Barendrecht Re-visited: A new perspective of the Risks of Misunderstanding Community Engagement

KJ Dolan[1], AM James[2], A. Smith[3]

[1]University College London, UK

[2]University of South Australia, STEM, SA, Australia

[3]Mullard Space Science Laboratory, University College London, UK

Abstract

During the first decade of the new millennium, the Netherlands was seeking to meet part of its environmental obligations through innovative projects. Barendrecht was proposed as a site for a carbon capture and storage (CCS) scheme. The project followed the required planning processes and was supported by the central government. However, the community-based stakeholders and the local politicians opposed the proposal to various degrees.

This paper re-visits the history of the project through the lens of OUTRAGE management and risk communication. This casts a new light on the views of the local communities and explains their responses to the project and its progress. These views were overlooked by the proponents of the project which contributed to the project being delayed and its ultimate termination having cost the Dutch government €30 million.

OUTRAGE identifies some of the most critical issues which cause the community to oppose projects. Using the Barendrecht CCS as a case study allows an exploration of these OUTRAGE factors and an explanation for the actions and the effective opposition to a large-scale infrastructure project.

Keywords: communication; outrage; stakeholder; uncertainty.

1 Introduction

During the first decade of the new millennium, many countries reviewed their obligations with respect to the capping and reduction of emissions which were impacting the climate and environment. Carbon capture and storage (CCS) was one approach under consideration, in the Netherlands, as part of a suite of strategies to address the short and longer-term impacts of industrial processes on the environment.

In 2006, project owner and developer Shell Storage B.V. (part of the Royal Dutch Shell PLC conglomerate, and referred to as Shell) started preparations to develop a CO_2 capture and storage demonstration project. The project proposed to pump gas through their existing pipe network and inject these waste gases into two depleted gas fields under the town of Barendrecht, near the Rotterdam Harbour area.

Shell commenced the permitting procedure which, upon completion and approval, made the project eligible for a grant, issued by the national government of the Netherlands, in the amount of €30 million. During 2007, Shell began engagement with the municipality government of Barendrecht, followed by the first official community engagement in February 2008. There was initial opposition, or at least, concern and resistance to the planned project, from both local politicians and the public.

Shell proceeded through the development of the Environmental Impact Assessment (EIA), following the required processes. The EIA was approved in early 2009, by the national government. Plans progressed throughout 2009, amid increasing opposition within the community, until the Provincial Council announced its opposition to the project, in November 2009. This followed the Ministers of the national government having given approval, although under the Dutch legal system, it is the provincial authorities who grant permits for mining and similar activities.

The national government, a coalition led by Prime Minister Balkenende's Christian Democratic Appeal (Christen-Democratisch Appèl (CDA)) party, resigned in February 2010, over unrelated matters. Following this, elections were scheduled for June 2010 and a new government was formed on 14 October 2010. This resulted in no decisions being made, in respect to the Barendrecht CCS proposal, until November 2010, when the project was cancelled.

1.1 Why is it necessary to revisit Barendrecht?

"As an early CCS initiative, which was cancelled almost entirely due to local opposition and negative media coverage, the project at Barendrecht in the Netherlands has become a poster child [prime example] for the consequences of a failed public outreach campaign" (Lockwood, 2017).

The Barendrecht CCS project has been covered by research since its conception in 2006. Previous published studies have taken different perspectives, some from a purely legal or regulatory view and others focusing on the chronology of events. As a result, there is a wealth of information which is not subject to dispute. There has been little analysis of how the events created the environment that shaped the community responses and reactions. This case study addresses this perspective and demonstrates the mechanism by which the community became increasingly active and expressed its OUTRAGE at the proposal. This paper will take the form of a chronological review of events and the documented community responses with a discussion of the reasons for the attitudes and behaviours of stakeholders.

2 Community Perceptions through the Lens of OUTRAGE

Sandman (1982) promotes the approach that the risk is greater than just the technical risks (which he terms the "HAZARD") and must account for the response or feelings of the stakeholders (which he terms the "OUTRAGE"). Sandman uses the non-arithmetic equation, below, to explain the real magnitude of the risks:

RISK = HAZARD + OUTRAGE

Thus, the total magnitude of the RISK is a combination of the actual risk event and its consequences (HAZARD) which can be calculated in several ways, including the Expected Monetary Value (EMV), plus the stakeholders' perception of that event (OUTRAGE).

