



USER'S GUIDE

HAZARD IDENTIFICATION TOOL

- HIT -



JOINT
UNEP / OCHA
ENVIRONMENT UNIT

Mobilizing and coordinating
the international response to
environmental emergencies

Pictures (from top downwards):

- 16 July 2007: Earthquake damages largest nuclear power plant - Japan
http://news.xinhuanet.com/english/2007-08/19/content_6561500.htm
- 17 January 2002: Mt. Nyiaragongo: Petrol station blast- Democratic Republic of Congo
http://news.bbc.co.uk/olmedia/1770000/images/_1773233_ap300explosion.jpg
- June 2007: Floods cause oil spill from refinery – Texas, United States:
<http://www.kansascity.com/115/story/182286.html>
- 17 August 2007: Torrential rains cause dam break in mine – 172 miners trapped
http://news.xinhuanet.com/english/2007-08/19/content_6561500.htm

USER'S GUIDE FOR THE HAZARD IDENTIFICATION TOOL (HIT)

In just a generation, the number of disasters triggered by these natural hazards has increased threefold, while direct and indirect losses have multiplied fivefold. Rapid urbanization and rising population density in coastal mega-cities such as Dhaka, Lagos and Sao Paulo mean the threat of a mega-disaster is also rising rapidly.

Under-Secretary-General for Humanitarian Affairs and
Emergency Relief Coordinator, John Holmes

Introduction

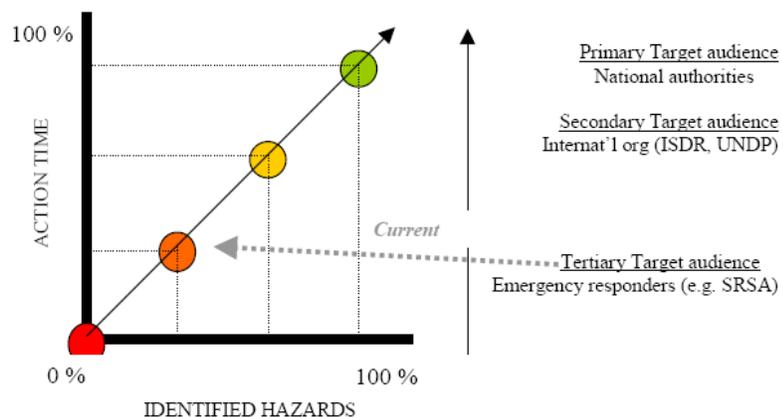
It is well known that large infrastructure and industrial installations can pose a risk for human health and the environment. Technological accidents as Chernobyl and Bhopal are the best-known examples. While incidents of such a magnitude might be rare, much more common is infrastructure being damaged by natural disasters. These so-called 'NaTechs' result in secondary risks for the population, such as landslides after earthquakes, dam breaks by extensive rains or exploded pipelines when hit by hot lava after a volcano eruption. Exact data on the occurrence of NaTechs are non-existing, however examples are not scarce and the frequency of NaTechs can be expected to increase due to the continuous global industrialization.

The Hazard Identification Tool (HIT)

It is easier to manage secondary risks if their location and potential extent is known prior to or very early in the crisis, and if such information is made readily available to relevant authorities and emergency responders to assist in their decision-making processes.

The **goal** of the HIT is to limit the consequences of natural disasters and technological accidents on man, hence to reduce the number of victims. The HIT builds on the idea that the identification of hazardous installations contributes to this goal.

It is important to emphasize that identification can only be seen as a first step to reach the goal of limiting the consequences of secondary risks. If we would compare the number of identified hazards in relation to the time to take safety measures before the occurrence of a disaster, one would be able to differentiate several outcomes, as reflected in the figure below. As a result, the HIT could benefit the entire disaster management community, going from response to response preparedness to disaster risk reduction and prevention.



The **method** used by the HIT is to provide the user with the (expected) location of hazards in the affected area. In addition, the type of facilities and the according substances that are expected to be present in these facilities are listed, as also the hazard type for the whole of the substances. The last column gives the estimated impact type of the hazard, namely:

- Direct impact on Human Health
 - Immediate death and immediate adverse health effects (explosion, immediate toxic effects)
- Direct impact on life-support functions and nature
 - Humans are impacted through effects on their life-support functions e.g. direct impacts on crops, fish resources, agricultural land, water supply
 - The same direct impacts that affect life support functions can also threaten biodiversity and specific species or ecosystems
- Long-term impact on life-support functions, nature and humans (toxic persistent substances entering the food chain and natural ecosystems and effects of carcinogenic substances)

A colour code (Red – Orange – Green) indicates the priority that should be given to each hazard.

