

# PROACTIVE CRISIS MANAGEMENT OF ACCIDENTS: DEEPWATER HORIZON AND YELLOWSTONE RIVER

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## ABSTRACT

This article contributes to the emerging discussions on crisis management of accidents. With proper planning and vigilance, an organization can plan for potential accidents and better manage a crisis. A case study method and analysis compared how British Petroleum and ExxonMobil Pipeline Company responded to the Deepwater Horizon Disaster and the Yellowstone River Oil Spill, respectively. When compared to the crisis management framework, the authors found that BP was not as prepared, ineffective, and even negligent in its response to the Deepwater Horizon crisis. ExxonMobil Pipeline Co. was better prepared to move into crisis mode when the Yellowstone River Oil Spill occurred and implemented better crisis management plans and execution.

**Keywords:** crisis management, leadership, planning, CSR

## INTRODUCTION

A crisis involves a series of causal events and circumstances to repair in a logical order. Coombs [13] defines a crisis as a significant threat to a company's operations that can have numerous negative consequences if not managed properly. These threats to organizations involve both past practices and future planning regarding safe operations. Financial consequences after an accident will call for important decisions that consider the needs of the public and environment. Organizations will try to rebuild their reputation and regain trust. The crisis management team needs to address these issues and communicate to the public the details and steps taken to recover, rebuild, and improve. It is imperative that the crisis management framework is in place to organize the operations and communicate the procedures to all stakeholders before, during, and after a crisis [9] [20] [21].

After a crisis, the recovery phase is long and complicated. The process demands skillful crisis management personnel who know how to communicate with the media and coordinate efforts with the communities and businesses affected by the crisis [20]. Organizations must make a firm commitment to proactively train and integrate the crisis management framework into the company's operations. Proactive crisis management relies on a three-pronged approach to crisis management. The proactive crisis management framework allows organizations to continually monitor risk, communicate with workers, and assess the need to change when public safety or the environment impact is at stake. Ideally, this proactive approach will prevent accidents. However, if a crisis does occur, the crisis management framework is in place and the organization can work towards a more successful recovery [19] [20]. This paper examines the different

aspects of a crisis including crisis management, planning, leadership, and corporate social responsibility. The authors examined these aspects of crisis management in the context of two oil spills, the British Petroleum Deepwater Horizon Disaster of 2010 and the ExxonMobil Pipeline Company Yellowstone River Spill of 2011.

## **PROACTIVE CRISIS MANAGEMENT**

Effective crisis management consists of five phases that require proper execution by skilled leaders. The first phase, signal detection, is preventive and requires everyone at the company to communicate any concerns or vulnerabilities. If the company is operating with open communication about worker concerns, it is possible to avoid accidents. The second phase, preparation and prevention, involves developing and implementing preventive measures. Preparation and prevention addresses any risk issues discovered. The third phase, damage containment, creates an immediate plan when a crisis occurs. Damage containment involves a quick response that emphasizes employee safety while containing and controlling the accident. The fourth stage involves making short and long-term plans to start the recovery process. These plans may resolve issues of liability and responsibility for injuries, losses, or environmental concerns. The final phase of crisis management involves learning from the accident. Crisis managers coordinate the knowledge gained and the training needed to rebuild and improve the company. [12] [25] [32].

Investing in crisis preparation yields immediate returns by increasing the organization's operational efficiency [10] [18]. Typical components of crisis planning include designating a crisis team and identifying their roles and responsibilities [31]. The crisis managers on that team plan for emergency communication procedures and disaster training. They also develop and practice drills and simulations [4] [30]. An effective crisis management plan prescribes certain key decisions on the mechanical portions of the crisis [19]. The crisis management team helps to facilitate decision making, past practices, and the flow of resources during an actual crisis [25].

Company leaders who have worked on a daily basis and practiced communicating about safe management are key people during an ongoing crisis. The crisis team gives stability and continuity to the process of crisis management. Company leaders are familiar with the complexities of the company's day-to-day operations. When leaders are effectively prepared for a crisis, they are better able to convey knowledgeable and factual information during a press conference. This in itself can help to ease the public's fear. All the previous work to formulate a crisis management plan, practice drills and simulations, and analysis of solutions for safety concerns helps to prepare crisis managers and workers to be effective from the onset of a crisis [20].

## **BP'S MANAGEMENT OF THE DEEPWATER HORIZON OIL SPILL IN THE GULF OF MEXICO**

BP plc. (formerly known as British Petroleum) is one of the world's leading international oil and gas companies. It is headquartered in London, UK, operates across six continents, and ships products to over 70 countries [5]. BP's reputation faced dramatic challenges due to a crisis that began on the evening of April 20, 2010, when a gas release and subsequent explosion occurred on the Deepwater Horizon oilrig in the Gulf of Mexico. Eleven workers lost their lives and many others were injured. [16]. The explosion caused a massive fire that burned for 36 hours. The causal chain continued as the rig disintegrated and sank into the ocean.

