



Accident Analysis Benchmarking Exercise Results of Survey of Seveso Inspectors on Accident Investigation and Analysis MJV Workshop Sweden 2012

Maureen Wood
Major Accident Hazards Bureau



Joint Research Centre
the European Commission's
in-house science service



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Summary



29 answers from 23 different countries

Austria

Belgium

Bulgaria

Croatia

Cyprus

Czech Republic

Denmark (2)

Finland

France

Germany (4)

Hungary

Ireland

Italy

Latvia

Lithuania

Norway

Poland

Portugal

Romania

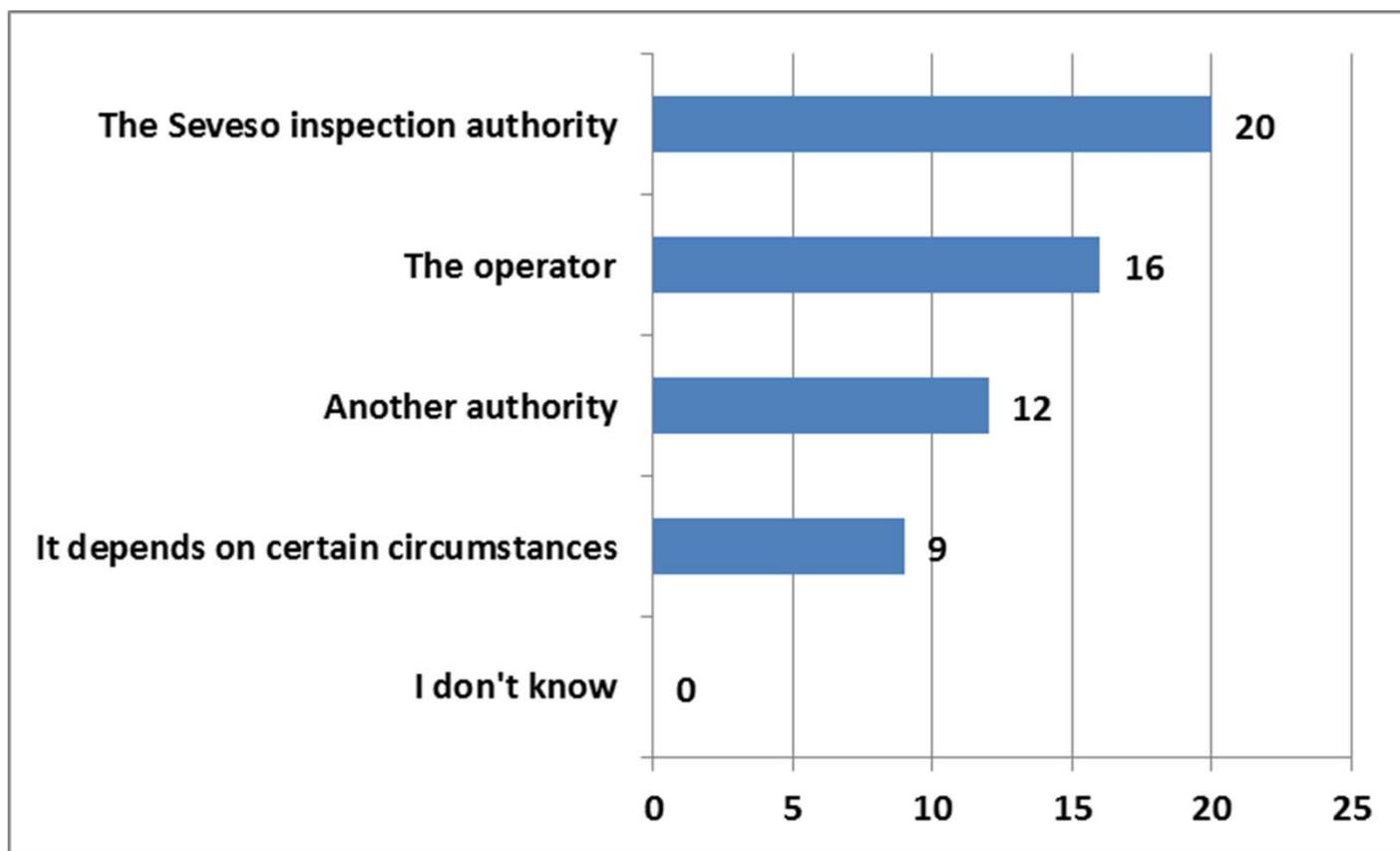
Sweden (2)

