The third case, the Triangle Shirtwaist Factory Fire on March 25, 1911, resulted in major safety and labor reforms in the United States. A fire broke out on the eighth floor of the Asch Building

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<sup>12</sup> Leviticus 24:19-21, Exodus 21:24.

<sup>13</sup> [https://www.revolvy.com/main/index.php?s=Abergele%20train%20disaster&item\\_type=topic](https://www.revolvy.com/main/index.php?s=Abergele%20train%20disaster&item_type=topic).

<sup>14</sup> It was apparently easier or cheaper to add iron weights rather than the floatable materials in the life vests.

<sup>15</sup> <https://www.nypl.org/blog/2011/06/13/great-slocum-disaster-june-15-1904>.

<sup>16</sup> Susan Q. Stranahan, *The Eastland Disaster Killed More Passengers Than the Titanic and the Lusitania. Why Has It Been Forgotten?*, Smithsonian, Oct. 27, 2014, <http://www.smithsonianmag.com/history/eastland-disaster-killed-more-passengers-titanic-and-lusitania-why-has-it-been-forgotten-180953146/>



in Greenwich Village, New York City.<sup>17</sup> The exits were locked on the eighth, ninth, and tenth floors, trapping the workers. Some victims jumped out windows to their deaths to escape the fires. One hundred forty-six textile workers, mostly women, died and 71 were injured. The two factory owners were acquitted of first and second degree manslaughter charges.<sup>18</sup>

Three decades lapsed occurred before the next case, a 1942 nightclub fire in Boston. The Cocoanut Grove Nightclub caught on fire on November 28, 1942 in Boston, Massachusetts with 492 fatalities and hundreds injured. The owner was pardoned after 4 years. Building and safety codes were strengthened after the tragedy.<sup>19</sup>

### C. Application to Corporations

A prosecution arising out of the Ford Pinto exploding gas tanks presaged the prosecution of corporations in disaster and tragedies. An engineer's memo notified management of the problem before the car was marketed to the public. It estimated an average cost of \$11/vehicle to change the part before mass manufacturing. The memo posited it would be cheaper to pay the judgments and settlements rather than changing the part. The changes were not made. A jury awarded a \$126 million punitive damages judgment.<sup>20</sup>

Significantly for our purposes, a county prosecutor in Indiana brought three counts of reckless endangerment against Ford for the deaths of three teenagers. A jury acquitted Ford of first and second degree murder charges.<sup>21</sup> The Pinto prosecution, while unsuccessful, set the stage for criminal prosecutions of companies.

### D. Minamata and Bhopal

Two late 20<sup>th</sup> Century environmental disasters in India and Japan ushered in the modern rise in criminal prosecutions. The names have acquired international notoriety: Minamata and Bhopal

#### 1. The Minamata Disease<sup>22</sup>

Chisso Corporation established a chemical plant in 1908 in Minamata, Japan on the shores of Minamata Bay. It discharged 27 tons of mercury into the Bay from 1932 to 1968. The fishing community relied upon the bounty of the sea. A weird neurological illness started manifesting itself in 1953. Confusion existed as to its cause until it was traced to the toxic mercury poisoning

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<sup>17</sup> The Asch Building is now the Brown Building, part of the New York University campus.

<sup>18</sup> Remembering the 1911 Triangle Factory Fire, <http://trianglefire.ilr.cornell.edu/primary/trialrecords/introduction.html>

<sup>19</sup> The Story of the Cocoanut Grove Fire: The Cocoanut Grove Fire, November 28, 1942, 2220 Hours, Box 1521, 5 Alarms, <http://bostonfirehistory.org/the-story-of-the-cocoanut-grove-fire/>.

<sup>20</sup> *Grimshaw v. Ford Motor Co.*, 174 Cal. Rptr. 348 (Cal. Ct. App. 1981) The damages were reduced to \$3.5 million and the case was then settled.

<sup>21</sup> <http://www.csmonitor.com/1980/0314/031435.html>.

<sup>22</sup> In general, see *TED Case Studies 246: Minamata Disaster*, <http://www1.american.edu/ted/MINAMATA.HTM>.

in the Bay.<sup>23</sup> The illness is now called the “Minamata Disease,” which has affected almost 3,000 victims.<sup>24</sup> The company’s President and a second executive were convicted of pollution in March 1979 and sentenced to two years in prison.<sup>25</sup>

## 2. Bhopal, India

An explosion at a Union Carbide plant in Bhopal, India represents the worst industrial accident in history. Union Carbide, the United States parent chemical company, owned 51% of its locally managed Indian subsidiary, Union Carbide of India. The Bhopal facility had operational and safety issues. For example, a coolant system was inoperable to save money. The plant experienced a catastrophic release of methyl isocyanate gas on December 2<sup>nd</sup> and 3<sup>rd</sup>, 1984. The death toll was about 15,000 with up to hundreds of thousands experiencing long-term symptoms.<sup>26</sup> Two separate veins of criminal prosecution arose out of the tragedy.

Warren Anderson, CEO of the United States parent company, promptly flew to Bhopal to represent Union Carbide. He was arrested and charged with manslaughter. He quickly raised bail and then was flown out of the country. International warrants were issued in July 2009 for his arrest. The United States refused to extradite him to India. He passed away on September 29, 2014.<sup>27</sup>

Twelve Indian executives of the Indian company were initially charged in 1987 with “culpable homicide not amounting to homicide.” The charges were subsequently reduced to “death by negligence” by the Indian Supreme Court.