There may be a very low technical risk, which the project team may be fully aware of and have addressed to ensure that the likelihood is very low, and the consequences are low, but the community are unwilling to accept.

Ignoring or deflecting such risks, due to the expert technical knowledge of the proponents and its supporters, may result in unexpected obstacles being raised by the community because of their different viewpoint. These obstacles could take the form of attempts to delay the project or derail it completely through any consultative process or by raising awareness of their view through media or demonstrations. In either case, the likely result, for the proponent, is a delay and cost increase to the project.

2.1 Principles of OUTRAGE

Although the definition of risk has broadened in recent years, professional and institutional stakeholders tend to focus on risk as being an approach to technical uncertainty informed by experts (Sandman, 1982). This leads to a clinically objective and mathematical consideration of the potential factors which can affect the project. The public's perception of the risk is not, normally, a factor considered by the proponent of a project.

Sandman (2011) stressed that "the most important truth in risk communication is the exceedingly low correlation between whether a risk is dangerous, and whether it's upsetting". In other words, the community does not perceive risks and respond to them in the same manner as experts. This may lead to misunderstandings and unanticipated responses from the community to risks which experts consider to be nominal. Conversely, there may be risks which experts calculate to be significant that illicit little reaction from the community.

Covello & Sandman (2001) described the 12 dominant factors which impact on risk controversies. They are shown in table 1 below. Each row shows extremes of a single factor.

Table 1: The main factors affecting OUTRAGE

Factor	Risks considered to…	Are less acceptable than…
Voluntariness	Be involuntary or imposed	Risks from voluntary activities
Controllability	Be under the control of others	Risks under individual control
Familiarity	Be unfamiliar	Risks associated with familiar activities
Fairness	Be unfair or involve unfair processes	Risks from fair activities
Catastrophic potential	Have the potential to cause a significant number of deaths and injuries at once	Risks from activities that cause deaths and injuries at random or over a long period of time
Understanding	Be poorly understood	Well understood or self-explanatory risks
Uncertainty	Be relatively unknown or are highly uncertain	Risks from activities that appear to be relatively well known to science
Dread	Evoke fear, terror, or anxiety	Risks from activities that don't arouse such feelings and emotions
Trust	Be associated with individuals, institutions, or organizations lacking in trust and credibility	Risks from activities associated with those that are trustworthy and credible
Media attention	Receive considerable media coverage	Risks from activities that receive little coverage
Ethical/moral nature	Be ethically objectionable or morally wrong	Risks from ethically neutral activities
Human vs. natural origin	Generated by human action, failure, or incompetence	Risks believed to be caused by nature or "Acts of God"

Source: Covello & Sandman (2001)

It is not necessary, nor is it likely, that all of these conditions are met at once; OUTRAGE can be triggered by the presence of any one of the conditions. The more factors which are present, the greater the likelihood that there will be a critical mass of anger and opposition to trigger the OUTRAGE within the community and maintain it. The relevant factors will be discussed as they related to the Barendrecht experience at the point in the timeline where they are relevant.

3 Timeline for the Barendrecht Project and the Community Response

Barendrecht is a small town, in the south of the Netherlands, approximately 15km from Rotterdam. In 2005, just before the proposal for the CCS project, Barendrecht had a population of 40000.

In response to its obligations to reduce CO_2 emissions, the government of the Netherlands began to explore the opportunity and viability for the capture and storage of the gas produced by industrial processes. Shell Storage BV started preparations for a CO_2 capture and storage scheme in 2006. The following year the Dutch government announced a tender for CCS demonstration projects with subsidies available of up to €30million.

The Barendrecht proposal was one of only two CCS initiatives in the Netherlands.

The other was planned for development by the French company GTI GDF Suez in Geleen. The proposed site for this scheme was beneath ammonia production plants, owned by the multinational DSM and approximately 1km from the neighbouring residential districts. There was no opposition to the project in Geleen. Contained within an industrial area, this site attracted little attention and opposition from the surrounding but unaffected communities.

