

Major Chemical Accidents in Industrializing Countries: The Socio-Political Amplification of Risk

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Accidents in the chemical industry, such as those that took place in Seveso (1976) and Bhopal (1984), may kill or injure thousands of people, cause serious health hazards and irreversible environmental damage. The aim of this paper is to examine the ever-increasing risk of similar accidents becoming a frequent occurrence in the so-called industrializing countries. Using figures from some of the worst chemical accidents in the last decades, data on the Bhopal disaster, and Brazil's social and institutional characteristics, we put forward the hypothesis that present social, political and economic structures in industrializing countries make these countries much more vulnerable to such accidents and create the type of setting where—if and when these accidents occur—they will have even more catastrophic consequences. The authors argue that only the transformation of local structures, and stronger technical cooperation between international organizations, industrialized and industrializing countries could reduce this vulnerability.

KEY WORDS: Major chemical accidents, socio-political amplification of risk, chemical industry; industrializing countries, industrialized countries

1. INTRODUCTION

Chemical accidents can result from emissions, fires, or explosion of chemicals during transportation, storage or industrial activities, leading to serious, immediate or delayed damage to human beings and/or the environment, and involve one or more chemical substances.⁽¹⁻⁴⁾ They are considered major chemical accidents—even if, as argued by Otway *et al.*,⁽⁵⁾ the concept of “major accident” is a rather fuzzy one. This article deals only with accidents that have as source stationary activities, that is, storage and industrial production, and those that have occurred in the pipelines. It fails to consider those that take place while chemicals are being transported by road or sea.

Our main objective is to examine the increasing risk of industrial chemical accidents occurring in industrial-

izing countries. It is possible that, in attempting to detect the causes for major chemical accidents, the overriding factor to be considered should be the characteristics of the context where such accidents take place, and this type of analysis could be even more important than considerations on the absolute magnitude of the accident. This certainly applies in the case of major chemical accidents in industrializing countries,⁽⁶⁾ where the specificity of social, political, and economic characteristics should be the subject of further investigation and discussions in the risk analysis field.⁽⁷⁾ As pointed out by Kasperson *et al.*⁽⁸⁾ “. . . the practice of characterizing risk by probability and magnitude of harm has drawn fire for neglecting equity issues in relation to time (future generations), space (the so-called LULU or NIMBY issue), or social groups (the proletariat, the highly vulnerable, the export of hazard to developing countries). . . .” These discussions are of great importance to risk analysis and the notion of socio-political amplification can help us in the understanding of how present social and political structures in industrializing countries have contributed to aggravating risk situations and events.

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