



JRC Annual analysis of chemical accidents in the media 2017-2018 in the North Africa and Sahel Region

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Chemical accidents in the media worldwide

In 2017, the JRC's Major Accident Hazards Bureau (MAHB) began collecting data on chemical incidents reported in the media throughout the world using EMM alerts and other sources. This work was originally prepared for the OECD Working Group on Chemical Accidents (OECD WGCA), but has been subsequently incorporated into forthcoming publications of UN Environment (the Global Chemicals Outlook) and the Global Assessment of Risk 2019. The study serves to provide an important baseline for measuring the status of chemical accident risk in line with the Sendai Disaster Risk Reduction Framework.

In 2017, MAHB compiled a total of 805 chemical small and large incidents reported in the media, identified through the European Media Monitor (EMM) news briefs. Any incident involving a chemical release on a fixed site, transport, pipeline, or offshore platform is included in the database.

Annual figures for 2018 will be available in April 2019. While OECD countries showed more incidents of chemical releases reported, far fewer deaths per incident occurred in the world's most developed countries, as represented by OECD countries, than in less developed countries (non-OECD countries)

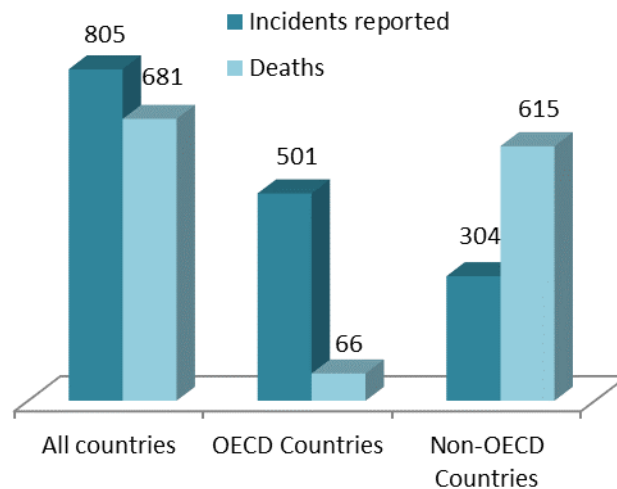


Figure 1 Chemical incidents in the global media, OECD and non-OECD countries – 2017 (JRC-MAHB – March 2019)

Focus on Africa: Chemical incidents in the media in 2017-2018

Figure 2 shows Africa in comparison to other continents showing deaths in relation to GDP in 2017. In total one-third of chemical incidents in African countries resulted in fatalities in 2017, including four incidents where 10 or more people were killed. The numbers also suggest a link between higher economic growth and increased fatalities from chemical accidents in Africa. It is expected that as African countries acquire the capacity to understand and control their chemical accident risk, they will impose targeted measures that decrease it. As Europe and North America show, a rise in fatal chemical accidents is not an inevitable result of economic growth.

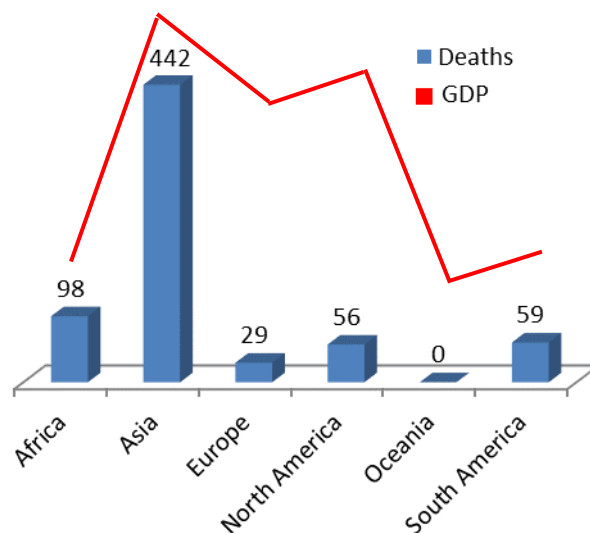


Figure 2 Chemical incidents and related fatalities reported in the media by continent in 2017 (JRC-MAHB - March 2019)

Figure 3 shows the number of incidents reported per country in Africa during 2017 and 2018.