There’s a saying that “justice delayed is justice denied.” Seven were tried and convicted of death by negligence in 2010 and sentenced to two years imprisonment. One of the convicted was Keshub Mahindra, the Chairman of Union Carbide of India, and patriarch of the Mahindra and Mahindra industrial giant in India.<sup>28</sup>

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<sup>23</sup> *TED Case Studies 246: Minamata Disaster*, <http://www.amrican.edu/ted/MINAMATA.HTM>

<sup>24</sup> Yoshinaga Fusako & Gavan McCormack, *Minamata: The Irresponsibility of the Japanese State*, *The Asia-Pacific Journal: Japan Focus*, December 9, 2004.

<sup>25</sup> Yoshinaga Fusako & Gavan McCormack, *Minamata: The Irresponsibility of the Japanese State*, **ASIA-PAC. J.: JAPAN FOCUS** (Dec. 9, 2004), [http://japanfocus.org/site/make\\_pdf/1559](http://japanfocus.org/site/make_pdf/1559) [<http://perma.cc/YDE9-E33E>].

<sup>26</sup> One civil law consequence of the Bhopal tragedy was an India Supreme Court decision imposing strict liability in a toxic waste discharge a year after Bhopal. *M.C. Mehta v. Union of India* (A.I.R. 1987 S.C. 1086). For an overall discussion of the many ramifications in India of the Bhopal Tragedy, see Sheila Jasanoff, *Learning From Disaster: Risk Management After Bhopal* (University of Pennsylvania Press 1994).

<sup>27</sup> Douglas Martin, Warren Anderson, 92, Dies, Faced India Plant Disaster, *New York Times*, October 30, 2014, [https://www.nytimes.com/2014/10/31/business/w-m-anderson-92-dies-led-union-carbide-in-80s-.html?\\_r=0](https://www.nytimes.com/2014/10/31/business/w-m-anderson-92-dies-led-union-carbide-in-80s-.html?_r=0).

<sup>28</sup> *Bhopal Trial: Eight convicted over India gas disaster*, BBC (June 7, 2010), [http://news.bbc.co.uk/2/hi/south\\_asia/8725140.stm](http://news.bbc.co.uk/2/hi/south_asia/8725140.stm).

With these two cases joining the earlier prosecutions, the foundations were in place for criminal prosecutions in disasters and tragedies.

## V. The Results

### A. The New Millennium

The study validates the thesis of a growing phenomenon of criminal prosecutions in the New Millennium, a 317% increase in just 16 years from over a century of prior prosecutions. I recorded 200 cases in the study, of which 48 preceded 2000 and 152 have been in the New Millennium. (Appendix A). The prosecutions are global in the New Millennium, significantly from both civil law and common law jurisdictions. 42 countries initiated prosecutions in the New Millennium versus 23 previously (Appendix B).

Criminal Prosecutions		
Pre-2000	New Millennium	Percent Increase
48	152	317%

The most common incidents involve building disasters and structural failures, maritime accidents, and aviation disasters, all of which may involve a large loss of life in a sensational “accident.” The exploding population and growing affluence has led to large scale, rapid development in countries like China and India. Owners, developers, and builders often cut corners in the design, construction, and subsequent modifications, often accompanied by derelictions in office by public officials. A common term in the building collapses was “shoddy construction.”

Some incidents were spectacular, garnering global attention. Others were only covered locally. They almost all involve fatalities and often substantial economic damages.

One major drop in prosecutions involved aviation disasters. 16 occurred before 2000, 1/3 of the pre-Millennium prosecutions, but dropped to 11 in the New Millennium. The premise is that aviation safety has substantially improved in recent years.

### B. Asia/Pacific Islands

Asia and Pacific Islands		
16	94	588%

The initial observation about Asia and the Pacific Islands is also validated with the large number of prosecutions in these countries. Asian and Pacific Island nations are high in the mix in both civil law and common law jurisdictions. The Asian cases comprised 1/3 of the pre-2000 cases, but jumped to 61.8% of the New Millennium incidents. Many of the incidents in Asia include the prosecution of government employees and officials for corruption and dereliction of duty (Appendix C).

#### C. Government Officials and Employees

Also confirmed is a substantial increase in the prosecution of government officials and employees in the New Millennium.

Government Officials and Employees		
14	43	307%

Government personnel show up in 43 of the New Millennium cases. Most cases involve allegations of corruption. Some could be described as incidents involving negligent acts by government employees.

#### D. The Unexpected Findings

Studies will often prove or disprove the initial hypotheses, but may also result in unexpected results. I discovered two such findings. The first is an increased prosecution of engineers and architects responsible for design or other errors.

Architects and Engineers		
8	34	425%

An unexpected observation is the increasing prosecution of engineers, mostly civil and structural, in these cases, from 8 prior to 2000 to 34 in the New Millennium. (Appendix D) Engineers were named as defendants in 42 incidents. (Appendix D). I suspect many more were prosecuted in the general listings of employees or officials mentioned in several incidents, but not specified as such. An early incident was the 1993 collapse of the Royal Plaza Hotel in Khorat, Thailand, resulting in 137 deaths and 227 injuries. An engineer was sentenced to 37 years while

the other 14 defendants were acquitted.<sup>29</sup>

The second surprise was the presence of the old adage: “Justice delayed is justice denied.” Several cases showed long delays between the initiation of criminal proceedings and their resolution. The Bhopal disaster had a 23 year gap, often filled by judicial proceedings, between the tragic incident and the resulting trial.

