

A Study of Case Studies

Mark Dix
*U. S. National Oceanic and
Atmospheric Administration*
Mark.Dix@noaa.gov

Introduction

The efficacy of case studies in training and education is well established. Examining the particulars of a past event with the present lens of perfection gives the student the ability to see the matter with greater clarity and draw important lessons from the example. Operational case studies also allow the researcher to see an actual event in full view and make sense of how the pieces fit together in what may have originally been a chaotic process. A distinction, however, is made between the use of a case study for instruction and a case study used for dissection and exploration in public presentation. An instructional case study can be completely fabricated, or heavily adapted from an actual incident, in order to teach specific principles. The International Oil Spill Conference Proceedings (dating back to 1969) list hundreds of case studies and histories. Most often, these case studies are retrospectives or narratives that review the events and then draw out particular points as lessons to be learned. Given natural human biases and the tendency of the eye witness to reinforce the portions they know, a case study can become parochial and overlook valuable lessons that are applicable across a wider horizon. Simple improvements to case studies in the oil spill arena can greatly improve their function as data sets and recommendations for future operations as well as the delivery to the intended audience.

Main Results

Case studies can be sorted in a number of ways: individual case studies, set of individual case studies, community studies, social group studies, studies of organizations and institutions, studies of events, roles and relationships; intrinsic vs. instrumental; illustrative, exploratory, cumulative, and critical instance; descriptive, exploratory, and explanatory; etc. For the purposes of this discussion, the bins shall be didactic (those used to teach in an academic environment) and retrospective (where an event is recounted and explained); and, the focus will mainly be on the latter but borrowing some of the better practices of the former.

In virtually all of the case studies that are presented to the operational oil spill response community, the perspective is from that of the responder or person who played some role in the event. Eye witnesses normally maintain extreme reliability, except when they don't. Very few published (or presented) case studies rely on alternative view points or collect multiple accounts. Assembly of multiple sources of input is often left to an investigative panel that follows a more significant incident. Yin suggests six forms of evidence that can support a case study: documentation, archival records, interviews, direct observations, participant observations, and physical artefacts. The better case studies found in oil spill literature use multiple streams of data and distil that information into a composite that portrays the event more realistically.

Another weakness of many oil spill case studies is the lack of attention paid to universality. That is, what is it about the incident that can be shared with others so that they can export the lessons and, one hopes, avoid meeting with a similar calamity (or, to repeat the positive successes of the previous event)? The assumption is that one event is equivalent to another and that the features of importance can be interchanged between one event and another. One

seasoned responder stated, “I’ve never been to the same spill twice.” Put another way, if you have been to one spill then you have been to one spill. In many cases, each spill event is completely unique; however, the aspects that make one spill notable (and likely worthy of a retelling) can also isolate it as an aberration and not universal. Good authors explore for universal themes then mine the elements that are exportable to other incidents. In fact, other emergency responses (e.g. wild land fires) that are well written as case studies can be used to derive benefits for other types of events.

The method of relaying the case study bears consideration too. A good story has certain required features that make the tale worth relating: setting, characters, plot, conflict (& resolution), and narrative arc. For the benefit of case studies it would be good to also include recommendations and references as necessary elements too. Without overplaying the storytelling aspect, a well constructed case study will contain the essential elements of a good story and will convey those parts well.

To that end, a case study for the oil spill community should contain many of the same features as a scientific paper. The setting of the case study is akin to the background research into the location, cargo, vessel(s), and so forth; the actors as well as the natural environmental forces that were in play form the roster of the characters. The methods of study or research ought to be shared: did the authors seek out other witnesses or reports of the incident? Did they find other evidence that corroborates their point of view such as log books, eye witnesses, weather data, bathymetry, etc.? In some case studies in oil spill annals, authors fairly neglect to even glance at a method of research; they entirely rely on their own eyewitness testimony as proof enough. Further, what made their response good or great? Did they use amount recovered to verify success? Was there a measurement of the velocity of the response? Did public reaction/perception (social media) confirm the results they touted? By better supporting the information in the case the impact of relating the case strengthens.

The narrative can link these pieces together and thereby draws any “conflict” into the tale. Comparison to other case studies and reports on the same or similar incidents shores up the credibility for what is to come. Through better research into spills of the same type (or in the same location, if setting played a major role), a case study can rise above the common and establish a benchmark. This portion is also where the author should subject themselves to a rigorous analysis: the proper lens might find that their decisions and actions were faulty. Not many authors could bear up to such self scrutiny but a truthful and gifted writer could carry this off well.

Finally, the conclusions and recommendations in the report need to follow on logically from the event and findings and, where possible, offer validation in order to reinforce their application. If the methods and features of the original spill event were not likely to be repeated elsewhere, the case study may not bear any value. If not well supported, the conclusions may only prove to re-fight a battle that will not be repeated and extrapolation to other events would be fruitless. This is where universality plays its starring role. If the practices or changes mentioned in the report are indeed lessons learned then they have been actually implemented; this helps to prove their usefulness. However, not all “lessons learned” can achieve this standard; admission that the observations or recommendations are untested would serve the community more forthrightly. Lastly, excellent case studies display the logical path they followed through the narrative to arrive at the final conclusion(s).

Conclusion

Case studies in the oil spill response community read more legitimately and find better applicability when they adhere to some basic guidelines for construction. Using some fundamental sections as building blocks and putting some real research into the write up establishes the credibility of the author as well as the usefulness of the conclusions presented. By offering transparency in the methods of the report as well as some evidence of the basis for the conclusions, the case study can distinguish itself as a true example of what can be learned from what one hopes is a non-repeatable event.

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