The accident at Deepwater Horizon oilrig led to a major crisis at BP while those who lived in the Gulf area watched in horror as their fishing and tourism businesses were devastated. The public was skeptical and distrustful of officials who spoke for the company, and BP struggled to handle the public relations aspect of the crisis. A variety of factors contributed to BP's failure from the perspectives of risk management and crisis leadership. BP lacked the crisis planning, communication, and corporate social responsibility necessary to be effective at the time of the Deepwater Horizon pipeline failure.

During the crisis, it became apparent that organizational behaviors and the ethics of a corporate-culture are important components of a company's approach to risk management, risk tolerance, safety concerns, and crisis preparation. BP's corporate culture made many documented mistakes during the 2012 spill. The company demonstrated that profit, not safety, often motivated management's decisions. Days before the blowout at Deepwater Horizon, BP decided to use a type of single wall well casing that it knew increased the risk of gas leaks. Drilling experts warned that BP's design for the casing pipe from the sea floor to the oil reservoir had a baffling design flaw. This design flaw made the casing pipe unable to create effective cement seals [6]. These are examples of the devastating mistakes and risks that BP was responsible for at the Deepwater Horizon Rig. BP suffered great financial losses from this accident. A disillusioned public, well informed of BP's mistakes and poor crisis management decisions via twenty-four hour media coverage, caused stock in the company to plummet. "Not surprisingly, the event coincided with one of the biggest drops for BP's stock since 1978. Shares of the company lost 54 percent on the New York Stock Exchange between April 20 and June 25, 2010, bouncing back slightly before the wellhead was capped on July 15, 2010. BP stock lost a similar amount in London over the same period [24]. Later the public learned even more about problems with BP's crisis management as investigations and court cases transpired [23].

In a 2017 study, human failures and poor leadership were cited as major causes of the BP Deepwater Horizon disaster [33]. BP managers and engineers could have prevented this accident by applying the knowledge and information that they had available. The company did not properly assess, monitor, and plan for the hazardous risks of deep offshore drilling operations. Flawed decisions and crisis management jeopardized the safety and welfare of the environment. Pranesh et al. [33] identified flawed decisions, poor communication, and improper coordination of top, middle, and lower managers as the cause of the major problems that occurred.

In 2010, Compass Inc. polled business leaders about BP's handling of the Deepwater Horizon incident and the company's crisis management strategies. The participants rated BP at forty-one on a 100-point performance scale [27]. During the 2010 crisis, the public was skeptical of the first company press releases and the disorganized approach BP took to the crisis. BP misled both the public and the governing agencies on the amount of oil that was leaking from the broken well. Two days after the explosion, BP claimed that no oil was leaking. One week later, the company estimated 5,000 barrels of oil a day were being lost. An internal, confidential email admitted at that time to 14,000 barrels daily. Government scientists began independent examination estimating that the loss was as high as 40,000 barrels per day [6].

By the time a solution to stop the leak at Deepwater Horizon was found, the disaster had done 17.2 billion in damage to Gulf Shore States. The disaster extended for 152 days and dumped 134 million gallons of oil into the Gulf of Mexico. The oil spill at Deepwater Horizon was the largest spill in U.S. history, far exceeding the Exxon Valdez oil tanker spill crisis of 1989 at Prince William Sound, Alaska. The Exxon Valdez leaked 10.8 million gallons of oil and cost seven billion dollars in damage [2]. On April 4, 2016, BP settled in court for another 8.8 billion in damages to the environment and for recreational losses on the Gulf Coast. The Deepwater Horizon Trustee Council will implement plans to allocate the settlement [28].

The ultimate cost of the BP 2010 oil spill clearly demonstrates the need to invest money, time, and support into a crisis management framework. That framework includes skilled personnel in place who are working and familiar with daily operations and communicating with all levels of workers, suppliers, and operators. Such an investment would have been more than cost effective for BP's bottom line since the public is still suspicious of BP's operations years after the Deepwater Horizon Oil Spill. Time has not softened that distrust [14]. The United States Courts and the Federal Government have also demonstrated a distrust of BP's operations. In 2012 under the terms of a plea agreement, the court appointed an ethics monitor to watch over BP's operations for five years and required BP to state this fact on their website [35].