Explanations may exist for the delays. First, these incidents often necessitate detailed expert studies involving engineers and scientists, followed by reviews of the evidence.

Second, as with Bhopal the defendants may engage in extensive legal proceedings, including appeals, even before a trial. Affluent defendants can afford to engage in delaying tactics with the hopes of either a favorable judicial decision or wearing out the prosecutors.

## VI. Major Categories of Incidents

### A. Maritime Accidents

Waterways, oceans, lakes, and rivers, are the historic highways of commerce. The automobile, train, and airplane have largely replaced the boat. However, in many parts of the world, especially Africa and the sub-continent, the ferry remains a primary means of travel. The results, all too often, are catastrophic when a ferry sinks or capsizes.<sup>30</sup>

Ferry accidents often have multiple causes, including overloaded vessels, sometimes in aged ships, with the connivance of public officials. Inadequate crew training is also involved in many incidents. The magnitude of these tragedies, in the hundreds or thousands of fatalities, exceeds the occasional Staten Island<sup>31</sup> type accident in the United States in which several responsible parties were criminally prosecuted.

The maritime cases are generally in Africa (Egypt (3), Gambia, Senegal, Tanzania, and Zanzibar (2)), and Asia and Pacific Islands (Bangladesh, China, Hong Kong, India, Pakistan (2), Philippines (3), South Korea, and Tonga) where many residents depend on ferries for water transportation. Europe has witnessed several maritime accidents, including Belgium, Greece (3), Italy (3), and Russia.

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<sup>29</sup> Royal Plaza Hotel Collapse, - Korat, Nakorn, Ratchachima Province, Thailand, <https://www.tcd.ie/civileng/local/notes/Dermot.ODwyer/4A6/Disaster%202011/Copy%20of%20Disaster%20Report.html>.

<sup>30</sup> Almost all the maritime cases involve ferry boats with a few cruise ships in the mix.

<sup>31</sup> The Staten Island Ferry crashed into a concrete maintenance pier at high speed on October 15, 2003. The pilot was asleep at the wheel due to prescription painkillers. The Director of Ferry Operations was not enforcing the regulation requiring 2 pilots in the pilot house. The captain, assistant captain, and both pilots pled guilty. William K. Rashbaum & Sewall Chan, Pilot and Supervisor Sentenced in '03 Staten Island Ferry Crash, New York Times, January 10, 2006, <http://www.nytimes.com/2006/01/10/nyregion/pilot-and-supervisor-sentenced-in-03-staten-island-ferry-crash.html>.

The only recent prosecution in the United States was the Staten Island ferry crashing into the docks in 2003.<sup>32</sup> Canada has one case when the Queen of the North ferry struck an island in British Columbia in 2006.

## B. Fires

The category of fires has three main subdivisions. The first are concert and nightclub fires, which seem to cry out for criminal prosecutions when a large loss of life occurs in a fiery inferno.

Nightclub fires have been tragic over the past decades. They often gave rise to criminal prosecutions prior to the recent wave of prosecutions because of the magnitude of the tragedies. For example, the Ozone Disco Club in Quezon City, the Philippines caught fire at 11:35pm on March 18, 1996. 162 died in the conflagration.

Seven Philippine safety officials and two club managers were sentenced to prison 18 years later in 2014. The government officials had issued safety permits to the club without inspecting it. They were sentenced to between six and ten years.<sup>33</sup>

A concert hall fire in Karamay, China on December 8, 1994 claimed 323 victims, mostly children. Delays occurred in evacuating the students during the fire. Nineteen were initially arrested, including a vice mayor. Thirteen received jail sentences.<sup>34</sup>

A Christmas fire in 2000 at a nightclub in Luoyang resulted in 309 deaths and scores of injuries. A welder started the fire in a building which lacked a sprinkler system. Fire exits were blocked by illegal construction and safety reports were falsified. 23 were tried for the disaster, including the police chief, fire inspector, and seven other government officials.<sup>35</sup>

A nightclub fire in the Wuwan Club in Shenzhen on September 1, 2008 killed 43 and injured 89. A pyrotechnics stunt ignited the flammable ceiling. China arrested 13 in the tragedy, including district, police, and fire staff. Others arrested include the club's general manager, vice-general manager, safety officer, technician and the performers.<sup>36</sup>

A second category are workplace/factory fires where the employees are trapped inside the burning structure. These cases involve the Triangle Shirtwaist Fire (1911) and Hamlet, North Carolina Poultry Plant (1981) tragedies in the United States. Similar fire tragedies also occurred

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<sup>32</sup> Id.

<sup>33</sup> BBC, *Philippines sentences over 1996 Ozone Disco fire*, <http://www.bbc.com/news/world-asia-30125553>.

<sup>34</sup> Gary Borg, *13 Sent To prison In China Fire Disaster*, Oct. 13, 1995, [http://articles.chicagotribune.com/1995-10-13/news/9510130287\\_1-xinjiing-china-last-year-new-china-news-agency](http://articles.chicagotribune.com/1995-10-13/news/9510130287_1-xinjiing-china-last-year-new-china-news-agency).

<sup>35</sup> Duncan Hewitt, *China sentences 23 for disco blaze*, August 2, 2001, <http://bbc.co.uk/2/hi/asia-pacific/1504638.stm>.

