Synthesis of select results from the UN/OECD joint survey conducted by

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Overview

- Survey participation
- Findings from select survey questions
- Conclusions

Participation

- Distributed by UNECE (secretariats to Industrial Accidents Convention, GHS, TDG), IMO, OECD, UNDRR Regional Office for Arab States, EU Joint Research Centre
- 101 submissions: English-75, Arabic-9, Russian-9, French-4, Spanish-4
- 66 submissions contained usable data totaling to 628 pages of data
- Respondents from
  - 43 countries: Algeria, Argentina, Australia, Belgium, Brazil, Bulgaria, Canada, Chile, China, Costa Rica, Croatia, Cyprus, Czech Republic, Estonia, Finland, France, Germany, Hungary, Ireland, Italy, Korea, Lebanon, Lithuania, Malta, Mexico, Montenegro, New Zealand, Norway, Philippines, Poland, Portugal, Republic of Moldova, Romania, Russian Federation, Serbia, South Africa, Sweden, Switzerland, Tunisia, United Kingdom, United States, Uzbekistan, Yemen; & the European Union
  - 5 UN regions covered with 65% of countries from Europe
- Authorities: Customs, Civil Protection, Defense, Development, Economic Affairs, Emergency Situations, Environment, Fire, Food, Health, Labor, Maritime, Port, Trade, Transport
- Academia & industry

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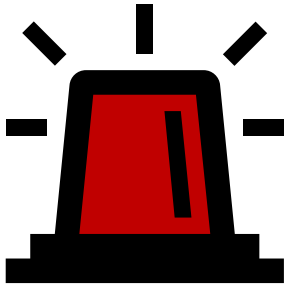
Actions prompted by Beirut explosions



- Responses indicated 30 countries took actions
- Examples of recurring actions
  - Inspected facilities with AN (incl. AN-based fertilizers) to ensure compliance
  - Followed up with non-compliant storage facilities & suspected irregularities
  - Initiated media discussion (incl. how COVID-19 impacts such accidents)
  - Awareness-raising; local communities raised concerns at facilities
  - Established expert groups for AN management, risk investigation in ports & recommendations
  - Triggered need for inventories in storing & transporting hazardous substances

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National laws & regulations

- Responses indicate most countries apply multiple international instruments & have national legislation & regulations that address hazardous substances; many have specific regulations for AN
- Some countries divide regulations & governance of hazardous substances between national, sub-national & local levels; ensuring national harmonization was a challenge in certain countries
- Relevant rules were reported under customs, economic, environment, occupational safety & health, port, security, trade & transport legislation, & under building & fire codes
- Threshold quantities were often reported as triggering more stringent requirements for safety measures when storing, handling & transporting AN

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‘Intermediate’ & ‘temporary’ storage

- No common definition or time-period
- Hazardous substances are often in such storage when classified, labelled, transported, traded or confiscated
- Some determinants of when rules or exclusions apply:
  - Location
  - Storage duration
  - Properties of hazardous substance or mixture
  - AN threshold quantities
- Respondents identified need to remove hazardous substance from ports as soon as practicable and deliver them just before loading

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AN risk management in ports & beyond

Good practices

- Limit quantities of AN per vessel within ports
- Have water & pumping facilities available to fight fires at loading stations
- Ensure port workers are aware of risks & regulations
- Conduct preventative checks & regular trainings for port workers

Lessons Learned

- Ensure sufficient information is provided with dangerous goods
- Companies to have emergency response teams – not rely only on firefighters
- Different industries that use AN have different technical knowledge

Challenges

- Assess why AN detonates in some situations but not others
- Manage AN residue from loading areas in ports or customs areas
- Build workers' technical capacities
- Improve marking of containers holding hazardous substances

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Hazard classification & labelling

- Most countries use international agreements & standards to classify & label hazardous substances
- Various regulatory domains have classification & labelling requirements: economic/market, labor, customs, trade, transport, environment & public safety
- AN classification is required at different times in different countries (e.g. when sold, imported, used in a workplace, stored long term)
- Testing provides information for classification, understanding resistance to detonation & to know which rules apply to ensure safety
- Additional tests of resistance to detonation are required in some countries for long-term AN storage at threshold quantities or when imported
- Some respondents emphasized importance of having sufficient information on safety data sheets, including for incoming shipments