### **EXXONMOBIL'S MANAGEMENT OF THE OIL RELEASE INTO THE YELLOWSTONE RIVER**

It would be unfair to make a point-by point comparison of BP and ExxonMobil on the safety and management issues of the Deepwater Horizon crises in 2010 and the Yellowstone River spill in 2011. The two spills were dramatically different in scope and magnitude. Since 2010, ExxonMobil and other multinational oil companies have had an opportunity to apply the important lessons from the BP Deepwater Horizon spill. This may have translated into improved and refined crisis management frameworks in the oil drilling industry. Still there are a number of comparisons between the operations of BP and ExxonMobil during each crisis that are important to this discussion of crisis management frameworks.

A year after the 2010 BP crisis, ExxonMobil Pipeline Company had a major spill on the Yellowstone River that would test the company's ability to handle a crisis. ExxonMobil is one of the world's largest oil and gas companies. Headquartered in Irving, Texas the ExxonMobil Pipeline Co. is a subsidiary that operates a pipeline that runs under the Yellowstone River near Billings in south-central Montana. On July 2, 2011, a rupture leaked 63,000 gallons of oil into the Yellowstone River. The emergency prompted temporary residential evacuations along the river. The pipeline break took one month to clean and cost the company 12 million dollars.

An ExxonMobil Pipeline Company spokesperson stated that the pipe was buried six feet below the riverbed and leaked for approximately a half-hour. The cause of the break is still under investigation. ExxonMobil speculates that high water flowing through the river might have gouged out the riverbed and exposed the pipe and it was then possibly hit by debris [7]. The oil spill released toxic fumes that sent several people along the river's flow to hospitals and the environmental impact of the accident is not yet clear [36]. The spill also threatened the famous Yellowstone National Park.

Prior to the accident, ExxonMobil appears to have put an organized crisis planning and risk management policy into the company operations. ExxonMobil demonstrated organization and control after the Yellowstone spill and it was evident in public communications. The company had a contingency plan to deal with the spill and explained it to the public [29]. During the Yellowstone spill, ExxonMobil had an immediate plan and showed commitment to the operations integrity that the company claims is integral to the operations. The crisis leadership and the workforce demonstrated experience in crisis preparation and shared learning [29].

ExxonMobil's organizational culture functioned effectively during the crisis. The company seemed to operate with OIMS guidelines in mind. Supervisors and spokespersons provided detail on issues related to the crisis. This indicates that training, open communication, and risk assessments were an integral part

of the corporate operation before and during the crisis [29]. ExxonMobil responded in an organized, proactive fashion by deploying a well-prepared organization unit to deal with the Yellowstone spill. This unit, known as the North America Regional Response Team (RRT), led the clean-up and rescue activities. During the Yellowstone River spill, the North America RRT organized assistance responded quickly to the crisis. Clean Harbors Inc., volunteers, and additional contractors hired by ExxonMobil worked to clean up the oil spill. On a typical day, there were more than 775 people active in the recovery effort [38]. ExxonMobil still had a severe crisis, but unlike BP, they were prepared to mitigate the damages due to their advance crisis management plan. On September 21, 2016, ExxonMobil agreed to pay 12 million for environmental damages from the estimated 63,000-gallon oil spill into the Yellowstone River. Further federal penalties are still in litigation. According to ExxonMobil, the company has spent 135 million on the cleanup and 2.6 million to resolve federal safety and pollution concerns [8].

The 2011 Yellowstone spill did raise new concerns about old pipeline buried along the riverbanks and lakes across the United States. These pipes are aging and experts are concerned that pipes laid before 1970 have serious risk potential to rupture and spill, especially in high water situations [17]. This accident points to the importance of a crisis management framework that is integral to company operations. The final step of crisis management, learning from the accident, will assist ExxonMobil and other oil companies to protect the public from unnecessary risks. Each accident is an opportunity to assess risks, correct problems, and build safer operations. The final expenses that can occur because of an accident demonstrate that it is cost effective to make a commitment to a crisis management framework. More importantly, corporations have an ethical responsibility to be socially responsible and protect both the public and the environment.

### **BOTH OIL SPILLS DEMONSTRATE THE IMPORTANCE OF CORPORATE SOCIAL RESPONSIBILITY (CSR)**

Establishing corporate social responsibility helps companies prevent crises and build strong public relations. Ethical operations enhance the structural power of the corporation by allowing proactive involvement in setting the agenda on environmental issues. The potential risks and threats to corporate operations can be detected before a crisis occurs if CSR can be properly managed [22]. There is a close relationship between CSR and successful crisis management. Companies with high levels of CSR have been shown to have better public relations and more open communication with all stakeholders [37].