<sup>36</sup> BBC News, *Arrests after Chinese club fire*, September 22, 2008, <http://news.bbc.co.uk/2/hi/asia-pacific/7628580.stm>.

in China with the 2013 Jilin Baoyuanfeng Poultry Slaughterhouse in China and the Philippines with the Kentex Slipper Factory fire in 2015.

121 workers died and 76 were injured in a fire June 2, 2013 at the Baoyuanfeng Poultry Slaughterhouse in Jilin Province, China. Management had blocked the emergency exits. Chinese authorities arrested the owner, general manager, and 11 local officials. The owner received a nine-year sentence for failing to ensure worker safety while the general manager received 4 years for installing sub-standard equipment. The local fire chief and deputy chief received prison sentences for failing to carry out safety inspections and then falsifying reports after the fire. The plant was built with combustible materials, lacked fire extinguishers, and had an inadequate number of escape routes, most of which were locked. The employees received no evacuation instructions.

In addition, 35 government officials and company executives were transferred to judicial authorities for prosecutions while 74 officials received disciplinary sanctions, including dismissal from office.<sup>37</sup>

Another catastrophic workplace fire occurred when seventy four workers died in the Kentex slipper factory fire on May 13, 2015 in the Philippines city of Valenzuela City. Welding sparks ignited inflammable materials. Workers were trapped on the second floor when iron bars prevented their escape. Several violations existed of labor standards and occupational health and safety, including no fire exits, no smoke and fire alarms, and a lack of fire and safety drills. The owner of the company was arrested, as were the Mayor of Valenzuela, two officials from the Business Permits and Licensing Office, and four officials from the Bureau of Fire Protection. The officials issued certificates and allowed Kentex to continue operations even though they knew of the serious safety violations.<sup>38</sup>

A third scenario was a spectacular, catastrophic explosion and fire at the Tianjin Ruihai International Logistic warehouse, which wracked the port city of Tianjin, China. Firefighters responded to a fire on August 12, 2015 at the warehouse. They applied water to the flames, not knowing of the nature of the chemicals and products at the warehouse.<sup>39</sup> Explosions and fires ensued. 165 died, including dozens of firefighters, with over 700 injured in the inferno while substantial damage was done to the neighboring community. The facility was built within 650 meters of the Vanke Port City residential complex. Chinese law requires toxics to be stored at least 1,000 meters from residences. About 17,000 homes were damaged in the explosion.

An estimated 3,000 tons of toxics was carelessly stored at the warehouse. 1,300 tons were ammonium nitrate<sup>40</sup> and potassium nitrate. Ammonium nitrate is used both as a fertilizer and

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<sup>37</sup> *Fire Chiefs and Poultry Plant Bosses Jailed for 2013 Jilin Fire That Killed 121*, South China Morning Post, Dec. 27, 2014, <http://www.scmp.com/news/china/article/1668863/fire-chiefs-and-poultry-plant-bosses-jailed-2013-jilin-fire-killed-121>.

<sup>38</sup> *Charges Filed Over Kentex Fire In Valenzuela*, <http://balitapinoy.net/charges-filed-over-kentex-fire-in-valenzuela-p1852-242.htm> (March 17, 2016).

<sup>39</sup> A basic rule of chemistry is that you can pour acid on water, but not water on acid.

<sup>40</sup> Ammonium nitrate was the explosive used to blow up the Alfred P. Murrah Federal Building in Oklahoma City, Oklahoma on April 19, 1995. 168 perished and over 600 were injured in the domestic terrorist attack.

explosive. 700 tons of sodium cyanide were also at the facility. The two owners of the warehouse and about two dozen local officials have been detained or are under investigation.<sup>41</sup>

### C. Oil Spills

The British Petroleum Macondo Well Blowout (Deepwater Horizon) in the Gulf of Mexico on April 20, 2010 is an example of prosecutors looking for defendants to prosecute in a spectacular disaster. The United States brought several criminal cases in the BP blowout, but most were against individuals who misled the government. Only 2 were against line supervisors who made judgment errors in the sealing of the drill hole. One was acquitted and the other pled guilty. One engineer was charged with 2 felony counts of obstruction of justice by deleting two email chains. He ultimately pled guilty to a misdemeanor, receiving no jail time or fine.<sup>42</sup>

### D. Natural Disasters

Natural disasters would initially seem a poor area for criminal prosecutions. Forces of nature, such as earthquakes and tsunamis can be devastating by themselves. Their impacts can be magnified by human fault, such as inadequate design, construction or response. Indeed, structural flaws may be tragically uncovered by forces of nature.<sup>43</sup>

Thus, human errors and misconduct can increase the impact of a natural hazard. Six cases arose out of “natural” disasters: cyclones, earthquakes, and hurricanes. At first glance a prosecution for a natural disaster might seem incongruous. However, when major human fault is present in causing the disaster or increasing the damages and injuries, then criminal liability may be a proper response.