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Trainings

- Most respondents reported legal requirements for training workers at sites with AN
- Training varied per country but covered how to work at a site, safety & security management & emergency response
- Some respondents indicated the nature & frequency of trainings should correspond with the hazards & risks of their tasks
- Major Hazard Facilities were sometimes reported as requiring detailed training, incl. involvement with emergency services
- Some countries have rules requiring undertakings to appoint a certified safety advisor, who must ensure safety & compliance with laws & regulations

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Inspection practices

- Various authorities conduct AN inspections at the national, sub-national & local levels
- Frequency of inspections depends on the site's major accident hazard potential, the threshold quantities met, previous inspections & corrective actions taken
- Some respondents indicated unplanned inspections may be conducted based on accidents, employee complaints, referrals
- Different national inspection tools & checklists exist
- Some respondents indicated using risk-based approaches to inspections
- Checks include inspecting testing, labels, safety distancing, licenses, permits & security seals
- Challenges reported include untrained workers, labels not representing all products, expired extinguishing mediums & low fire hydrant pressure

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Land-use planning, siting & risk assessment

- Many respondents indicated land-use planning & siting is governed by national or sub-national authorities, but administered at local level
- Rules commonly apply to the development of a new hazardous installation, modification of an existing one or installations near populated areas
- Recurring requirements include:
  - Zoning to keep installations away from populations
  - Public safety & notification near installations
  - Protection of nature near installations
  - Distancing from explosives
  - Security assessments
- Several countries have guidance for land-use planning or distancing
- Suggestion to review new technological developments based on the risks surrounding AN, specifically of the toxic vapor produced during AN decomposition

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Information to & participation of the public

- Many respondents cited national requirements to inform the public of major accidents that could affect them & for public participation in land-use planning, licensing & emergency planning
- Most countries have specific requirements for Major Hazards Facilities (MHFs)
- Examples of good practices
  - Regularly communicate & consult with nearby land use owners & neighbors of MHFs, incl. to provide them information on hazards & emergency preparedness
  - Inform local emergency responders of AN locations, quantities & storage types
  - If a port stores or uses hazardous substances, notify the public of the risks & mitigation measures & inform them during & after emergencies
  - Publish information on MHFs & ports containing hazardous substances
  - Conduct public consultations on land-use planning
- In providing public information, security should be considered

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Ensuring effective accident preparedness

- Port authorities are often responsible for emergency preparedness in port areas
- Industry/operators are often responsible for emergency preparedness at their hazardous installations & for internal contingency planning
- Public authorities are often responsible for external contingency planning
- Contingency plans commonly include emergency management, workers' tasks, information exchange, public notification & international cooperation
- Operators are often required to conduct drills to test contingency plans, enhance preparedness & improve cooperation
- Some countries have cross-border emergency plans for dangerous goods
- Challenges include communicating with local communities during accidents & local authorities not having resources to test contingency plans

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International notification & assistance

Widely used international & regional notification systems

- UNECE Industrial Accident Notification (IAN) System
- Global Disaster Alert & Coordination System (GDACS)
- EU Civil Protection Mechanism has several relevant tools
- Alert systems under river basin commissions

Widely used international & regional assistance mechanisms

- UN Disaster Assessment & Coordination (UNDAC) team
- UNEP/OCHA Joint Environment Unit's Environment Emergencies Roster
- UN International Search & Rescue Advisory Group (INSARAG)
- WHO Emergency Response Framework
- NATO Euro-Atlantic Disaster Response Coordination Centre (EADRCC)
- EU Common Emergency Communication & Information System (CECIS)
- Global Congress on Chemical Security & Emerging Threats networks

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Select suggestions to enhance AN risk management

- Enhance knowledge on different AN types, especially its behavior in fire
- Develop & maintain traceability & inventory systems
- Assess risks, contamination problems & co-storage with other chemicals
- Enhance coordination across relevant authorities & with industry
- Train workers on accident prevention, preparedness & response
- Inform the public of hazards and risks and emergency response
- Improve information & knowledge exchange, including across countries
- Generate wider awareness on international & national instruments & recommendations
- International organizations to raise awareness & provide assistance to countries to strengthen preventative measures

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Thank you for your attention

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