Scientifically based

The methodology of the HIT is based on the Flash Environmental Assessment Tool (FEAT), a scientific assessment methodology to detect the most acute hazards to human health and the environment after natural disasters. The development of this tool was initiated following a recommendation of the Sixth Meeting of the AGEE (Advisory Group on Environmental Emergencies), convened by UNEP and OCHA (United Nations Environment Programme and United Nations Office for the Coordination of Humanitarian Affairs).¹

The HIT does not replace the FEAT, on the contrary, both tools are complementary. The HIT can be seen as a (simplified) country-application of the FEAT.

Components of the HIT

The HIT consists of two documents:

1. List of electronic information sources
2. Reference Table – This table provides all relevant hazards that should be considered when using the HIT. In correspondence with the facility, the related substances and the hazard type, the table also provides the user with the estimated impact type of this hazard, being one of the following:

Steps for making a HIT

1. Research

- a. Much information on the location of hazards is publicly available on the internet. The HIT provides you with a list of a dozen websites that can be used to find information. Most of the websites gather information on one specific hazard, being nuclear facilities, energy facilities or mining activities. Each

¹ FEAT has been developed by the National Institute for Public Health and the Environment (RIVM) by order of OCHA/JEU and with the support the Inspectorate of the Ministry of Housing, Spatial Planning and the Environment (VROM). DHV-Engineering Consultancy also contributed to the development. For more information on the FEAT, see van Dijk et al. (RIVM report)

website has its own structure, but most of them provide you with a country or region profile. One website is more user-friendly than the other according to its lay-out, how up-to-date the information is, the speed, etc. With some basic critical thinking, the 'big and obvious' hazards should be located in the region.

- b. Internet will not provide you with a complete picture though and therefore it is necessary to add data from other sources. Depending on the case, additional data can be found through other websites, sometimes found through links on the earlier websites. When existing, national databases are strongly encouraged to use, although they are not always accessible. Some local and/or national disaster management agencies have already this information available, although not always in an emergency-specific format. Data from the private sector prove also to be very useful, such as investor websites. It is also advised to request information to national and international agencies that operate in the region.
- c. This collected information should be verified as much as possible, preferably on the ground. Nevertheless actual verification requires a lot of resources and efforts and is not always possible due to a variety of reasons. Reference maps or electronic means, such as Google Earth can be used to check the accuracy of the data.
- d. If geographical coordinates are available, which is rare if a HIT is not verified on the ground, a map showing the location of the hazards in a region or country would be an ideal outcome of the HIT.

2. Consolidation

The data collected during the research phase of the HIT, should be filled in the Reference Table of the HIT. This table is comprehensive and only shows the relevant facilities. Non-relevant facilities, meaning hazards without a significant risk, are not a part of the Reference Table. If such facilities are found during the research, they can be disregarded during consolidation. When filling in the location next to corresponding facility, one will automatically have the substances such a facility may have, as well as the hazard type and the estimated impact type. Please note that these calculations are based on scientifically expectations, but the degree does not compulsory correspond to the actual hazard.

3. Distribution

Share the HIT with relevant partners, such as other national agencies, national disaster management actors, international partners, disaster risk reduction actors, national and international emergency responders (such as the Joint UNEP/OCHA Environment Unit).

Follow-up, depending on case-specific possibilities

- Data on industrial facilities is very dynamic and it can be expected to change over time. In order to limit the consequences of NaTechs as much as possible, it is imperative to keep the results of the HIT as updated as possible.
- The data of the HIT should be readily available upon the occurrence of a natural disaster. Depending on institutional arrangements, the HIT should be kept in the most appropriate and accessible context.

Disclaimer

- Based on the list of information sources, the HIT may not provide a conclusive list. Other hazards may not be readily identifiable and it is therefore strongly encouraged to use additional information sources. Also, the listed information sources are public websites. All efforts are made to screen the websites for accuracy, but data require confirmation on-site.
- The HIT is based on the FEAT, but has pulled together all substances that can be expected in the related facility. As a result, the hazard type and estimated impact type have been simplified.
- The HIT is only an identification tool and does not provide you with any recommendations for response, preparedness or mitigation activities. For this, specialized expertise from qualified and experienced actors is mandatory.