Cyclone Xynthia was a massive windstorm which struck Western Europe between February 27 and March 1, 2010. It caused damage in Portugal, Spain, Germany, and England, but hit the France coast especially hard. 29 died in la Faute-sur-mer in homes built since 1990. It struck homes in a “Red Zone.” The delineation of red zones was intended to bar development in vulnerable coastal areas. 22 of the victims were over 60, while hundreds of homes were flooded.<sup>44</sup> The mayor was sentenced to 4 years; the officer in charge of building permits received 2 years while her son

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<sup>41</sup> See Andrew Jacobs, et al, *In China Blast, High Price of Lax Rules: Company at Center of Tianjin Tragedy a Symbol of a Corrupt System*, New York Times, August 31, 2015 at p. A1, col. 3; Tang Yue, *11 held in probe of Tianjin blasts*, China Today, August 28-30, 2015 at p.1, col. 1. *Ex-BP Engineer Convicted of Deleting Text Messages to Obstruct Oil Spill Probe*, FOX NEWS (Dec. 18, 2013), <http://www.foxnews.com/us/2013/12/18/ex-bp-engineer-convicted-deleting-text-messages-to-obstruct-oil-spill-probe/> [<http://perma.cc/P3PH-VHKC>].

<sup>43</sup> For example, Taiwan was struck by a 6.4 earthquake on February 6, 2016. The 17 story WeiGuan Golden Dragon Tower collapsed 4 days later with 166 deaths. The developer and two associates from the construction company were among the fatalities. The builder was arrested. New York Times, Feb. 10, 2016 at p. A10, col. 4.

<sup>44</sup> Eliasbetta Genovese, et al, *Disaster Risk Management and Territorial Governance: Lessons from Xynthia Storm in France 3* (FIG Working Week 2012).



in charge of ensuring and monitoring the safety of the seawall was sentenced to 18 months.<sup>45</sup> They had permitted development in the Red Zone while failing to ensure the safety of the coastal zone.

The Italian L'Aquila earthquake aftermath raised tremors throughout the scientific community. A series of minor earthquakes preceded a 5.8-5.9 earthquake on October 22, 2012. 309 were killed and over 1,000 left homeless. A public conference a week before the large quake issued assurances of safety. Six scientists and a public official were convicted in October 2013 of miscommunications of safety for issuing false assurances of safety. The convictions of the scientists were overturned the next year, but upheld for the public official who minimized the danger and said the people should sit back and enjoy a glass of Montepulciano wine.<sup>46</sup>

Hurricane Katrina struck New Orleans and the Gulf Coast of the United States on August 25, 2009. 1,834 fatalities were recorded with 135 missing. Much of New Orleans was flooded when the levees failed. Prosecutions were brought against medical personnel and nursing home operators for failing to evacuate patients in advance of the storm and providing improper medical care afterwards.<sup>47</sup>

#### E. Fukushima, Japan

Japan was doubly struck on March 11, 2011; first by the magnitude 9.0 Great East Japan Earthquake, and then 41 minutes later by a 43'-49' high tsunami at 3:42am. It was a worst case scenario, causing tremendous death and destruction throughout Japan.

The earthquake, which was the largest recorded in Japan, slightly damaged the Fukushima Daiichi nuclear reactor complex; the three operating reactors<sup>48</sup> shut down automatically in the quake. The safety system worked as planned in the seismic half of the disaster. The tsunami overflowed the 19' high seawall, flooded the basement, inundated the complex, and disabled the emergency diesel generators. 44 persons perished around the reactor site. The radiation contamination left over 100,000 homeless.

The tsunami exceeded the planning parameters for the facility. The cooling system for the reactors failed with three of the six reactors ultimately incurring core meltdowns. Three former officers of TEPCO (Tokyo Electric Power Co) were indicted on February 29, 2016, five years after

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<sup>45</sup> Visiting France, French mayor jailed for four years over 2010 storm deaths, <http://en.rfi.fr/visiting-france/20141212-france-mayor-jailed-four-years-eynthia-storm>.

<sup>46</sup> <http://www.economist.com/news/science-and-technology/21632459-six-seven-scientists-convicted-earthquake-advice-have-been-cleared-laws>.

<sup>47</sup> See Sheri Fink, *The Deadly Choices at Memorial*, **N. Y. TIMES MAGAZINE** (Aug. 25, 2009), at MM28 of the Sunday Magazine on Aug. 30, 2009,

<http://www.nytimes.com/2009/08/30/magazine/30doctors.html?pagewanted=all>,

*Katrina Nursing Home Owners Acquitted*, **NBC NEWS** (Sept. 7, 2007, 10:26 PM),

[http://www.nbcnews.com/id/20649744/ns/us\\_news-crime\\_and\\_courts/t/katrina-nursing-home-owners-acquitted/#.Vh4qdrRViko](http://www.nbcnews.com/id/20649744/ns/us_news-crime_and_courts/t/katrina-nursing-home-owners-acquitted/#.Vh4qdrRViko).

<sup>48</sup> The complex has six reactors, but three were down for maintenance when the disaster occurred.

the tsunami, for professional negligence in failing to take proper safety measures that would have protected the facilities from the forces of nature. The indicted include the former President of TEPCO and two former vice presidents of the nuclear power division.<sup>49</sup>

The tsunami countermeasures designed for the plant in the early 1960's met the standards of the time. However, they were inadequate by the time of the tsunami. Neither TEPCO nor government regulatory agencies made any changes in safety precautions in response to the changing risk appreciation.<sup>50</sup>

The prosecutors initially decided not to file charges in 2013, but a procedure in Japanese law allows citizens to review prosecutorial decisions not to indict. The Tokyo Prosecutorial Review Board No. 5 ordered the prosecutions.