3.1 The community was not considered a stakeholder

From the very beginning of the proposed CCS project at Barendrecht, there was a misunderstanding of the identity of the stakeholders and the context in which it would be perceived. This placed the proponents at a disadvantage because they failed to perceive the community as stakeholders.

The proponents considered the project, to store CO_2 in the depleted gas reservoir under Barendrecht, as a demonstration project only in so far as to apply, test and learn lessons from the administration, legal procedures, regulations, and monitoring of an onshore CCS system (Brunsting et al, 2016). This perception of the project was summarised eloquently and concisely, “The project was seen as so technically straightforward, that the main aims of Shell and the government were to test the legal and regulatory framework for CCS, such as the claiming of EU Emissions Trading System credits, as well as monitoring and verification procedures” (Lockwood, 2017).

This attitude likely led to the view that the community were not stakeholders in this project; thus, explaining the lack of consideration of the communities and the absence of planning for their engagement.

Experts and, indeed, government Ministers accepted that the project was technically simple and that the storage of CO_2 was completely safe. However, the community view of risk differs from that of experts. This difference can be explained by the experts having access to considerably more information and experience that the general public (Sandman, 1993). The omission of the community as a recognised stakeholder ensured that they were, at least initially, ill-informed. It is not surprising that the community opposed the project.

This appears to be a classic example of, what Sandman (1993) observes as "[t]he public often misperceives the hazard. The experts often misperceive the OUTRAGE. But the overarching problem is that the public cares too little about the hazard, and the experts care too little about the OUTRAGE."

Shell and the national government perceived that the project was primarily aimed at testing the legal framework for this type of project onshore and therefore the primary stakeholders were the regulatory authorities. The deliberate exclusion of the community as a key stakeholder was an error, perhaps understandable; but this oversight, meant that the community were not engaged at the early stages of the project's development, led to the perception that the community could do little, or nothing, to influence the outcome of the project.

From a technical perspective, some of the key issues were unchangeable – the location of the depleted gas fields, for example. It, also, made complete sense to use the existing network of pipelines to the Barendrecht site.

There was a perception that the CCS facility was being forced on the Barendrecht community. In addition, the whole process reinforced the lack of local control in the trusted representatives, who were the locally-elected officials, and demonstrated that the control would be vested at a national level, in the authorities whom the community did not trust (Terwel et al, 2012). In terms of OUTRAGE, the scheme had no "voluntary" element to it; the CCS facility was being forced upon the town of Barendrecht, and its residents.

3.2 Convenience versus Solving at the Root Cause – Imbalance of benefits and risks

The Dutch people, were aware of the issue of climate change and were beginning to understand the link to the issue of energy security (Kuijper, 2011). However, they "…are among the most sceptical people in the EU and most inclined to think that the problem [climate change] is being exaggerated" (Kuijper, 2011). There was a perception, amongst the community that this project did not really address any of the environmental issues. Storage of CO_2 emissions allowed Shell to continue with their current operations with little impact, whilst claiming to be much "greener". The capture and storage of waste gasses was observed as a cheap way of compliance without addressing the root cause of industrialised pollution.

It was concluded that "…[t]his project is just another way to cash in on the demands by the European Union to reduce CO_2 at our cost and that of future generations. It will not bring any fundamental change in the way factories produce. This is a negative incentive, avoiding the essential questions about CO_2 production and how to tackle it at its roots" (van der Velden, 2009).

"As seen in the Barendrecht case, the general neutral attitude towards CCS may change into rejection by the local population when a concrete project is proposed. This is mostly due to a lack of trust in the project and concerns related to risks." (von Egmond, 2016). The CCS proposal was clearly an industrial, or "human" intervention which was viewed as having dubious value and being a mechanism to circumvent some environmental obligations and commitments. OUTRAGE is generated by the presence of human (as opposed to natural) factors and the absence of ethical drivers for the project.