Contact

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Electronic Information Sources

- <http://www.iaea.org/programmes/a2/index.html>
- http://www-pub.iaea.org/MTCD/publications/PDF/cnpp2003/CNPP_Webpage/pages/countryprofiles.htm
- <http://www.iaea.org/worldatom/rrdb/>
- <http://www.grid.unep.ch/data/download/gnv181.gif>
- <http://www.worldenergy.org/>
- ICOLD World Register on Large Dams <http://www.icold-cigb.net/>
- National Implementation Plan for Stockholm Convention on Persistent Organic Pollutants (POPs)
<http://www.pops.int/documents/implementation/nips/submissions/default.htm>
- http://www.chem.unep.ch/pops/pccd_activities/inventories/default.htm
- <http://www.eia.doe.gov/emeu/cabs/index.html>
- http://www.mbendi.co.za/a_sndmsg/Country_List.asp?C=1&PT=0
- <http://www.eoearth.org/search?q=energy+profile>
- Pipelines/Oil and gas sites http://www.lib.utexas.edu/maps/map_sites/oil_and_gas_sites.html
- <http://pubs.usgs.gov/of/2006/1135/>
- <http://minerals.usgs.gov/minerals/pubs/country/>
- <http://www.infomine.com/countries/>
- <http://www.infomine.com/global/Search/search.asp>
- <http://www.basel.int/natreporting/compilations.html>
- Radioactive, chemical and biological hazards
http://maps.grida.no/go/graphic/radioactive_chemical_and_biological_hazards_in_central_asia

Reference Table²

Location	Actual Hazard			Estimated Impact Type
	Facility	Substances	Hazard Type	
	Aerospace manufacture/repair (land-side)	hydrofluoric acid, cyanide	Liquid Toxic to the Environment, Liquid Toxic to humans , Liquid Toxic after contact with water	Direct impact on life-support functions and nature (Direct impact on Human Health)
	Agricultural services (incl small storage)	mixed chemicals (fire)	Gas Toxic to Humans (toxic smoke)	Direct impact on Human Health
	Agriculture (animals, crop, forestry, fruit, etc)	Organotin pesticide, Organochlorine pesticide, Phenoxyacetic acid derivative pesticide, Carbamate pesticide, Substituted nitrophenol pesticide, Organophosphorus pesticide, Pyrethroid pesticide, Triazine pesticide, Mercury based pesticide, Dithiocarbamate pesticide, mixed chemicals (fire)	Toxic/persistent, Carcinogenic, Mutagenic, Liquid Toxic to the Environment, Liquid Toxic to humans, Flammable liquid, Gas Toxic to Humans, (toxic smoke)	Long-term impact, Direct impact on life-support functions and nature (Direct impact on Human Health)
	Airports (air-side)	kerosine	Liquid Toxic to the Environment, Toxic/persistent	Long term impact, Direct impact on life-support functions and

² The colours in the column 'Estimated Impact Type' indicates the priority to be given to this specific hazard. (Red = Priority nr. 1, Orange = Priority nr. 2, Green = Priority nr. 3)

				nature
	Artificial ski run	ammonia	Gas Toxic to Humans, Gas Toxic to the Environment	Direct impact on Human Health
	Breeding and keeping animals	mixed chemicals (fire)	Gas Toxic to Humans (toxic smoke)	Direct impact on Human Health
	Bus-, tram- en metro, taxi, touringcar stations	solvents, cleaning agents	Liquid Toxic to the Environment, Liquid Toxic after contact with water, Carcinogenic, Mutagenic, Flammable liquid, Toxic/persistent	Direct impact on Human Health, Long Term impact
	Car scrapyard	cleaning agents, solvents	Liquid Toxic to the Environment, Flammable liquid, Toxic/persistent, Liquid Toxic after contact with water, Carcinogenic, Mutagenic	Long term impact, Direct impact on life-support functions and nature
	Defence	hydrazine, fuel, explosives	Liquid Toxic to the Environment, Liquid Toxic to humans, Flammable liquid, Toxic/persistent (Explosive)	Long term impact, Direct impact on life-support functions and nature (Direct impact on Human Health)
	Electricity distribution	ammonia	Gas Toxic to Humans, Gas Toxic to the Environment	Direct impact on Human Health, Direct impact on life-support functions and nature
	Energy production and distribution (steam, propane/butane, oil and solvents, etc)	natural gas, propane, butane, ammonia	Flammable Gas, Gas Toxic to the Environment, Gas Toxic to Humans	Direct impact on Human Health
	Environmental services	mixed chemicals (fire)	Gas Toxic to Humans, (toxic smoke)	Direct impact on Human Health
	Fishfarming	mixed chemicals (fire)	Gas Toxic to Humans (toxic smoke)	Direct impact on Human Health
	Forestry and - services (incl small storage)	mixed chemicals (fire)	Gas Toxic to Humans (toxic smoke)	Direct impact on Human Health
	Galvano industry	chromium (III)	Toxic/persistent, Carcinogenic, Mutagenic, Solid Toxic after contact with water	Direct impact on Human Health
	Gas distribution	natural gas	Flammable Gas, Gas Toxic to the Environment	Direct impact on Human Health
	Gas servicestations (with LPG)	LPG	Flammable Gas, Gas Toxic to the Environment	Direct impact on Human Health
	Glass production	hydrogen fluoride	Explosive, Solid Toxic after contact with water	Direct impact on Human Health
	Hydrodams (Large)	-	-	Dam stability might be