Switzerland

The Netherlands

United Kingdom

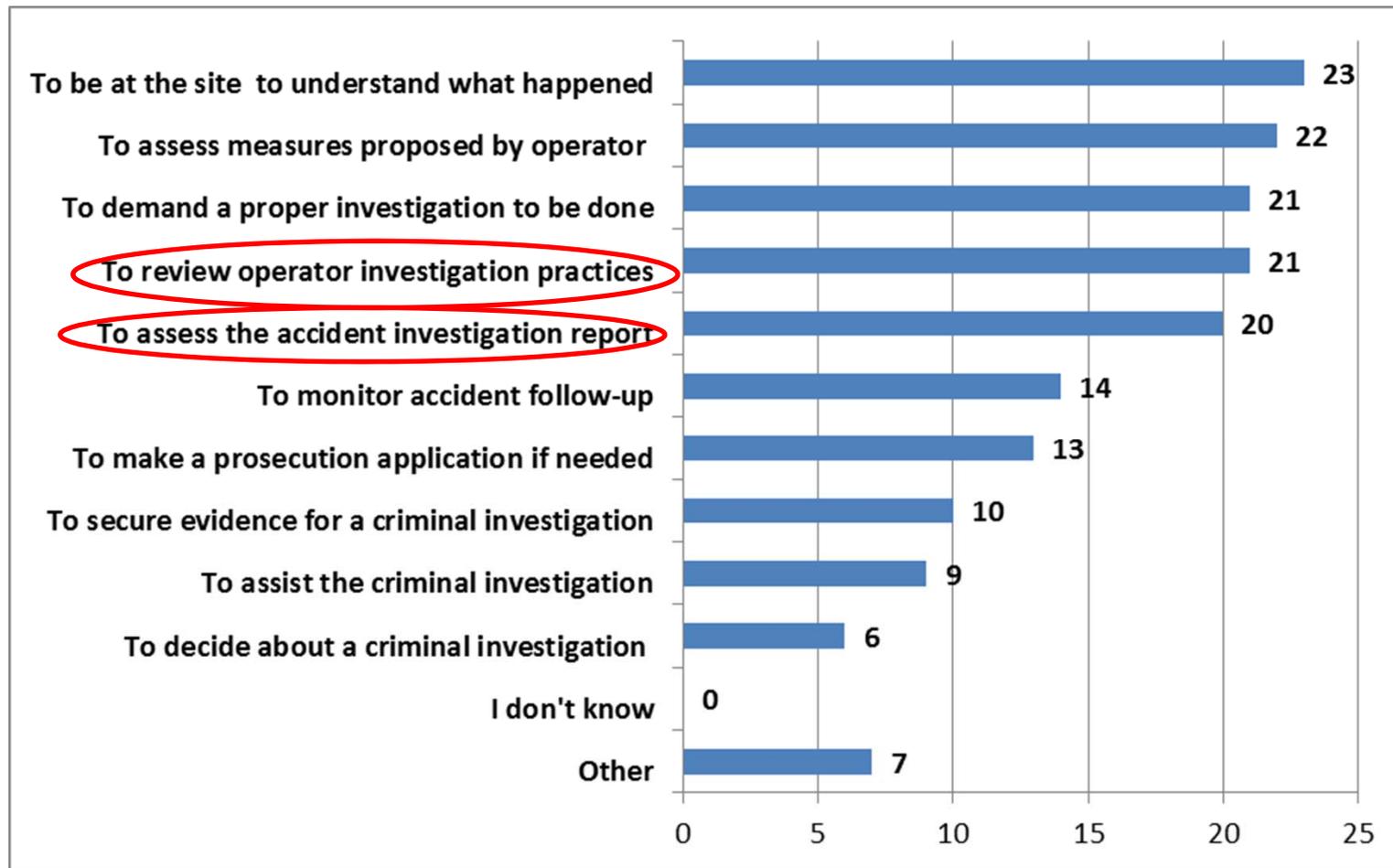
Who conducts investigations?