Another of the elements of OUTRAGE is "fairness". It is clear that the primary beneficiary of the proposed CCS project would be Shell who would be able to continue using their existing facilities and operational processes, incurring the relatively small, and subsidised, costs of carbon capture – the costs of the pipelines would be nominal because of the re-use of the existing infrastructure. The national government of the Netherlands would also benefit by complying with their environmental obligations. On the other hand, it is the residents of the town who would bear any downside to this industrial activity. It is they who would be left sitting on a "CO_2 bomb" (this term was used in the headline of an influential newspaper article) (Feenstra et al, 2010) once the project was completed and the operations ongoing.

3.3 Early Stages – pre 2008

Prior to 2007, the discussions regarding the development of CCS projects was quite academic and high-level. Little detail was known nor discussed. In early 2007, Shell began to inform the Municipality government of Barendrecht of their proposal and plans. In early 2008, Shell presented the project to the city Council. Both levels of government were unenthusiastic at this time.

Nevertheless, Shell pressed on with the Environmental Impact Assessment (EIA) and licencing procedures and the national government set up Taskforce CCS to stimulate the development of CCS opportunities. Shell, as the project owner and developer, were responsible for the EIA, which is a legally required assessment of possible impacts, of the project, on the environment including natural as well as economic and social aspects. The remainder of the licencing process can be summarised as:

- National Government, two Ministries are involved: The Ministry of Economic Affairs (EZ) and the Ministry of Environment and Spatial Planning (VROM). The Province of Zuid-Holland which coordinates the EIA procedure.
- Most of the permits have to be granted by the Province and the Ministry of Economic Affairs.

The Municipality Barendrecht only has to grant some local permits at the very end of this process.

3.4 2008

The first information meeting involving the local community was held in February 2008. 60 people attended. They were described a “mostly activists” although Brunsting (2011) explains that 50% were professionals and 50% locals who were active in local politics. Acknowledging that the “activist” label is inaccurate is important. Use of that label implies that the participants had a hidden, or not-so-hidden, agenda and discredits their purpose in contributing. The words are very important in portraying people and events objectively and avoiding dismissive attitudes and biases.

The national government limited “public consultation” to the EIA process, and scheduled only a matter of 3 months between the publication of the EIA and the final approval. This left insufficient time for the compilation and presentation of substantive submissions. Additionally, the government’s clumsy and heavy-handed use of the legislative process, in 2009, to remove the control of licencing and permissions from local authorities to the national level further enhanced the perception that a single solution was being pushed through and forced upon the Barendrecht community.

The "fairness" factor of OUTRAGE was again triggered by these actions, and also the "control" factor became obvious as the planning permit and licence responsibility was centralised in the central government.

The community of Barendrecht, had been inconvenienced by a number of infrastructure projects in the preceding years, prior to 2007. This was another that was being forced upon them. While it is likely that the public would have been aware of the broader benefits of the proposed CCS project and its role in the national and European sphere, there were no local benefits but all of the disruption and risks were local. This imbalance of benefits was perceived to be unfair by those the community because they would have to absorb longer-term risks with no advantage. As previously mentioned, there was some scepticism amongst the Dutch population to the impact that such schemes would contribute to the environmental footprint of the Netherlands or the European Union, (van der Velden, 2009 and von Egmond, 2016). As a result, OUTRAGE was stoked by the lack of "trust" for the proponents of the project. This intensified as the planning progressed. There were several components which contributed to the lack of trust:

- The sceptical attitude of the community raised questions about the real aim of the project. The community felt that CCS would not address the root cause of the environmental pollution.
- There was greater trust in the local and municipal authorities than there was in the central government, or Shell.
- The devolved powers of those trusted authorities became progressively centralised by the government.

During the planning for the project, there was some discussion of the uncertainty about the impact of the project on house values in the area surrounding the project. It is easy to dismiss this as a selfish response to the proposal and characterise it as evidence of NIMBY-ism (Not In My BackYard) in action. The proponents certainly appear to have adopted this view. However, this is a legitimate concern for people in the community who have purchased a house and probably have a mortgage. For decades, house prices had increased throughout the Netherlands, although values had fallen in Barendrecht (van der Velden, 2009). Being dismissive, of this concern, would be unempathetic to the plight of the populace, but it does enable the proponents to treat the opposition to the project as self-centred. In this instance, the community had a valid concern that was never addressed or investigated. This was certainly not NIMBY for its own sake, this was a response to the unfair imbalance in the distributions of risks and benefits.

