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COMPARING AMOCO-CADIZ AND EXXON VALDEZ CLEANUP COSTS

Jean-Baptiste HENRY¹

ABSTRACT

What millions really buy ? The cleanup costs by T are 100 times higher for the Exxon Valdez (1989) than for the Amoco Cadiz (1978) : 50 000 \$ versus 545 \$. Hypothesis is made that the strategy and goals of the polluter are more important than the characteristics and the impact of the pollution itself.

INTRODUCTION

The worst coastal oil spill ever to hit Europe and the worst one in the United States were caused, eleven years apart, by two powerful American corporations : Amoco, which polluted Brittany with 220,000 tons of oil from the Amoco Cadiz in 1978, and Exxon, which polluted the shores of Prince William Sound with the 40,000 tons of oil from the Exxon Valdez in 1989.

Especially surprising in France and in Europe was the extraordinarily high cost of the cleanup of the Alaskan coast. Limiting the inquiry to the expenses of the few months of emergency cleanup, the Amoco Cadiz cost \$126 million, while the Exxon Valdez seems to have cost more than \$2 billion - about twenty times more, but for a spilled cargo six times less ! Per spilled ton, the cost of the cleanup of the Exxon Valdez is 100 times higher ; \$ 50,000 per ton vs. \$545 for the Amoco Cadiz.

The object of this report is to consider the reasons for this disparity. Given my lack of detailed information concerning the costs of the Exxon Valdez spill, however, it is necessarily more of an outline of the areas for inquiry than a detailed analysis.

The following chart lists the principal factors which might explain the differences. A plus sign (+) in the Exxon Valdez or the Amoco Cadiz column indicates that this factor resulted in a relatively higher cleanup cost in the one case than in the other. An

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equals symbol (=) indicates that the given factor would not have had significant impact on cost differences.

Possible reasons that the per-ton cleanup cost for the Exxon Valdez is 100 times greater than for the Amoco Cadiz.

	EXXON VALDEZ		AMOCO CADIZ
1. Time factors 1978-1989			
- inflation	+		
- cleanup techniques		=	
- awareness of damages	+		
2. Nature of the pollution			
- distance from the coast		=	
- season		=	
- amount spilled			+
- viscosity	+		
- toxicity			+
3. Géographical Factors			
- climate	+		
- isolation	+		
- ease of access	+		
- spread of the pollution	+		
- population			+
- natural resources	+		
4. Institutional factors			
- advance preparation	+		
- organizing entity	+		
- market intervention	+		
5. Political factors			
- risks for the polluter			
of the cleaner	+		
- available resources			
for the cleanup		=	
- cleanup results targeted		=	

It appears that the differences in costs may result from two types of factors, first, there is the pollution itself, its nature, its extent, the milieu in which it occurs, and the natural resources which it damages or threatens. Second, there are the cleanup strategies, the means used, the objectives pursued, and the level of efficiency sought. However the time factor must be considered separately.

1. The time factor

The eleven years which intervened between the Amoco Cadiz and Exxon Valdez catastrophes influence their respective costs. Inflation thus must be taken into account. On the basis of United States domestic price increases of roughly 80 % since 1978, the Amoco Cadiz costs would equal \$980 per ton in 1989 dollars.

While one might hypothesize that cleanup techniques would have undergone radical change during the eleven year period, to my knowledge that has not been the case. What I saw in May and June 1989 on the Alaska coastline was not very different from what I observed in Brittany in 1978, or even 22 years ago during the 1967 Torrey Canyon oil spill.

Awareness of the risks associated with oil spills, on the other hand, has undoubtedly increased during this time period. The security and the protection of the environment seem more highly valued in 1989, implying a willingness to devote greater resources to cleanup and to the restoration of the polluted areas today.

2. Nature of the pollution

The Amoco Cadiz and Exxon Valdez oil spills both occurred near the coast, and at the same time of the year, late March. However, the amounts spilled were different (220,000 tons vs. 40,000 tons). The nature of the polluting oil was also different. The North American crude was stickier, more viscous, and therefore more difficult to clean than the Middle Eastern oil spilled by the Amoco Cadiz. The Amoco Cadiz cargo, however, was more aromatic and therefore more harmful to marine life.

