

Mikael Härlin  
Public Security Coordinator

## **Environmental risks in case of an emergency or incident**

Air, land, and water pollution has been deemed an environmental risk in case of an emergency or incident. The risk is caused by fire, explosions, technical failure, and human behaviour. Environmental risks are divided into chemical, biological, and radioactive risks; see chart in Appendix 1.

In cases of fire, most of the environmental damage is caused by smoke and fire extinguishing water. The fumes pose a severe health risk to humans if inhaled. Toxic particles that accompany the smoke into the open air are dispersed by the wind, cool down, and fall to the ground, where they pollute water and crops. Large amounts of toxins can spread across large areas of land, or into water supplies, if no embankments are made around the burning object.

The use of chemical products, GMOs, radioactive substances, and other “risk materials” may, in a worst case scenario, lead to extensive damage to people and nature in case of an accident.

The emergency services will handle risk materials that may cause severe harm to people and the environment if spread uncontrollably as the result of an accident.

It is thus presumed that the emergency services have somehow received relevant information from any business or organisation that handles such substances, including the amount of hazardous substances, how dangerous they are, and where they might be encountered during emergency response operations.

Anyone handling chemicals or other hazardous, flammable, or explosive substances in their work must be proactive in preventing accidents by performing risk analyses and documenting the quantities, danger levels, and environmental impact in case of a spill.

Assessing environmental risks is almost always about identifying six factors:

- How dangerous are the substances/organisms that risk being released into the environment?
- Are there any hazardous substances that, in contact with air, land, water, or fire, will react by forming toxic pollutants (e.g. dioxins) or releasing harmful heavy metals?
- What quantities of hazardous substances might be released in case of an incident?
- How and where might they spread (air, land water)?
- What might be damaged, and how serious is this?
- What short- and long-term impact might this have on the environment?

The incident commander will make an overall assessment regarding which other local authorities need to be called in to assist during and after the emergency situation.

Other authorities may include environmental agencies, water and sewage authorities, experts in various fields, and salvage managers from the insurance industry.

A salvage manager should always be called in during a serious accident/incident and/or when the emergency services' incident commander expects there to be a negative impact on the environment. This usually happens as a matter of course when emergency services have been called to the scene of a major incident. The salvage manager works alongside other social institutions during the emergency response operation.

The person in charge of security is always responsible for making sure that a salvage manager has been called to the scene, regardless of who is on duty or on call at the time.

Salvage operations are guided by insurance interests and are thus subject to legal decisions.

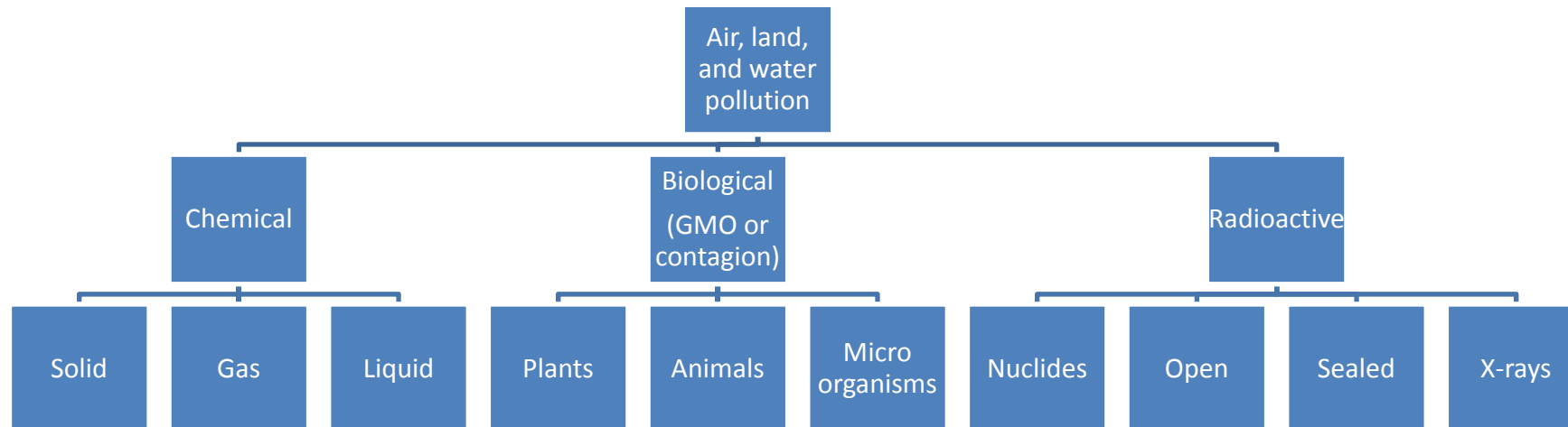
### **Responsibilities and costs**

The cost of immediate emergency response operations is covered by the municipality.

The "polluter pays" principle does not apply to the emergency response itself. The municipality is entitled to compensation from the state if the emergency response operation meets the criteria stipulated by the Civil Protection act.

When an emergency response operation has ended, the responsibility for subsequent measures is transferred to other agencies than emergency services. The business owner or the person who caused the incident, typically represented by an insurance company (Kammarkollegiet for the University), will cover the cost of environmental remediation.

## Appendix 1 Division of environmental risks in case of an emergency or incident





2013-01-24

Reg. no. SU FV-2.10.2-0275-13