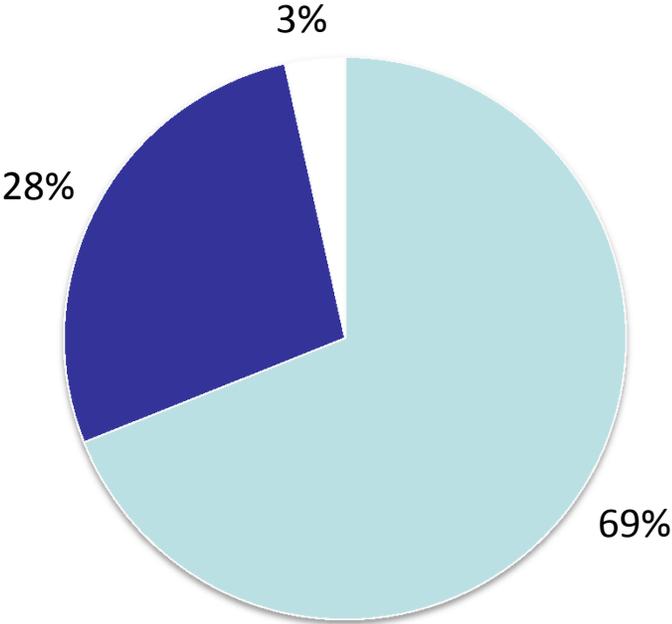
European

What is the role of the Seveso inspector before, during or after an accident?

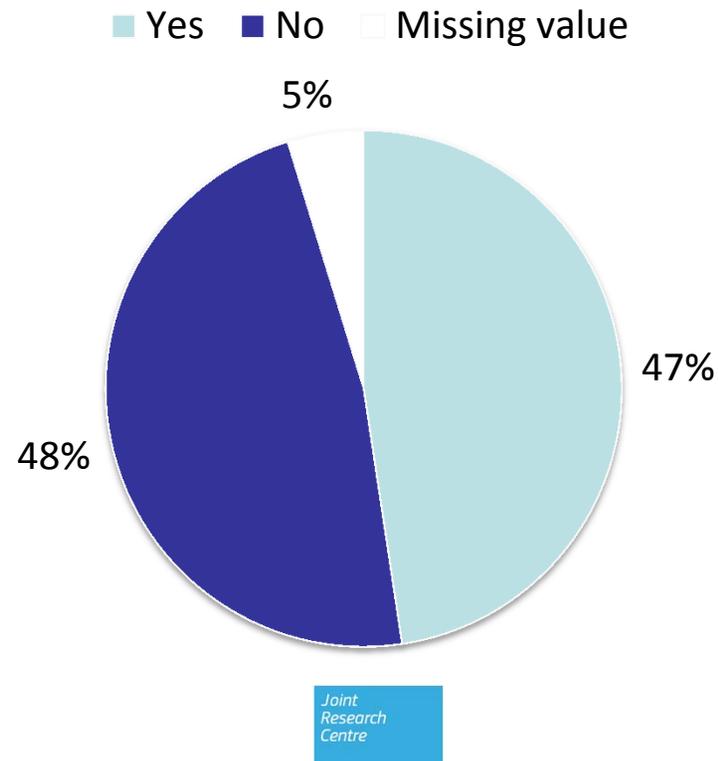


Do you review and quality assess accident investigation reports?

■ Yes ■ No ■ Missing value



Do you feel that you have enough knowledge on accident investigation methodologies to perform the quality assessment? (only the Yes answers from the picture before)





Are there any deficiencies in the investigation reports that are more common than others?

Human factors are often overlooked in favor of engineering issues. Root causes are not always identified. The search for root causes is often not deepened enough.

Investigations are often carried out in an attempt to prevent prosecution or civil claims rather than determining the cause and identifying improvements.

Operator's reports are formal, not enough cause analysis

Deficiencies

- **not detailed description of the accident dynamic**
- **not adequate evidence of the root causes and the management deficiencies behind the direct causes**
- **not use of adequate investigation technique to identify the causes**
- **not adequate evidence of lessons learned per each SMS element**

Are there any deficiencies? continued



The investigation reports are not regulated for a typical major Seveso accident

- detection of latent causes
- detection of system failures

Not all the events leading to the accident being investigated
Lessons learned sometimes are missing or are not specific