ExxonMobil demonstrated concern for CSR during the crisis on the Yellowstone River. To date the company has received more than 530 calls from the community. Crisis teams responded to 174 claims related to property, agriculture, and health. These claims were resolved as quickly and effectively as possible. Aside for this active response, ExxonMobil was also proactive in their efforts to control the effects of the crisis. Their employees and insurance claim adjusters have visited more than 300 residents as far as 50 miles downriver of the pipeline [38]. To address individual health concerns, teams of trained environmental specialists conducted air and water quality testing. Experts surveyed the affected areas of the river for oiled wildlife. The well-organized crisis response plan was critical for the efficient oil clean up and demonstrates how a systematic crisis management promotes the high efficiency in responding with crisis.

During the 2011 oil spill, ExxonMobil demonstrated an important facet of corporate social responsibility in being transparent with the company's operations and fact sharing with the public. Many other oil and gas companies have also posted their safety policies and environmental protection initiatives on their company websites. The International Organization for Standardization (ISO) provides standards for companies as they construct their safety policies. ISO is a global system that develops agreed upon

standards through the work of the ISO Technical Committee (ISO/TC 207) and related subcommittees. ISO standards provide multinational companies with an emphasis on managing risks to the environment [3]. Oil and gas multinationals have become more transparent since recent high profile, high-cost oil spills and accidents. They now share the ISO guidelines and standards for safety procedures and managing crises [1].

SATORP, which operates in Saudi Arabia, has published A Corporate Social Responsibility (CSR) plan on its website that outlines how the company promotes wellness, safety awareness, and environmental stewardship [11]. As recently as May of 2017, Chevron's website states that the company is committed to operating in compliance with oil and gas industry guidelines. These guidelines share best practices for monitoring, reporting, and prioritizing health, safety, and operating issues [15]. BP's website focuses on managing responsibly and developing effective leadership, improving communication, consistently training, performing audits, and using self-assessments [35].

ExxonMobil has posted a detailed Operations Integrity Systems Management (OIMS) flow chart and explanation of the company's crisis management framework. The website focuses on training, risk assessments, investigations, and open communication of concerns. The company is in line with the standards commonly accepted throughout the oil and gas industry. These standards also include constant reevaluations of operations, employing oversight personnel, and updating environmental regulations. Most importantly, ExxonMobil is committed to fostering high ethical standards into its corporate culture. The importance of investigating and responding to incidents and open reporting of accidents and concerns is integral to the crisis management framework [29].

Shell Global has developed 12 mandatory safety rules for company operations that include obtaining needed permits, conducting safety tests, and verifying all safety issues before work begins. The company has standards for working in confined spaces, maintaining critical equipment, and avoiding falls. Shell warns that any managers or outside contractors in violation of these mandatory safety regulations will be barred from future work with Shell Global. Many of these safety issues are extremely important because multinational oil companies operate in regions where risks on the road and the workplace are commonplace. Companies must act as responsible and ethical citizens otherwise workers and local populations may not be protected [1].

The oil and gas industry recognizes that public concerns about the environment, climate change, and past oil spills are changing the landscape of their operations. After BP's 2010 spill, deep water drilling halted for six months and stricter guidelines and regulations were enacted [14]. The Pew Research Group reported that public support for deep water drilling, which was favored at 62 percent before the Deepwater Horizon spill, fell to 52 percent in 2010. Even though the public polled back at 59 percent in 2015, Pew Research Group found that there is increasing concern with protecting the environment and finding alternative sources of energy [26]. Oil and gas companies need to operate safer, cleaner, and more responsibly to protect their future interests. Clearly defined safety guidelines and detailed crisis management policies are examples of how the oil industry is responding to public concerns. Companies are addressing the issues of safe management of operations and making a formal commitment to protecting the environment. Each company also needs to make a strong commitment to implementing and supporting a crisis management framework into its organization.

## CONCLUSIONS

This article contributes to the emerging discussion on proactive crisis management during major accidents. This paper surveyed existing literature on crisis management and found that experts have made several key recommendations. Effective crisis management requires systematic and integrated planning. Company leaders need to make a commitment to supporting a crisis management framework in daily operations.

The crisis management team should be encouraged to offer training, develop simulations, conduct risk assessments, and foster open communication about safety concerns. These safety concerns should include the communication of any equipment or other operational issues. Many oil and gas companies are making a strong commitment to safer and more responsible operations. It is essential that the public can trust this commitment. Companies need to have a fully functioning crisis management framework in place to avoid accidents by using the preventative and educational steps of crisis management. If an accident does occur, the crisis management framework will help the company mitigate the damages, aid the recovery, and apply the lessons learned to future operations.

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