				affected, dammed water, high voltage electricity
	Hospital /sterilizing industry	ethylene oxide	Gas Toxic to Humans, Carcinogenic, Mutagenic	Direct impact on Human Health
	Ice skating rink	ammonia	Gas Toxic to Humans, Gas Toxic to the Environment	Direct impact on Human Health
	Iron and steel foundries	cleaning agents, solvents	Liquid Toxic to the Environment, Flammable liquid, Toxic/persistent, Liquid Toxic after contact with water, Carcinogenic, Mutagenic	Direct impact on Human Health, Direct impact on life-support functions and nature, Long term impact
	Laundry, carpet clean, hairdr., undertaker, fitness, etc.	dibenzoylperoxide, chlorosilane, hydrogen peroxide	Liquid Toxic to the Environment, Liquid Toxic to humans, Toxic/persistent, Gas Toxic to the Environment	Direct impact on life-support functions and nature (Direct impact on Human Health)
	Loading and storage ships (oil and solvents, hazardous, etc)	oil and solvents, fire	Liquid Toxic to the Environment, Toxic/persistent, Combustible	Direct impact on Human Health
	Manufacturing synthetic fibres	acrylic acid	Liquid Toxic to the Environment, Flammable liquid	Direct impact on life-support functions and nature
	Marshalling yards	chlorine, LPG	Gas Toxic to Humans, Gas Toxic to the Environment, Flammable Gas	Direct impact on Human Health
	Mining other(gold, copper, nickel)	arsenic/mercury/cyanide	Toxic/persistent, Carcinogenic, Mutagenic, Solid Toxic after contact with water, Liquid Toxic to the Environment, Liquid Toxic to humans, Liquid Toxic after contact with water, Gas Toxic to the Environment	Long-term impact (Direct impact on Human Health, Direct impact on life-support functions and nature)
	Nuclear plants and cooling towers	<i>specialized expertise needed</i>	<i>specialized expertise needed</i>	Direct impact on Human Health
	Oil and gas mining (onshore, offshore)	oil and solvents, natural gas	Liquid Toxic to the Environment, Toxic/persistent, Flammable Gas, Gas Toxic to the Environment	Direct impact on Human Health
	Photo and film development	solvents	Liquid Toxic to the Environment, Liquid Toxic after contact with water, Carcinogenic, Mutagenic	Long-term impact

