A Global Outlook on Disaster Science

Appendix D Keyword Search Criteria

We adopt a keyword-search approach to define the field in partnership with experts, to avoid restrictions to any particular subject areas that may ignore a significant portion of the relevant corpus. We focus our search on those publications that explicitly adopt a Disaster Science perspective, thereby also ensuring consistency across the different corpora. All data are restricted to articles, reviews, and conference proceedings. These publication types are peer-reviewed, so that the corpus is fundamentally scholarly in nature. In addition to Disaster Science as a whole, we also examine Disaster Risk Reduction Cycle stages and Disaster Types as per the UNISDR Suggested List of Hazards for the Purpose of Measuring Global Targets of the Sendai Framework for Disaster Risk Reduction 2015-2030.1,2

Disaster Science results from the combination of criteria for all ten Disaster Types.

Each Disaster Risk Reduction Cycle stage is defined as the combination of criteria for Disaster Science and inclusion of specific keywords for each stage.

Disaster Prevention
1) belongs to Disaster Science AND
2) contains at least one of the following keywords

- risk*
- "assess* vulnerab*"
- "assess* capa*"
- "reduce* vulnerab*"
- DRR
- hazard*
- resilien*
- law*
- legal
- legislat*
- root*
- caus*
- (consequence analysis)
- (consequence analyses)
- safety
- protect*
- [lesson learned]
- [lesson learnt]
- [land use planning]

- accident database
- (accident databases)
- (code of practice)
- (codes of practice)
- scenario*
- standard*
- guidance
- guideline*
- (best practice)
- (best practices)
- implement*
- design*
- construct*
- (accident analyses)
- (accident analysis)
- cascad*
- domino
- interdependen*
- fragilit*

Disaster Preparedness
1) belongs to Disaster Science AND
2) contains at least one of the following keywords

- prepar*
- warn*
- aware*
- educat*
- (evacuation drill)
- (evacuation drills)
- (evacuation exercise)
- (evacuation exercises)
- (risk monitoring)
- coordinat*
- manage*
- (needs assessment)

- needs assessments
- response monitoring
- (operational capacity)
- (operational capacities)
- continent*
- BCP
- [business continuity planning]
- (business continuity plan)
- simulat*
- map*
- scenario*

1 http://www.preventionweb.net/files/47137_proposedlistofhazardsforglobaltargets.pdf
2 https://www.unisdr.org/files/45291_sendaiframeworkfordrren.pdf
**Disaster Response**
1) belongs to Disaster Science AND
2) contains at least one of the following keywords

- respons* evacuate*
- respond* shelter*
- relie* sanita*
- search* (damage assessment)
- rescu* (assess damage**)
- assist* communicat*

**Disaster Recovery**
1) belongs to Disaster Science AND
2) contains at least one of the following keywords

- recover* (sphere standards)
- rehabilitat* (temporary housing)
- reconstruct* (temporary home)
- "build* back" (temporary homes)
- relocat* (temporary accommodation)

**Geophysical Disasters**
1) contains {geophysical disaster} or {geophysical disasters} OR
2) contains disaster* AND at least one of the following keywords

- earthquake* (mud flow)
- seism* (mud flows)
- volcan* (rockfall*)
- tsunami* (rock fall)
- (tidal wave) (rock falls)
- (tidal waves) (ground subsidence)
- (soil liquefaction) (earth subsidence)
- (soil liquefactions) (land subsidence)
- (mass movement) (slope stability)
- (mass movements) lava
- (mass wastings) (ash fall)
- mudslid* (ash falls)
- landslid* (pyroclastic flow)
- avalanch* (pyroclastic flows)
- (debris flow) (pyroclastic density current)
- (debris flows) (pyroclastic density currents)
- (earth flow) tephra*
- (earth flows) lahar*

**Hydrological Disasters**
1) contains {hydrological disaster} or {hydrological disasters} OR
2) contains disaster* AND at least one of the following keywords

- flood* avalanche*
- inundat* (debris flow)
- (coastal erosion) (debris flows)
- (shoreline change) (earth flow)
- (shoreline changes) (earth flows)
- (rogue wave) (mud flow)
- (rogue waves) (mud flows)
- seiche* rockfall*
- sinkhole* (rock fall)
- (mass movement) (rock falls)
- (mass movements) sturzstrom*
- (mass wastaging) (ground subsidence)
- (mass wastings) (earth subsidence)
- mudslid* (land subsidence)
- landslid* (slope stability)
### Meteorological Disasters
1) contains {meteorological disaster} or {meteorological disasters} OR  
2) contains disaster* AND at least one of the following keywords

| *storm* | tornado* |
| rain* | cold wave* |
| wind* | cold waves |
| hail* | cold snap* |
| snow* | cold snaps |
| ice* | frost* |
| blizzard* | freeze* |
| lightning* | heat wave |
| sand* | heat waves |
| dust* | heat burst* |
| [heat bursts] | fog* |
| [extreme temperature] | landspout* |
| [extreme temperatures] | derecho* |
| cyclon* | typhoon |