The media began to take an interest in early 2008, with the first national press article describing the nature of the project. This was followed by an article entitled "No CO_2 under our back garden" and, in April 2008, another national press article which reported that unrest in Barendrecht was growing.

A second public meeting was held in April 2008, with a larger group of attendees. Reports vary from 180-250 participants and the meeting allowed more debate and discussion amongst the participants.

Following this meeting, the Municipality asked Shell to stop providing information because it was creating confusion and anger within the community. In some circumstances, this would be perceived as an attempt to supress information which may have result in anger. However, in this instance it was seen as a genuine attempt to provide independent information to the community. In mid-2008, a consultation group was established comprising the leaders of the local political parties. In late 2008, the Alderman expressed concerns about the project and the consultation group compiled a 100-question checklist which was announced on local radio.

Simultaneously, the BCO_2, the administrative consultation group, was set up to provide a single point of information emanating from the developers and the national government. The BCO_2 did make information available regarding the EIA processes (the public's only opportunity to have input into the process was by responding to the EIA reports) and other legislative requirements of the licencing process. Additionally, experts were invited to closed-door meetings with the municipality.

3.5 2009

The third public information meeting was held in February 2009 and was attended by over 1000 people. In the same month, a 900-signature petition was completed and a protest march held with 300-400 participants. Again, the project attracted national media coverage for these events and the release of the EIA reports. In an eventful month, submissions were invited in response to the EIA.

In March 2009, an information centre was opened but attracted little media coverage. This new information centre was weakened because "…not all main stakeholders were on board. The Municipality and the local political parties did not actively use the information centre as a communication channel. Instead they displayed project information separately, in the lobby of their office building" (Brunsting et al, 2011). A website was set up at the insistence of the national government to present environmental information. The website was perceived as containing pro-CCS propaganda because of its lack of opposing views. This meant that there were several "official" sources of information available to the public. Some were more prominent than others and the BCO_2 and website were not trusted because of their association with the project's proponents.

There had initially been a lack of information available to the public. In 2009, there was too much; different sources were providing conflicting and biased information that could not be trusted by the community.

Whilst the community may have been familiar with the extraction of gas from a known gas field, pumping gases back into a reservoir was an alien concept. There was little awareness of the successful Dutch offshore CCS projects, nor the experience in North America from over 30 years of similar projects. Although information was available through a number of sources, sometimes contradictory, there was no attempt made to educate the public, or provide unbiased and balanced information. The communities lack of "familiarity" with, and "understanding" of, the technology and the process further fuelled the OUTRAGE.

Although the technical experts understood the risks well, the community did not. It is difficult to change opposing, polar opinions; so, the proponents understood the risk profile of the project much better than they were able to, or willing to, communicate to the public. With the lack of trust between the parties, this technical assessment would likely have been viewed warily but earlier engagement and, particularly, education may have been able to moderate opinions. This is a situation where the "risk" is significantly greater than the hazard. In this situation, the hazard was very small (according to ClimateWise (2012), the risk of CO_2 leakage rises during the operations of filling the reservoir then rapidly declines post-operations) but the OUTRAGE is significant. The public were concerned about large and catastrophic leaks and gaseous explosions.

Although the risk is low, it cannot be dismissed because the perception of some stakeholders is at odds with the technical assessment. It should be remembered that the community of Barendrecht will need to live with the risk in the longer term. Shell and the national government will not be, living on top of the CO_2 bomb (Feenstra et al, 2010).

In March 2009, the project was deemed to be in the national interest which enabled the national government to impose legislation which allowed the national government to make the final permitting decisions. The EIA was approved one month later. Understandably, the City Council responded by releasing a statement to the effect that their important concerns had not been addressed adequately. Although there were site visits by Ministers, press articles and briefings of the council, little progress was made in the subsequent 6 months during which, it appears, that the national government were hoping that the opposition would wane.