## VI. The Punishments

Guilty determinations will often result in prison sentences of varying terms. However, two China incidents resulted in capital punishment.<sup>51</sup> The first was the Rainbow Bridge Collapse in Qijiang County on January 4, 1999. Forty deaths and 14 injuries resulted when the three-year old bridge collapsed. The former Deputy Secretary of the County Communist Party Central Committee was sentenced to death.<sup>52</sup>

The second was a contaminated milk marketing episode in Hebei Province in 2008, which resulted in at least 6 infant deaths. 262,662 were sickened, of which 891 were seriously ill. Two defendants were sentenced to death.<sup>53</sup>

## VII. Changes Occasioned by the Disasters

Societies may respond to disasters and tragedies through enacting legislation, promulgating regulations, and issuing professional standards designed to improve safety. However, statutes, regulations, and professional standards are not self-enforcing. Government must be prepared to enforce them.

Changes in society can be implemented by government in deciding to bring criminal prosecutions or by private actors in changing behavior in response to the threat of criminal prosecutions. The former is easier to measure whereas the latter is more difficult to ascertain.

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<sup>49</sup> Jonathan Sobel, *3 Ex-Executives Indicted in Fukushima Disaster*, New York Times, March 1, 2016 at p. A6, col. 1.

<sup>50</sup> World Nuclear Association, *Fukushima Accident at 2, 22*, <http://www.world-nuclear.org/information-library/safety-and-security/safety-of-plants/fukushima-accident.aspx> (April 2016).

<sup>51</sup> I assume that these sentences were carried out.

<sup>52</sup> BBC News, World: Asia-Pacific Death sentence over bridge collapse, April 4, 1999, <http://news.bbc.co.uk/2/hi/asia-pacific/311408.stm>.

<sup>53</sup> Tania Branigan, China executes two for tainted milk, The Guardian, November 24, 2009, <https://www.theguardian.com/world/2009/nov/24/china-executes-milk-scandal-pair>

Several incidents resulted in changes in safety standards, reform, society, and political offices. For example, as early as 1904, the tragic fire on the General Slocum, resulted in the state and federal governments improving safety standards for passenger vessels. President Theodore Roosevelt also fired the chief inspector of the United States Steamship Inspection Service.<sup>54</sup>

Bangladesh relies economically on its large textile manufacturing industry, which produces apparel for many of the world's largest retailers. The industry has a reputation for poor safety, including a history of fires in its textile mills. Criminal prosecutions were virtually non-existent prior to the Rana Plaza.<sup>55</sup>

Global pressure on the apparel companies and Bangladesh is forcing safety improvements in the industry. The same result occurred a century earlier with the tragic Triangle Shirtwaist Fire in New York City. Workplace safety legislation was enacted in New York and the workers were able to unionize to further protect themselves.<sup>56</sup>

### VIII. South Korea

South Korea stands out in the study, not because of the relatively small number of incidents, but because of the country's cultural, legal and structural responses to them. South Korea is a modern example of a country responding institutionally to a disaster to minimize future risks.

Two structural failures within 8 months during 1999 changed the ethos of South Korea. Seoul emerged from the Korean War as a devastated city. Its transformation to an economic giant was called the "Miracle on the Han." Economic development and growth were unquestioned. Then the fabric cracked.

The Seongsu Bridge in Seoul, completed in 1979, collapsed on October 21, 1994 with 32 deaths and 17 injuries. Nine of the deaths were students on a bus. The cause was initially blamed on

<sup>54</sup> <https://www.nypl.org/blog/2011/06/13/great-slocum-disaster-june-15-1904>.

<sup>55</sup> An example is the Tazreen Fashion Factory in Dhaka, which caught fire on November 4, 2012. 112 workers perished with over 200 injured. The deadly fire occurred six months before the Rana Plaza Collapse. Only after the Rana Plaza tragedy was prosecution brought as part of the reaction to Rana Plaza.

The eight story building lacked adequate emergency exits. It also lacked a fire safety permit. None of the fire extinguishers seem to have been used, while managers closed collapsible gates to prevent the workers running down the stairs to escape the inferno. Many workers were trapped in smoke-filled staircases or behind windows covered with iron grills.

Charges were filed against Delwar Hossain and his wife Mahruda, Tazreen co-owners, the factory manager, an engineer, and nine others in December 2013. A government investigation accused Delwar of "unpardonable negligence." Julfikar Ali Manik & Ellen Barry, *Months After Deadly Fire, Owners of Bangladesh Factory Surrender to Court*, New York Times, Asia Pacific, [http://www.nytimes.com/2014/02/10/world/asia/owners-of-bangladesh-factory-surrender-in-deadly-fire.html?rref=world&\\_r=0](http://www.nytimes.com/2014/02/10/world/asia/owners-of-bangladesh-factory-surrender-in-deadly-fire.html?rref=world&_r=0).

<sup>56</sup> See David Von Drehle, *Triangle: The Fire that Changed America* 194-218 (2003).

overloading,<sup>57</sup> but further investigation had welding as the cause.<sup>58</sup> Seven Seoul government officials were arrested for involuntary manslaughter, and the Mayor of Seoul was dismissed from office.<sup>59</sup> President Kim Young Sam publicly apologized to the South Korean people in a national radio broadcast. The Prime Minister offered to resign, but the President rejected his offer.