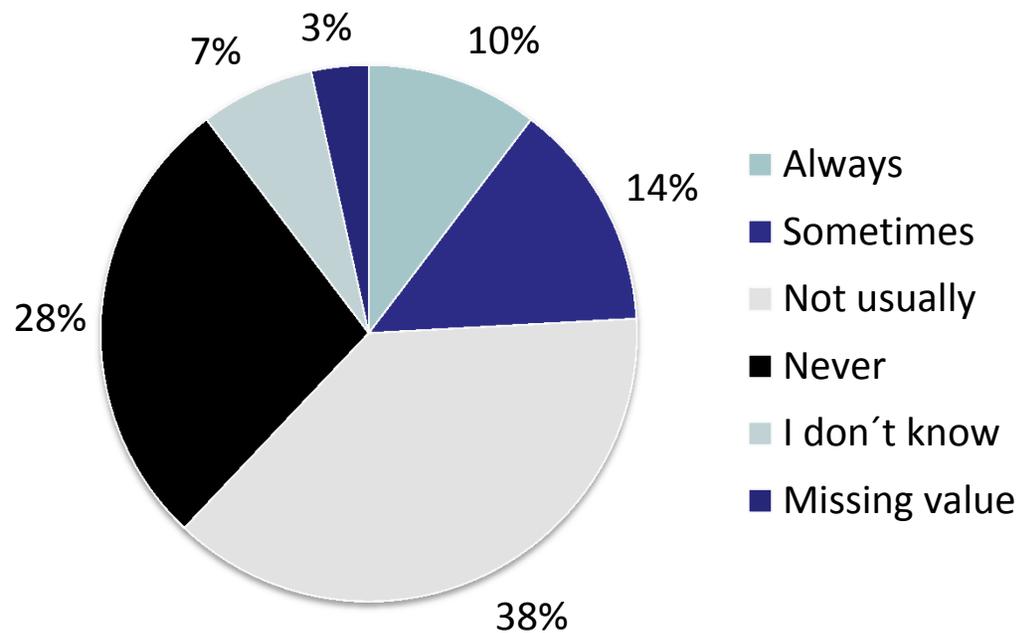
Human factors and organisational failures are often not well addressed.

Mainly technical "single cause" approach.

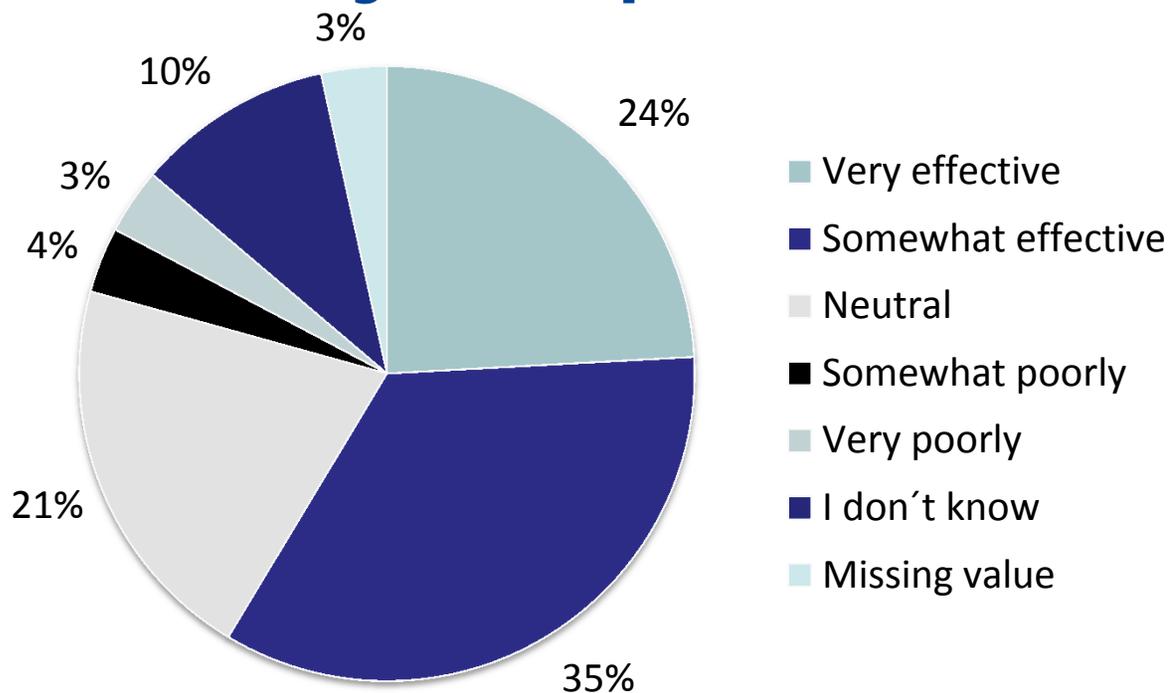
Corrective actions are often limited to the relevant plant or equipment only. A more comprehensive review is rarely done on similar facilities or equipment.



Does your inspection authority (or another inspection authority) make any demands or recommendations on what methods should be used for the accident investigation in case the operator does the investigation?