	Production accumulators and batteries	mixed chemicals (fire)	Gas Toxic to Humans, Toxic/persistent (toxic smoke)	Direct impact on Human Health
	Production anorganic chemical base materials	ammoniumnitrate	Explosive, Solid Toxic after contact with water	Direct impact on Human Health
	Production cardboard and paper	chlorine bleaching	Gas Toxic to Humans, Gas Toxic to the Environment	Direct impact on life-support functions and nature
	Production chemicals - other	dimethylsulfate, chloride salts	Liquid Toxic to the Environment, Liquid Toxic to humans	Direct impact on Human Health, Direct impact on life-support functions and nature
	Production clothing (incl. painting and printing)	solvents	Liquid Toxic to the Environment, Liquid Toxic after contact with water, Carcinogenic, Mutagenic	Long-term impact
	Production cokes	oxigas	Flammable Gas, Gas Toxic to the Environment	Direct impact on Human Health
	Production cokes electrodes	liquid acid, hydrogen, methanol	Liquid Toxic to the Environment, Flammable liquid, Flammable Gas, Gas Toxic to the Environment, Carcinogenic, Mutagenic	Direct impact on life-support functions and nature (Direct impact on Human Health, Long term impact)
	Production electromotors- and generators	cleaning agents, solvents	Liquid Toxic to the Environment, Flammable liquid, Toxic/persistent, Liquid Toxic after contact with water, Carcinogenic, Mutagenic	Long term impact, Direct impact on life-support functions and nature
	Production fertilizer	ammoniumnitrate, ammonia	Liquid Toxic to the Environment, Liquid Toxic to humans, Gas Toxic to Humans, Gas Toxic to the Environment	Direct impact on Human Health
	Production fireworks	ammoniumnitrate, ammonia	Liquid Toxic to the Environment, Liquid Toxic to humans, Toxic/persistent, Gas Toxic to Humans, Gas Toxic to the Environment	Direct impact on Human Health
	Production industrial gasses	monovinylchloride, ethene, hydrogen chloride, propane, oxigen	Gas Toxic to Humans, Carcinogenic, Mutagenic /Gas Toxic to the Environment/Gas Toxic to Humans, Gas Toxic to the Environment/Flammable Gas, Gas Toxic to the Environment/GMR	Direct impact on Human Health

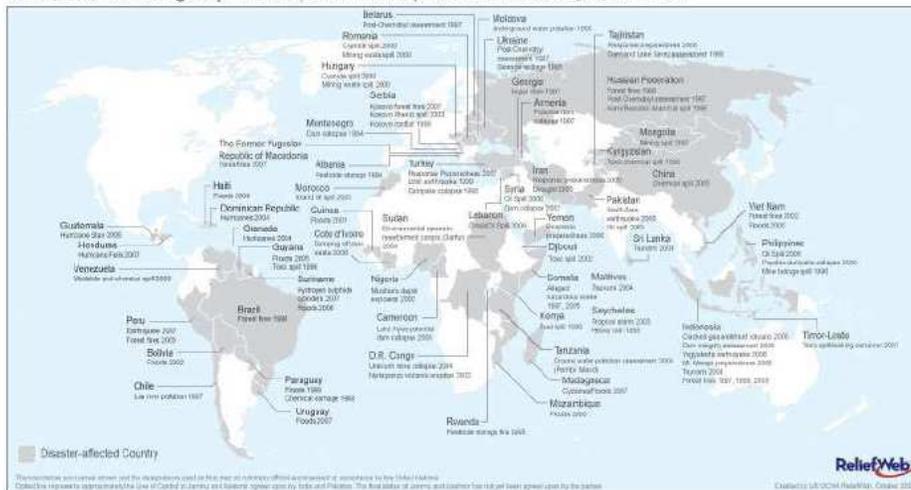
	Production iron and steel base materials	oxigas	Flammable Gas, Gas Toxic to the Environment	Direct impact on Human Health, Direct impact on life-support functions and nature
	Production lamps	hydrogen	Flammable Gas, Gas Toxic to the Environment	Direct impact on Human Health
	Production leather	galvano, zinc bath	Liquid Toxic to the Environment, Liquid Toxic to humans, Toxic/persistent	Direct impact on Human Health, Long term impact, Direct impact on life-support functions and nature
	Production lubricants	oil and solvents	Liquid Toxic to the Environment, Toxic/persistent	Long term impact, Direct impact on life-support functions and nature
	Production of agricultural chemicals	chlorine, carbon disulfide	Gas Toxic to Humans, Gas Toxic to the Environment, Liquid Toxic to the Environment	Direct impact on Human Health
	Production of color and paint	solvents	Liquid Toxic to humans, Liquid Toxic after contact with water, Carcinogenic, Mutagenic	Direct impact on life-support functions and nature
	Production of farmaceutical base materials	methanol/ammonia/isopropanol/pentane/medicine	Liquid Toxic to the Environment, Carcinogenic, Mutagenic /Gas Toxic to Humans, Gas Toxic to the Environment/ Flammable liquid/ST	Direct impact on Human Health
	Production of food and drink, incl. slaughterhouse	ammonia	Gas Toxic to Humans, Gas Toxic to the Environment	Direct impact on Human Health, Direct impact on life-support functions and nature
	Production of lacker and varnish	toluene diisocyanate	Liquid Toxic to the Environment, Toxic/persistent	Direct impact on Human Health
	Production of rubber	chloroprene	Carcinogenic, Mutagenic, Liquid Toxic to the Environment	Long term impact
	Production of synthetic resin	toluene diisocyanate, acrylic acid	Liquid Toxic to the Environment, Liquid Toxic to humans, Toxic/persistent, Flammable liquid	Direct impact on life-support functions and nature
	Production oil and solvents products (base materials)	oil and solvents	Liquid Toxic to the Environment, Toxic/persistent	Long term, Direct impact on life-support functions and nature
	Production organic chemical base materials	Organotin compound - liquid, n.o.s., Dibromomethane, Tetrabromoethane, Pentachloroethane, Chromic fluoride - solution, Arsenic compound - liquid, n.o.s., Arsenic chloride, Hexachlorobenzene,	Toxic/persistent, Carcinogenic, Mutagenic, Liquid Toxic to the Environment, Liquid Toxic to humans, Flammable Gas, Gas Toxic to the Environment, Gas Toxic to Humans, Explosive	Direct impact on Human Health, Long Term impact, Direct impact on life-support functions and nature