3. The geographic factor

It is obvious that there are large differences between Brittany and Alaska in this context, whether it be a question of climate, relief, geographical position, natural sites, or population. Such factors relating to physical or social geography contributed to aggravate the consequences of the pollution and to make dealing with it more difficult in Alaska.

Thus, although the amount spilled was six times smaller, the Alaskan pollution, due to relief and currents, nonetheless spread across a distance six times greater (1,900 kilometers instead of 300). The topography, combined with the very low density of population and infrastructure, posed very serious problems of access to the polluted coastline, with the result that everything and everyone necessary for the cleanup had to be transported by air or by sea. The isolation of Alaska also contributed to increasing the costs of the transportation of supplies, equipment and workers.

The Breton coastline, by comparison, is much more accessible, with an access way to the shore virtually every five hundred

meters. All along the coast there are villages and cities, ports, roads, lodging places, etc.

Geographic factors also influence the nature and value of the resources threatened by the pollution, creating in turn a greater or lesser vulnerability of the coastline. But how is it possible to judge what is worth more, as between a very densely populated (close to 100 inhabitants per square kilometer) and very human-oriented Breton coastline, and the Alaskan coast, with virtually no human population, but rich in fauna ?

4. The institutional factor

The question here is how differences in the organization of the cleanup operations may have affected their costs. In the case of the Amoco Cadiz, a third party, not the polluter, took charge of the cleanup. The French national government, through its various bureaus and officials, coordinated the cleanup in liaison with local governmental authorities. Financing came principally from the national budget, with additional funds from the local governments. The cleanup work was done almost exclusively by existing governmental entities (notably the Army) and personnel already in place in those government entities.

In Alaska however, it was the polluter, Exxon, which took direct responsibility for the cleanup. This effort was organized within the framework of private economics, financed and directed by Exxon, but, if I have understood correctly, under the supervision of various agencies of the federal government and of the government of the State of Alaska. Consistency of action may have felt the effect. The fundamental point with respect to all costs is nevertheless that Exxon, by investing and creating jobs, actually in some measure created for a few months a new sector of activity in Alaska. In France, on the other hand, the cleanup was for the greatest part achieved through use of preexisting entities and infrastructures, with minimal recourse to the market.

5. The political factor

The various factors discussed thus far cannot in fact explain by themselves the total costs committed for the cleanup of oil spills. In objectively identical situations of pollution, the cleanup costs may be very different because the willingness to pay of the polluter or the organizer of the cleanup is not the same. Each such catastrophic event arises in a context which influences the cleanup policy, the decision to dedicate this or that amount of resources to it, and to carry the cleanup efforts to a certain determined level. The comparison here between the Amoco Cadiz and the Exxon Valdez is particularly revealing because the conduct of the two big American companies concerned was very different. But, first, was Amoco more innocent than Exxon ? The Amoco Cadiz, through a shell company in Liberia, sailed under that country's flag, an action designed to allow the true owner to escape from liability, as the Court of Appeals in Chicago recognized as much in 1983 : the

Liberian registry having "been obtained no doubt for the not too creditable purpose of avoiding liability, rather than to conduct business in or from Liberia " Amoco's guilt was all the greater in that, although it was aware of defects in the steering gear (the ultimate cause of the accident), it had deliberately delayed the necessary repairs so that it would not lose the \$28,000 per day which it made by chartering the tanker to Shell ! However, in spite of these aggravating circumstances, Amoco has not had one word of apology to the victims of its negligence. Amoco has not spent one cent for the cleanup of the Breton coasts. Worse still, twelve years after the fact, Amoco has not yet paid a penny of damages or reimbursement to its victims !