### Climatological Disasters
1) contains {climatological disaster} or {climatological disasters} OR  
2) contains disaster* AND at least one of the following keywords

| drought* | solar radiation |
| sand* | solar radiations |
| dust* | glacial lake outburst |
| (water shortage) | glacial lake outbursts |
| (water shortages) | GLOF* |
| [dry season] | fire* |
| [dry seasons] | combustible vegetation |
| arid | smoke |
| [low humidity] | haze |
| [El Niño] | thermal radiation |
| [El Nino] | thermal radiations |

### Extraterrestrial Disasters
1) contains least one of the following keywords OR  
2) contains disaster* AND at least one of the following keywords

| alien | radio disturbances |
| airburst* | shockwave* |
| [energetic particle] | meteorite* |
| [energetic particles] | magnetospher* |
| [geomagnetic storm] | solar flare |
| [geomagnetic storms] | solar flares |
| [radio disturbance] | |

### Environmental Disasters
1) contains {environmental disaster} or {environmental disasters} OR  
2) contains disaster* AND at least one of the following keywords

| eros* | wetland degradation* |
| erode* | wetland degradations |
| deforest* | glacier retreat |
| salination* | glacier retreats |
| desert* | glacier melting |
| (Asian dust) | glacier melt |
| (wetland loss) | glacier melts |
| (wetland losses) | |
Biological Disasters
1) contains {biological disaster} or {biological disasters} OR
2) contains disaster* AND at least one of the following keywords
epidemi* ebola
tuber* tuberculosis
de* SARS
plag* {severe acute respiratory syndrome}
pand* {severe acute respiratory syndromes}
outbre* zika
quarantine* dengue
(human immunodeficiency virus) malaria
{human immunodeficiency viruses} epidziotic*
AIDS pest*
{acquired immune deficiency syndrome} insect*
{acquired immune deficiency syndromes} animal*
influenza* pollut*
flu* pollut*

Technological Disasters
1) contains at least one of the following keywords OR
{technological disaster} {mining accidents}
{technological disasters} {technological incidents}
(industrial disaster) (technological incidents)
(industrial disasters) (industrial incident)
(mining disaster) (mining incidents)
(mining disasters) (mining incident)
{technological accidents} natech
{technological accidents} {na tech}
(industrial accident) na-tech
(industrial accidents) (mining accident)

2) contains disaster* AND at least one of the following keywords
(structural collapse) transboundar*
(structural collapses) {infrastructure disruption}
(power outage) {infrastructure disruptions}
(power outages) (service disruption)
explod* {service disruptions}
explos* pollut*

Chemical & Radiological Disasters
1) contains at least one of the following keywords OR
(chemical disaster) {radiological accident}
(chemical disasters) {radiological accidents}
(radiological disaster) {nuclear accident}
(radiological disasters) {nuclear accidents}
(nuclear disaster) natech
(nuclear disasters) {na tech}
(chemical incident) na-tech
(chemical incidents) {hazardous materials release}
(radiological incident) {hazardous substance release}
(radiological incidents) {pipeline accident}
(nuclear incident) {pipeline accidents}
(nuclear incidents) {pipeline spill}
(chemical accident) {pipeline spills}
(chemical accidents)

2) contains disaster* AND at least one of the following keywords
oil* {hazardous material}
petroleum {hazardous materials}
chemical* {hazardous material}
radiation* {hazardous substance}
spill* {hazardous substances}
Transportation Disasters
1) contains at least one of the following keywords
(transportation
disaster)
(transportation
disasters)
(transportation
taccident)
(transportation
taccidents)
(transportation
incident)
(transportation
incidents)
(aviation
accident)
(aviation
accidents)
(rail
accident)
(rail
accidents)
(large
road
accident)
(large
road
accidents)
(large
traffic
accident)
(large
traffic
accidents)
(navigation
accident)
(navigation
accidents)
(naval
accident)
(naval
accidents)
(space
accident)
(space
accidents)
(aviation
disaster)
(aviation
disasters)
(rail
disaster)
(rail
disasters)