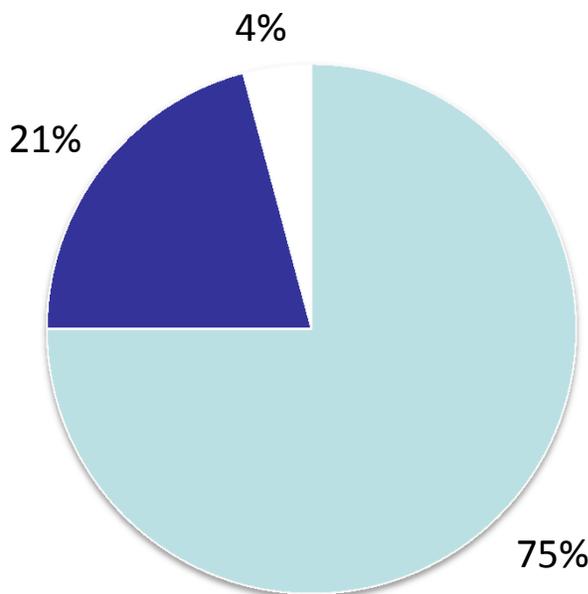


How effective is your country's system for investigating major Seveso accidents in your opinion?

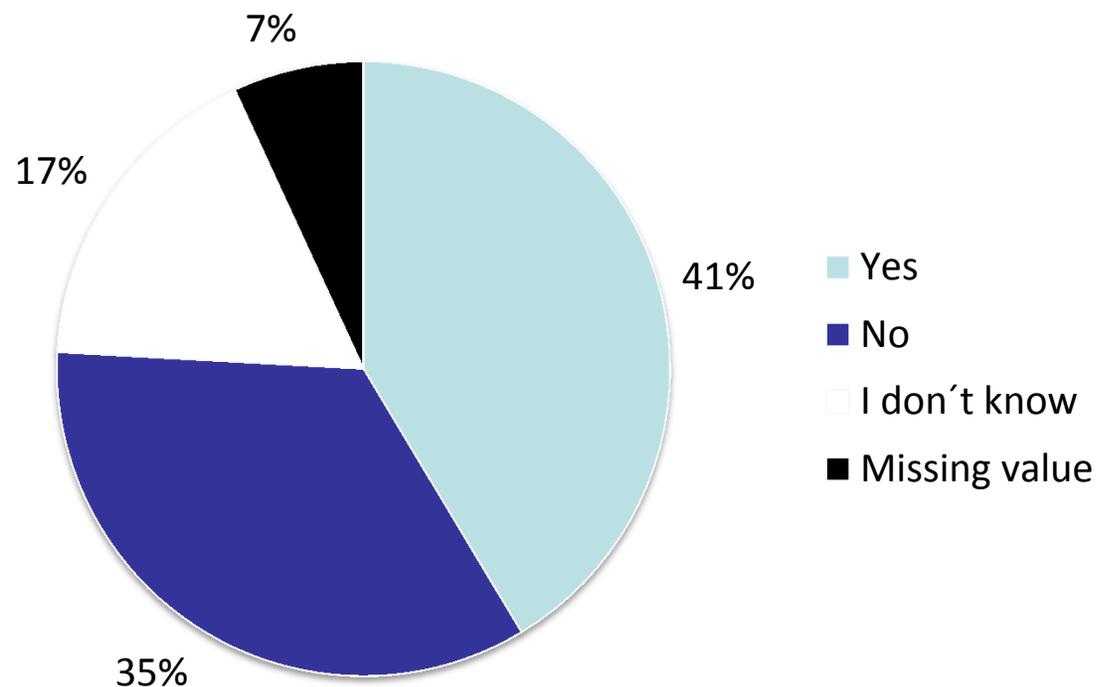


Does your country have a national database for Seveso accidents or for major industrial accidents including Seveso-types? (24 answers)

Yes No Missing value



Do you have difficulties extracting lessons learned from databases?





Do you have difficulties extracting lessons learned from databases? – Please explain

They are not always clear from database fields, the narrative of the accident and the measures is important.

Few information on accident causes are contained in the data bases

Often accidents are reported as "unique" one-off, and it is not recognised that they are repeats of previous events

There is no separate part dedicated to lesson learned in the database, so this information must be included in description part which is not always the case, especially for minor incidents.

Sometimes there are no detailed information on lessons learned, or they are not easy to find, or they are confused with accident causes

Do you have difficulties extracting lessons learned from databases? – please explain

Difficult to find specific and relevant data

Some kind of summery could make it easier to access information.

Takes time, not so well organized database.

Lack of information from operators and police investigation conclusions.



Thank you for your kind attention!

**Please come visit the Minerva web platform for resources on
chemical accident risk reduction**

<https://minerva.jrc.ec.europa.eu/en/minerva>