Exxon, in contrast, has spent in the billions to clean the coast of Alaska. But was this solely to combat the pollution and its effect on the coastline ? If one may credit an interview of Exxon's CEO Rawl, in the May 1989 issue of Fortune, Exxon was hoping at the same time to clean its own tarnished public image : "we are going to demonstrate that Exxon is trust worthy". Exxon also tried to demonstrate that the opening of new oil fields in fragile areas could, if adequately supervised, be without any irreversible consequences to the environment : "a "super job" of cleaning up, he hopes, will overcome Congress new coolness to Artic exploration ..."

Amoco had neither these constraints nor these risks, having for its victims foreign citizens in a country in which it had no financial interest, no ongoing business, and not even any reputation to protect. The Amoco group thus adhered to a strict policy of incurring the lowest possible cost.

CONCLUSION

1. There is no standard, scientific definition of what constitutes a good cleanup or an efficient cleanup. This is due in part to the uncertainty and the lack of definite knowledge concerning the short, medium and long term effects of an oil spill on the coastal and marine environments. It is also in part due to slow advances in cleanup technologies and to uncertainties concerning their impact on these environments.

Nobody being clear about what is clean, the level and the vigor of the cleanup effort result therefore from a compromise among the different actors having a role : the spiller, the government, the coastal population and public opinion. Depending upon the balance among these actors you may get a first rate cleanup, a second rate job, and so forth, all the way to no cleanup at all if nobody is there to demand one.

2. The primitive level of cleanup technology, and the mediocre level of knowledge about the impacts, contrast markedly with the high level of financial resources available to the oil industry. But it is precisely because it is so powerful that the oil industry is able to escape from what should be its duty and its responsibility. Many countries are not big enough to argue with it ; even the most powerful among them are led to compromise. It is true, yet, that coastal activities and environment dont weigh heavy compared to

the energy side of the problem. This explains why the national and international agreements on the limits of liability set amounts which are ridiculously low. For the Amoco Cadiz in 1978, the framework of the Civil Liability Convention (C.L.C.) would have limited Amoco liability to \$ 17 million. During trial at Chicago, Amoco argued that its liability should be limited to the value of the petroleum cargo spilled. The liability ceiling of the International Oil Pollution Convention (I.O.P.C.) Fund was recently assessed at \$ 79 million, but this figure too is far from covering all likely needs including, for instance, response costs, natural resource damages and economic losses.

3. The insufficiency of the guaranty funds oblige oil spill victims to engage in complicated, costly, time consuming and uncertain legal procedures. These victims not only receive no indemnity after the catastrophe ; to the contrary, their resources have to be spent on proving that they have suffered damage. Our experience in the Amoco case is illuminating : more than twelve years later, we have nothing more than a provisional judgment awarding us \$20 million in damages (with interest), but we have had to spend very nearly that much to achieve that result. And this year again, each resident of the polluted area must still pay an annual tax of 15 Francs to finance the ongoing case against Amoco. Victims of the oil spill, we become moreover victims of "the inadequacy of the federal Forum" (F. Mac Garr presentation, yesterday).

4. Finally, what must be done ? Based on my preceding remarks, I believe that the following possible remedies exist.

From the legislative point of view, nations should act within an international framework, with the support of public opinion, to impose on the oil industry unlimited strict liability for accidents. If liability limits must exist, the burden must be placed on the polluter to demonstrate why one should be applied in a given case.

From the scientific point of view, there must be better analysis of the effects of oil spills and the damages they cause. This will require cooperation among, notably, biologists, geomorphologists, chemists and economists.

When the uncertainties have been lessened from these two points of view, it will become easier to administer cleanup operations and to conduct them more efficiently. Especially, the oil industry, once it knows that it will have to pay the total costs and damages linked to pollution, will be motivated to take new precautions to reduce the risks of new accidents.

If, on the other hand, we continue on the current path of undervaluation of damages, the number of accidents may well grow, and the cleanup will remain more or less a program of public relations and experiment. At the limit, given that for the Amoco Cadiz pollution of 220,000 tons of crude oil over 300 kilometers (about 180 miles) of coastline, a judgement held that there were only \$8 million in damages beyond the actual costs of cleanup, at the limit, one may wonder whether it's worth the trouble to cleanup the spill.