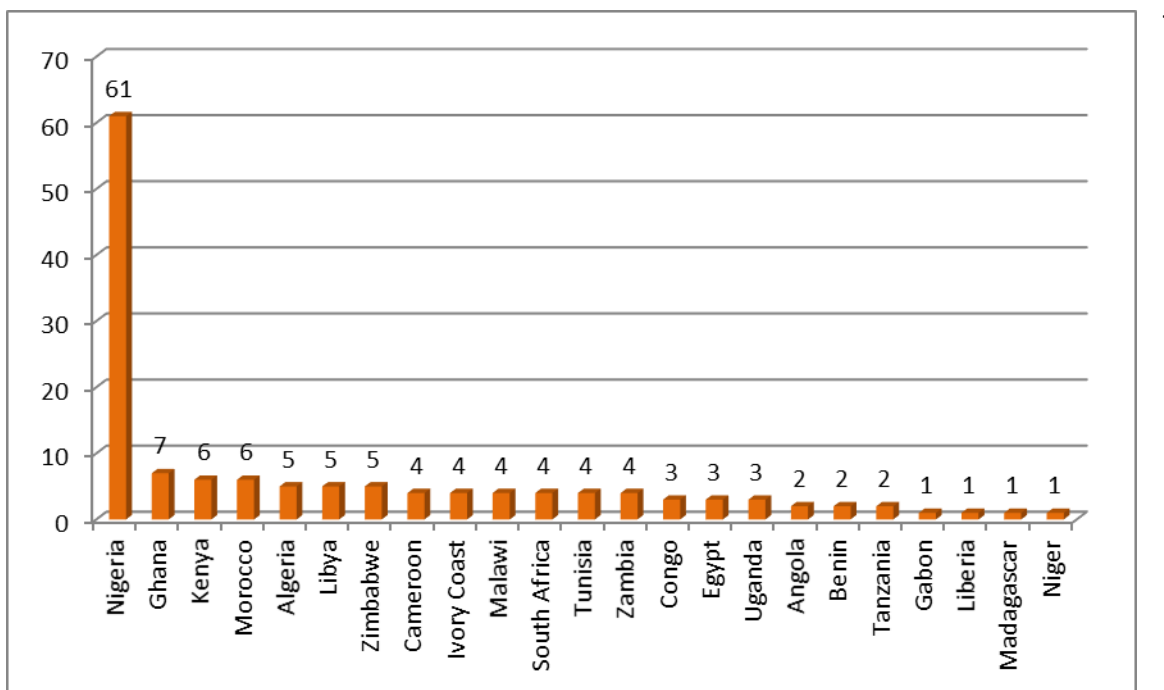


Figure 3 Chemical incidents occurring in African countries as reported by the media in 2017 and 2018 (JRC-MAHB - February 2019)

New developments in 2018 – Analysing impacts of chemical accidents

In 2018, MAHB began classifying incidents in terms of three levels of severity, “no or limited consequences”, “locally serious incident” and “major catastrophe” . These ratings are based mainly on the [European Gravity Scale](#) (0-2, 3-4, 5-6, respectively) but can be increased if there are also exceptional political or economic consequences. The classification of the criteria is shown in the text box at right.

Chemical incidents in the North Africa and Sahel Region in 2018

Of the 7 countries in the North Africa and Sahel region, a total of 21 occurrences of chemical incidents were reported in the media in 2018, as shown in Figure 4.

Local level disaster = 3-4 on the European Gravity Scale =

- 2-19 deaths
- 6-50 serious injuries
- 500 – 50,000 (people x hours) evacuated
- € 2 – 10 million property damage,
- 10,000 to 1 million m³ environment damage
- Politically significant at local level

Major catastrophe = ≥ 5 on the European Gravity Scale (including politically significant at national level)

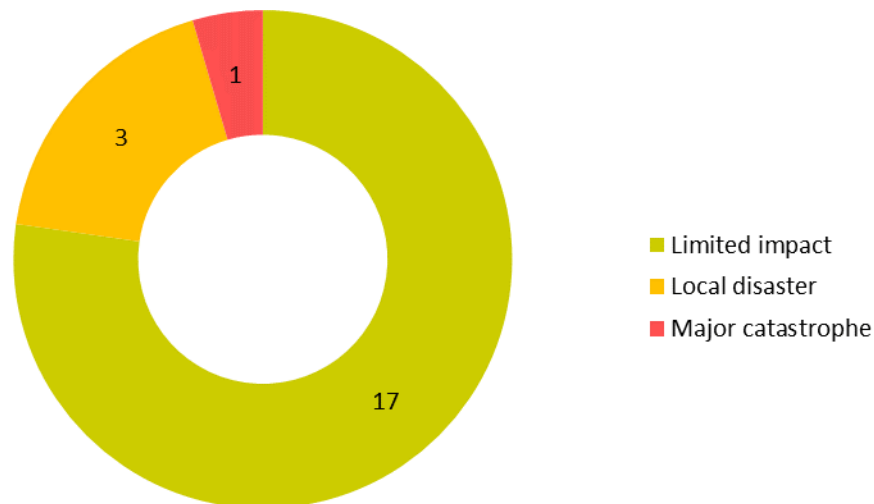


Figure 4 Chemical incidents in the media that reportedly caused either local level disasters or a major catastrophe in the North Africa and Sahel Region in 2018. (JRC-MAHB, March 2019)

Of these, three incidents had serious impacts at the local level:

- Explosion of a gas pipeline on the East-West highway, between Baraki and Sidi Moussa, Algeria, on 17 September created a fireball and caused the death of three people. The incident touched the pipeline transporting liquefied petroleum gas, especially propane and butane, from Algeria to Blida, 50 kilometers west of Algiers. The gas supplied to the pipeline was closed but the fire was ignited by the remaining gas along a 12 kilometer stretch. (<https://www.maghrebvoices.com>)