The Cabinet met in emergency session and ordered an inspection of bridges throughout South Korea.<sup>60</sup> The inspection of the 14 Seoul bridges over the Han River and of the Seoul subway system found 1,114 flaws in the bridges and 330 in the subways.<sup>61</sup>

A newly created Department of Bridge Safety Management was established in the Ministry of Construction and Transportation. A new statute, The Facility Safety Law, was enacted.<sup>62</sup> The President of the construction company that built the bridge offered to tear it down and replace it for free. However, the government used a different contractor for the rebuild.<sup>63</sup>

The disaster broke the existing faith in speed and technology.<sup>64</sup> A Korean commentator posited the collapse “changed the social system of Korea, strengthened the city dweller’s mindset on safety, and broke the illusion of perfect modernization.”<sup>65</sup>

The crowded Sampoong Department Store in Seoul, South Korea collapsed at 6:00pm on June 29, 1995.<sup>66</sup> 502 died and another 937 were injured. It was built five years earlier. The approved plans called for a four story apartment building. The owner converted it into a five story department store. A large air conditioner was installed on the fifth floor. Other changes were made, including removing many of the supporting columns. The initial contractor objected to the changes, and was replaced by a subsidiary of the department store.

Warnings preceded the collapse.<sup>67</sup> A crack developed in the ceiling of a fifth floor restaurant 15 days before the failure, followed by a water leak five days before, and then a gas leak three days before.

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<sup>57</sup> The designed maximum load for the bridge was 36.3 tons, but new trucks could carry up to 47.3 tons. <sup>57</sup> J. Hyuck Moon, *Cracks Everywhere: How the Seongsu Bridge Collapse Changed Seoul’s Urban Personality* 34 (May 18, 2011).

<sup>58</sup> The welding thickness was specified to be 10mm, but was only 8mm. In addition, the joints of the trusses supporting the bridge slab were not welded fully. *Id.* at 28.

<sup>59</sup> J. Hyuck Moon, *Cracks Everywhere: How the Seongsu Bridge Collapse Changed Seoul’s Urban Personality* 34 (May 18, 2011); Masahiko Kunishima, *Collapse of Korea Seoul Seongsu Bridge* the (October 21<sup>st</sup> (Fri.), 1994 Korea) at 6.

<sup>60</sup> *Id.* at 34.

<sup>61</sup> *Id.* at 37.

<sup>62</sup> *Id.* at 35.

<sup>63</sup> *Id.* at 42.

<sup>64</sup> *Id.* at 6.

<sup>65</sup> *Id.* at 2.

<sup>66</sup> A study of the failure is *A Suitable Function of Construction Industry* (March 23, 2015), <https://www.ukessays.com/construction/construction-industry.php>

<sup>67</sup> *Id.* at 2.

More clear warnings manifested themselves on the day of the collapse. The fifth floor's restaurant's floor cracked open around 9:30am. Neighboring restaurants experienced water leaks from the ceiling and cracks in the floor between 11am and noon. The fifth floor was then closed. The air conditioning and gas services broke down after 1:00pm, accompanied by a storewide power failure. Management met at 3:00pm and left the building without closing the store or warning customers and employees.<sup>68</sup>

Joon Lee, the owner, and his son, Han-Sang Lee, were convicted of criminal negligence.<sup>69</sup> The chief administrator for the neighborhood was sentenced to three years in jail for bribery, while 23 others received prison sentences and fines.<sup>70</sup>

These two disasters, and the response to them, had an effect on Korean culture. No major building collapsed from 1995 until February 17, 2014 when 10 students died and 120 were injured when the roof of a gymnasium collapsed during orientation at the Busan University of Foreign Studies.

The precipitating cause was the failure to remove the heavy snow on the roof, but the underlying cause was defective construction. Allegedly bad bolts and shoddy materials combined with lax supervision and perhaps false official documents caused the collapse of the main pillars.

Arrest warrants were sought for two officials of the building's operator and four men involved in the construction of the building.<sup>71</sup> In addition, once again the President of South Korea became involved after the tragedy. President Park Geun-Hye called for a full investigation into the collapse.<sup>72</sup>

The April 16, 2014 sinking of the ferry Sewol<sup>73</sup> was a disaster with the tragedy compounded by botched responses. As with the collapse of the Seongsu Bridge, a national response ensued.

The inexperienced third mate was in control through a treacherous passage when the overloaded ferry executed a sharp turn, which may have started the capsizing. 172 of the 476 passengers were rescued. 250 victims were students at Danwon High School. Another 11 victims were teachers. The Vice Principal, Kang Min-kyu, survived the sinking, but committed suicide two days later out of shame.

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<sup>68</sup> Id.

<sup>69</sup> The sentences were 10 ½ and 7 years respectively. Id. at 3.

<sup>70</sup> CNN World News, *Korean store owner, son sentenced for role in collapse* (December 27, 1995), [http://edition.cnn.com/WORLD/9512/skorea\\_store/sentencing/ondex.html](http://edition.cnn.com/WORLD/9512/skorea_store/sentencing/ondex.html).

<sup>71</sup> Yonhap News Agency, *Arrest warrants sought for 6 people in gym collapse case*, March 27, 2014. <http://english.yonhapnews.co.kr/dev/2703000000.html?cid=AEN201403270055000315>.

<sup>72</sup> BBC, *S Korea building collapse: President calls for inquiry*, Feb. 18, 2014, <http://www.bbc.com/news/world-asia-26231628>.

<sup>73</sup> An analysis of the Sewol disaster can be found at Choe sang-hun, et al, *Greed Before the Fall: After Ferry Deaths, Prosecutors See an Empire Built on Corruption*, New York Times, July 27, 2014 at p. A1, col. 2.