In November 2009, the project was officially approved. The Provincial government still opposed the project and the Municipal government announced its plan to use the legal process to stop the project. A boisterous public meeting, with 600 attendees, was attended by government ministers in December 2009. A 2-year delay to the project was announced. The project was the source of debate in the national government where the opposition

parties, generally, opposed the project; however, the majority of Members of Parliament were in favour. In early 2010, preparations were made for project planning and permissions and in March 2010, the government announced that the project was part of the Crisis and Economic Reform Law which prevented any further legal challenge.

3.6 2010 – the end of the project

In February 2010, the national government resigned (over unrelated issues) triggering an election which was held in June 2010. In April, following critical media coverage, the Dutch cabinet debated the project and was still in favour of it proceeding. However, a final decision was deferred until after the elections.

The media coverage reached its peak during this period, culminating with a peak-time documentary screened on a national television programme. The inflammatorily-titled "CO_2 bomb under Barendrecht" highlighted many of the critical views of the campaign, including the withholding of expert reports, from the decision-making process, which were critical of the project.A new government was sworn in during October 2010 and the project was cancelled 1 month later.

Table 2: Summary of the OUTRAGE factors which impacted the Barendrecht Community

Factor	Feature	Was the factor evident?	Evidence	Comment
Voluntariness	Was the project forced onto the community?	Yes	Terwel et al (2012)	The project was forced on the community
Controllability	Was the implementation and operations of the project under the control of others?	Yes	The changes to the planning processes. Ter Mors et al (2010) Terwel et al (2012)	Control was taken out of the hands of the local representatives and placed with the national government.
Familiarity	Was the type of project unfamiliar or new to the community?	Yes		This was the first time that an onshore CCS was to be developed in the Netherlands
Fairness	Could the project and the planning process be deemed to be unfair?	Yes	EIA Process van der Velden (2009) Ter Mors et al (2010)	There were no benefits to the local community – in fact, there were a number of dis-benefits, including the uncertainty with respect to the storage of gas in a residential area and the impact on house prices. This project was the lastest of a series of large infrastructure projects which had caused significant disruption to this community.
Catastrophic potential	Did the implementation and operation of the CCS facility have the potential to cause a significant number of deaths and injuries at once?	No	ClimateWise (2012)	The risks of CO_2 leakage were deemed to be very low and negligible.
Understanding	Was the project poorly understood within the	Yes	Brunsting et al (2011)	The technical aspects of the project were well understood, by experts.

	community?			There was no meaningful attempt made to educate the community.
Uncertainty	Were the approach and CCS, in general, relatively unknown or are highly uncertain?	No	ClimateWise (2012)	The risks of CO_2 leakage were deemed to be very low and negligible.
Dread	Did the project evoke fear, or anxiety amongst the public?	Yes	Feenstra et al (2010)	Stoked by press articles with titles such as "CO_2 bomb under Barendrecht"
Trust	Did the community mistrust individuals, institutions, or organizations associated with the project.	Yes	Terwel et al (2012)	There was no trust of the proponents. There was trust in Barendrecht council and the activist group CO_2isNee ("CO_2=no"). There were a number of sources of key information, some more trustworthy, in the eyes of the community, than others.
Media attention	Did the project receive considerable media coverage?	Yes	News articles Brunsting et al (2011) Feenstra et al (2010)	The media became increasingly interested, and active, in reporting the project from technical, planning and political perspectives.
Ethical/moral nature	Was the project ethically objectionable or morally wrong?	Possibly	van der Velden (2009) Kuijper (2011) von Egmond (2016)	It was perceived that the CCS solution to emissions was simply treating the symptoms of current industrial processes rather than addressing the root causes of CO_2 emissions.
Human vs. natural origin	Was the project generated by human action?	Yes		This was an industrial process

4 Conclusions

Care needs to be taken when drawing conclusions from any case study in order to avoid Hindsight Bias and misconstrue the causal relationships between events and actors. Barendrecht is often presented as a case where public action led to the cancellation of a significant project with sunk costs in excess of €30million. It is unclear how the public actions and those of the local officials led to the project being cancelled because it was ultimately a political decision made by a new coalition government to overturn the policy of its predecessor. Clearly, a new government has less invested in the projects that it inherits, making it easier to close them. Although the local issues within the Netherlands, including Barendrecht, will have played a part in the election of 2010 and the instatement of a new government, the issues on which the former government resigned were primarily related to foreign policy – the military action in Afghanistan. The primary issues upon which the election was fought were (Aarts & van der Kolk, 2010):

- Economy,
- Taxation,
- Social Policy.