- On 21 September, at least 30 houses and shops were burnt down in in the Suleja Local Government Area of Niger State after a petrol-laden tanker exploded. The incident occurred on Thursday evening after the brake of the tanker failed. The tanker was said to have collided with three vehicles before it rammed into the shops and exploded. (<https://worldview.stratfor.com/>)
- In Safi, Morocco, a leakage of toxic chemical gases (possibly sulphur dioxide) from a nearby chemical compound over three consecutive days in August was suspected as the cause of respiratory difficulties reported by numerous residents during that period. (www.hespress.com)

National chemical disaster - Libya

On 14 June 2018, armed forces in Libya seized two vital oil export terminals, held by Khalifa Hifter's Libyan National Army in Libya. The National Oil Company (NOC) confirmed catastrophic loss of product at its Ras Lanuf terminal from a fire that destroyed two storage tanks and warned that an environmental disaster could ensue if adjacent tanks also caught fire. The attack led the NOC to evacuate its workers, and shut down all four of its terminals, halting exports following a declaration of “force majeure”. The operator noted in a statement that prolonged shutdown could lead to increasing loss of production as well as loss of degradation of product already in storage, degradation of tanks and pipelines from damage and lack of maintenance, resulting in potentially widespread environmental contamination, and a substantial hindrance to recuperating productivity once operations were restored. The so-called Libyan National Army (LNA) retook control over all eastern oil ports on June 22, but the terminals remain closed another 2 weeks, re-opening on 11 July 2018.

In December 2018 it was reported that local tribesmen took over the Sharara oil field risking shutdown and loss of production of 315,000 barrels/day. This event came on the heels of severe flooding that temporarily shut down all four of Libya’s oil terminals, although they eventually re-opened. Libya is struggling to restore its production to pre-war levels of 1.6 million barrels/day. Libya currently produces little more than half that.

The Libyan oil terminals have been under attack several times since 2011, including December 2014 and January 2016 when tank fires resulting from armed conflict induced substantial economic losses and also threatened environmental disaster. (<https://worldview.stratfor.com/>)

Industry sector and type of hazard source

Figures 6 and 7 provide an indication of the type of industry and hazard source of chemical incidents reported in the North Africa and Sahel Region countries. There are only slightly more incidents associated with the oil and gas industry than with chemicals. Most of the incidents also were reported to occur in fixed locations. This experience differs somewhat from other regions notably the African Atlantic Façade where incidents are dominated by oil and gas with a high number occurring in transport.¹

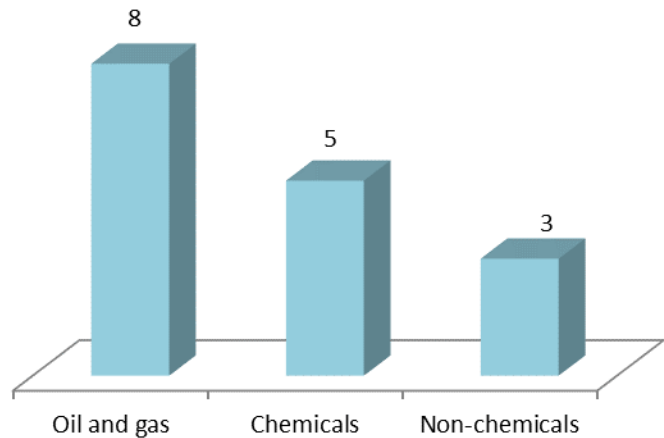


Figure 6 Chemical incidents in the North Africa and Sahel Region as reported by the media by industry (JRC-MAHB, March 2019)

Update in 2019

In 2019, so far two incidents have occurred in the North Africa and Sahel Region.

- On January 14, an explosion occurred in the Silmiyiri neighborhood of Ouagadougou, **Burkina Faso**, leaving at least one person dead and several more injured. According to preliminary reports, the explosion was caused by the detonation of explosive material used in mining operations. (<https://www.garda.com>)
- On 25 January a tanker laden with diesel caught fire along the Lagos-Benin express way in Ugbowo, **Benin**, where the driver of the tanker was burnt to death. The accident occurred opposite the University of Benin Teaching Hospital (UBTH) and slowed traffic for several hours (www.vanguardngr.com).

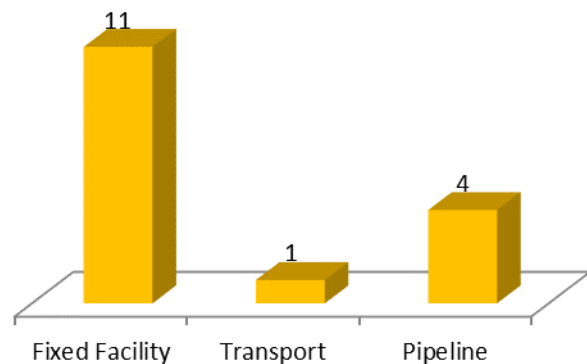


Figure 7 Chemical incidents in North Africa and Sahel Region countries as reported by the media by hazard source (JRC-MAHB, March 2019)

¹ Wood, M. 2019. JRC annual analysis of chemical accidents in the media 2017-2018 in African Atlantic Façade Countries and Nigeria.