		Butadienes - inhibited, Pentachloropheno, acrylonitrile, monovinylchloride, organic peroxide, bromine, chlorine, dimethylsulfate, Fluorosulfonic acid, Acrolein - inhibited, Mercury compound - liquid, n.o.s., Vinyl bromide -inhibited, Fluorine, butane, Trichlorobenzenes-liquid, Hydrazine, anhydrous, Bromomethylpropanes , Chlorobenzene, Hexachlorocyclopentadiene, Formaldehyde - solution, Vinyl chloride - inhibited		
	Production perfumes and cosmetics	solvents	Liquid Toxic to the Environment, Liquid Toxic after contact with water, Carcinogenic, Mutagenic	Long-term impact
	Production photochemical products	solvents	Liquid Toxic to the Environment, Liquid Toxic after contact with water, Carcinogenic, Mutagenic	Direct impact on Human Health, Long Term impact
	Production rubber tyres	chloroprene	Carcinogenic, Mutagenic, Liquid Toxic to the Environment	Long term impact
	Production soap and detergents	chloride salts	Liquid Toxic to humans, Liquid Toxic to the Environment	Direct impact on Human Health
	Production steel pipes	cleaning agents, solvents	Liquid Toxic to the Environment, Flammable liquid, Toxic/persistent, Liquid Toxic after contact with water, Carcinogenic, Mutagenic	Long term impact, Direct impact on life-support functions and nature
	Production sugar	sulfur dioxide	Gas Toxic to Humans, Gas Toxic to the Environment	Direct impact on Human Health, Direct impact on life-support functions and nature
	Production textile	solvents	Liquid Toxic to the Environment, Liquid Toxic after contact with water, Carcinogenic, Mutagenic	Long-term impact
	Production wood	solvents	Liquid Toxic to the Environment, Liquid Toxic after contact with water, Carcinogenic, Mutagenic	Long-term impact
	Radioactive and nuclear industry	-	<i>specialized expertise needed</i>	Direct impact on Human Health

	Railwaystations (no marshalling)	cleaning agents, solvents	Liquid Toxic to the Environment, Flammable liquid, Toxic/persistent, Liquid Toxic after contact with water, Carcinogenic, Mutagenic	Direct impact on Human Health, Long term impact, Direct impact on life-support functions and nature
	Recycling	fire	Combustible	Direct impact on Human Health
	Recycling liquids and rubber	trichlorobenzenes, trichloride ethanes	Liquid Toxic to the Environment, Liquid Toxic to humans, Carcinogenic, Mutagenic, Toxic/persistent	Long term impact, Direct impact on life-support functions and nature
	Recycling oil and solvents and lubricants	oil and solvents	Liquid Toxic to the Environment, Toxic/persistent	Long term impact
	Refinery of vegetable oil and solvents and grease	ammonia	Gas Toxic to Humans, Gas Toxic to the Environment	Direct impact on Human Health, Direct impact on life-support functions and nature
	Refinery oil and solvents and gas (incl. storage)	oil and solvents, natural gas	Liquid Toxic to the Environment, Toxic/persistent, Flammable Gas, Gas Toxic to the Environment	Direct impact on Human Health
	Scrap yards (collection)	cleaning agents, solvents	Liquid Toxic to the Environment, Flammable liquid, Toxic/persistent, Liquid Toxic after contact with water, Carcinogenic, Mutagenic	Long term impact, Direct impact on life-support functions and nature
	Ship dismantling	cleaning agents, solvents	Liquid Toxic to the Environment, Flammable liquid, Toxic/persistent, Liquid Toxic after contact with water, Carcinogenic, Mutagenic	Direct impact on Human Health, Long term impact, Direct impact on life-support functions and nature
	Swimming facilities	chlorine bleaching	Gas Toxic to Humans, Gas Toxic to the Environment	Direct impact on life-support functions and nature
	Synthetic manufacturing	phenolic resin	Liquid Toxic to the Environment	Direct impact on life-support functions and nature
	Tanker cleaning	oil and solvents, cleaning agents	Liquid Toxic to the Environment, Liquid Toxic after contact with water, Carcinogenic, Mutagenic, Liquid Toxic to the Environment, Toxic/persistent	Direct impact on Human Health
	Tanning industry	aniline, cyanide, ammonium sulfate, sulfuric acid, arsenic, chromium (III)	Carcinogenic, Mutagenic, Liquid Toxic to the Environment/Liquid Toxic after contact with water, Liquid Toxic to humans, Toxic/persistent, Solid	Direct impact on Human Health, Long Term impact