The captain, chief engineer and 13 crew members survived. They all were prosecuted. The captain received a 36-year sentence, the chief engineer 30 years, and the crew members 5-20 years for criminal negligence and accidental homicide. The captain was acquitted though of murder.<sup>74</sup>

The ferry had an illegal redesign with cabins added to the second floor to accommodate more passengers. The Sewol was overloaded,<sup>75</sup> as was common. The ballast was reduced to handle the extra weight. The crew received no safety training, not even an evacuation drill. The passengers were told to stay below and not evacuate during the capsizing. Their pathos is captured on their cell phones.

The chairman of the company committed suicide. Three of his relatives were charged with embezzlement. Four officers of the ferry operator were arrested on charges of overloading the ferry. The charges include accidental homicide.<sup>76</sup>

This accident was different than most in that political consequences ensued. Prime Minister Chung Hong-won resigned, saying “I offer my apology for having been unable to prevent this accident from happening and unable to properly prepare to respond to it afterwards.”<sup>77</sup>

The captain of the first South Korea Coast Guard vessel that arrived on the scene was sentenced to four years imprisonment for professional negligence and filing false reports.<sup>78</sup> The South Korean Coast Guard was disbanded

## IX. Conclusion

The significance of this study is that decision makers now need to factor the possibility of criminal prosecutions into their risk analysis. Corporations, their officers and employees are at risk for criminal prosecutions, as are government employees. The Rana Plaza prosecutions signify a new risk for those responsible for disasters and tragedies, criminal liability, which can well include imprisonment and will not be covered by insurance.

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<sup>74</sup> Choe Sang-hun, *Captain Gets 36 Years for deserting Korean Ferry*, New York Times, November 12, 2014 at p. A6, col. 1.

<sup>75</sup> The ship reported by radio to the Korea Shipping Association prior to departure from port that it was carrying 3,608 tons of cargo. The maximum recommended cargo weight for the vessel was 987 tons. *Ferry Bore Triple Its Proper Load*, Wall Street J., April 24, 2014 at p. A8, col. 5.

<sup>76</sup> Choe Sang-hun, *4 Officials of South Korean Ferry Operator Are Arrested*, New York Times, May 7, 2014 at p. 9, col. 1.

<sup>77</sup> Rich Schapiro, *South Korea's prime minister resigns over handling of ferry disaster*, <http://www.nydailynews.com/news/world/south-korea-ferry-entire-steering-crew-custody-prosecutor-article-1.1769816>.

<sup>78</sup> KJ Kwon & Time Hume, CNN, *South Korean coast guard captain jailed for 4 years over botched Sewol rescue*, <http://www.cnn.com/2015/02/12/worldkorea-sewol-coast-guard-jailed/>.

The New Millennium globally ushered in an increasing application of criminal prosecutions in disasters and tragedies. Asia and the Pacific Islands are in the vanguard. Criminal prosecutions preceded the 21<sup>st</sup> Century, but not nearly to the extent as recently. The internet and social media may be fueling the public clamor for justice.

Investigators quickly enter disaster scenes and usually divine the cause(s) of the disaster. One commonality is a cavalier attitude to safety by owners, developers, builders, operators, and government regulators. Other common causes are poor design in the original construction or modifications, ship shod construction, and inferior building materials; in short, a rush to completion by cutting corners, often with the connivance of public officials. The Sewol and other maritime accidents also involved inadequate training.

Prosecutions involve those with direct involvement in the disasters, such as owners and operators, officers, and in the case of ships, captains and crew members. Many of the incidents involve derelictions in office, including bribery, by public officials. They have been swept up in the prosecutions. In some building collapses, such as the Rana Plaza and Sampoong, warning signs appeared before the collapses, but were ignored.

History tells us that reforms often arise from tragedy. For example, the United States initiated widespread workplace safety, working conditions, and labor reforms in response to the 1913 Triangle Shirtwaist Fire.

Bangladesh has a history of laxity with workplace safety. The Rana Plaza collapse pressured Bangladesh building owners and apparel manufacturers and customers to improve safety standards. The pressure is on the retailers to police the manufacturers. Whether or not the changes are permanent, or laxity will return, remains to be seen. Much depends on the attitude of the government.

South Korea has not experienced a large number of disasters, but those it has experienced have been major tragedies resulting in societal changes and the involvement of the country's leaders. Legislation has been enacted and changes in government agencies have resulted. The mandate for change comes from the President's office.

The picture in China and India is different. The exponential increase in criminal prosecutions over the past six years has not yet seemed to have an effect on the prevailing culture of shoddy construction coupled with derelictions in duty by public officials. While impressive, the number of prosecutions represent the tip of the iceberg with respect to the scores of structural failures annually.

Many of China's enterprises are affiliated with the government. Public officials have often been arrested or sanctioned in the disasters. Admittedly many of the failing structures in China were built before the new emphasis on weeding out corruption.

What is needed is strict enforcement of building and permit requirements before, during, and after construction or commencement of operations. The preferred approach would be to prevent the incident in the first instance.

Even today, most owners, developers, builders, and government inspectors and regulators know the odds are still substantially in their favor against any punishment or retribution for their misdeeds, which will not be discovered absent a disaster. They have yet to realize that the new culture of vigorous enforcement may ruin them, their families and their fortunes.

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