To complicate matters, the incoming government was a coalition, so there may have been some issues, including Barendrecht, which would have been discussed, and actioned during the negotiations. These factors make it difficult to establish that the ultimate decision was as a result of public action, media coverage and local political support for the community. They certainly raised the profile of the project and would have contributed in some manner to the cancellation of the project – it is just the significance of these factors which uncertain.

However, there are some important lessons from reviewing the project:

1. The proponents' perception of the project was not shared by the community

The approach of Shell and the national government, to consider the project as, primarily, one to test and evaluate the legislative and regulatory processes involved in the funding, operation and safety of the CCS in an onshore environment, was, in all probability, one which led to the delays and the ultimate demise of the project. This perspective excluded, or at least marginalised, the community as a stakeholder. This directly created the impression that the project was being forced upon the area with no opportunity influence the project. If one single issue (other than policy) led to the cancellation of the project, it is this one. This approach led directly to many of the subsequent issues which materialised as community OUTRAGE and enabled the public opposition to mount its attack.

2. Transparency in the planning process

The public believed that the planning process was unfair and that the proponents had too much control over decision-making (Ter Mors et al, 2010). A less opaque process may have allowed for public participation and involvement in decision-making.

The government's decision to claim the project was in the national interest, and therefore changed the licencing process, was a major error. It reinforced the perception that there was no choice in the matter – it was being forced upon the Barendrecht community. It also placed the local authorities in a position where they could legitimately exploit the changes and the unfairness of the process.

This aspect of the project features three factors of OUTRAGE which increased the activity and opposition to the project. Those three factors are:

- Voluntariness - the project was seen to be forced onto the community,
- Fairness - the planning process was unfair,
- Controllability - the project and planning process was controlled by others.

3. The community's view of risk differs from that of experts

The OUTRAGE felt and expressed by the community was underestimated and misunderstood by the proponents of the project. It is only necessary for some of the factors of outrage to be present to encourage a group to action. In this case, there were many factors in evidence and these appealed to a diverse range of actors who became mobilised in opposition to the project.

4. There was no trusted source of information

Information was available from several sources which were in disagreement. This, and the lack of a trustworthy and comprehensive source led to mixed messages being delivered to the public. This hindered the community gaining an informed understanding of the project and enhanced the distrust in the project – both fuelling OUTRAGE. The presence of conflicting information may polarise opinions, but this does not appear to have been the case in the Barendrecht community, where the majority opinion remained consistently opposed to the project.

5. No attempt was made to educate the stakeholder groups

There was no real attempt to educate the community regarding the nature and technical approach to the project. The technical approach and CCS in general were unfamiliar to the general community, because this was the first onshore CCS project in the Netherlands. Presenting experiences from offshore projects and from North American experience may have addressed some of the community concerns. However, there was no trusted, independent body created or engaged to put forward balanced arguments. An education programme would have reduced a number of the OUTRAGE factors:

- Familiarity,
- Understanding,
- Uncertainty,
- Dread.

6. Local representatives are more trusted than more distant ones

The Barendrecht community had greater trust in the local representatives, local council and authorities, than in the national government (Terwel et al, 2010) and Shell. In the case of Barendrecht project, the local administrations had their powers eroded by decisions at the national government level to change the status and legislated planning process. This highlighted the imbalance in power between the parties and increased the distrust for the more distant authorities.

7. Discussions regarding compensation may have reduced the OUTRAGE

The community were legitimately concerned that the value of houses would fall as a result of the CCS Scheme. This was not the most important factor, but no attempts were made to discuss options for compensation. It was found that compensation could be an effective method of gaining public support for controversial projects (Zaal et al, 2014). However, this would need to be addressed in balance with other issues in the Barendrecht community. This could help with the perception of unfairness.

The re-visiting of the Barendrecht project as a case study, and applying a news lens, highlights the inadequacy of following a standard approach to risk management and stakeholder engagement. This will be the subject of a thesis to be submitted for the award of PhD.

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