			Toxic after contact with water	
	Textile industry (dyes)	naphtalene, benzene, bromine, chlorine, alkali, sodium nitrate, sodium sulfide	Toxic/persistent, Solid toxic after contact with water, Carcinogenic, Mutagenic, Liquid Toxic to the Environment, Liquid Toxic to humans, Gas Toxic to the Environment, Gas Toxic to Humans	Direct impact on Human Health
	Trading and repair cars, motorcycles, service stations	cleaning agents, solvents	Liquid Toxic to the Environment, Flammable liquid, Toxic/persistent, Liquid Toxic after contact with water, Carcinogenic, Mutagenic	Long term impact, Direct impact on life-support functions and nature
	Trading professional fireworks (large enterprises)	fireworks	Explosive	Direct impact on Human Health
	Truck and (rail) lorry repair shops	cleaning agents, solvents	Liquid Toxic to the Environment, Flammable liquid, Toxic/persistent	Long term impact, Direct impact on life-support functions and nature
	Wholesale chemical products	mixed chemicals (fire)	Gas Toxic to Humans (toxic smoke)	Direct impact on Human Health
	Wholesale fertilizers	ammoniumnitrate	Explosive, Solid Toxic after contact with water	Direct impact on Human Health
	Wholesale fire products (SME)	fire	Combustible	Direct impact on Human Health
	Wholesale liquid and gas fuels	oil and solvents, natural gas	Liquid Toxic to the Environment, Toxic/persistent, Flammable Gas, Gas Toxic to the Environment	Long term impact, Direct impact on life-support functions and nature (Direct impact on Human Health)
	Wholesale mineral oil and solvent product (excl. fuels)	oil and solvents	Liquid Toxic to the Environment, Toxic/persistent	Long term impact
	Winning, preparing and distribution drinking water (with chemicals)	chlorine	Gas Toxic to Humans, Gas Toxic to the Environment	Direct impact on Human Health
	Wood treating industry	pentachlorophenol, creosote, chromium (III), arsenic, copper salts	Liquid Toxic to humans, Solid Toxic after contact with water//Liquid Toxic to the Environment, Carcinogenic, Mutagenic /Toxic/persistent,	Direct impact on Human Health, Direct impact on life-support functions and nature

Environmental Emergency Section (UNEP/OCHA): Activities as of September 2007



The Joint Unit's key functions include:

Monitoring

Continuous monitoring and ongoing communication with an international network of contacts.

Notification

Prompt notification and dissemination of emergency information in the event of an environmental disaster.

Information

Serving as an effective focal point for providing technical information such as maps and satellite images, scientific information and other expert assistance that can be channelled directly to requesting countries.

Brokerage

Facilitating contact between an affected country and donor countries who are ready to assist and provide needed response resources.

Assistance

Mobilise multilateral assistance from the international donor community when requested to by countries affected by environmental emergencies. OCHA Emergency Cash Grants may also be released in certain circumstances.

Assessment

Arrange for the urgent dispatch of international experts to conduct impartial and independent assessment of the environmental impacts of an emergency.



**JOINT
 UNEP / OCHA
 ENVIRONMENT UNIT**

Mobilizing and coordinating the international response to environmental emergencies