**Health Emergency Risk Assessment Typology (draft 8 May)**

| **Family**  | **Type** | **Purpose/uses** | **Scope** | **Output** | **Investment** | **Example** | **Comment** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Risk modelling | Probabilistic loss models | * Total expected losses (used by insurance industry)
* Maps risks based on likelihood and impacts
 | * multi / single hazard
* exposure
* vulnerability
* conjoint risks
* cascading risks
 | * Loss exceedance curves
* Risk maps
 | High | CAPRA (Comprehensive Approach to probabilistic Risk assessment) | * Risk analysis
* Natural hazard event-focused
* Rarely accounts for coping capacity
 |
|  | Hazard risk models (epidemic, flood, earthquake, chemical, radiological) | * As above – focused on specific hazards
 | * Risk modelling for specific hazards
 | As above | High |  |  |
| Deterministic/ scenario | Strategic emergency risk assessment  | * Analyses risks by scenarios
* Assigns level of risk
* Prioritizes risk
* Emergency risk management programming
* Emergency preparedness (including ex-ante planning)
 | * Risk analysis based on hazard, vulnerability and capacity analyses
* At organization, local, sub-national, country levels
 | * Risk matrix
* Risk profile
 | Low-medium-high | STAR (rapid approach for emergency preparedness and response) |  |
| EMRO Health Emergency Risk Assessment  |
| VRAM: Detailed analysis with emphasis on vulnerability: usually for specific hazards; sub-national or community levels |
| Operational tool for conduction national joint qualitative risk assessments for (zoonotic diseases) |
| Vulnerability and capacity assessment (VCA) – IFRC/Red Cross |
| Event risk assessment | * Analyses risks (likelihood and potential consequences) of existing events
* Characterises risk
 | * Event focused
* Analysis of hazard, exposure, context,
* Impact on human health
* Risk of spreading internal/regional/ international
* Risk control capacities
 | * Level of risk
* Emergency response planning
* Actions required
 | Low - Comprehensive | WHO Rapid Event Risk Assessment Tool http://www.who.int/csr/resources/publications/HSE\_GAR\_ARO\_2012\_1/en/ WHO Event Risk Assessment TIPRA – Pandemic Severity assessments | Outbreak focusedSupports WHO grading |
|  | * Also organizational risk assessments/ business impact analysis, health facility assessments (e.g Hospital Safety Index),
 |  |  |  |  |  |
| Risk indices |  | * Integrates large data sets using indices
* Allows comparisons between jurisdictions
 | * Multihazard or single hazard
* Uses indices of risk variables
 | Risk rating table | Medium | * INFORM

uses indicators based on hazards and exposures, capacities* SEARO Regional Risk Assessment (combines INFORM, UHC index)
* Epidemic risk index
 | Modified DAISY approach (SEARO)communicable disease risk profiles – threat characteristics, vulnerability – laboratory and surveillance capacities, epidemic status, media/social impact (25 risk attributes)  |
| Descriptive risk assessment | Public health situational analysis | * Situation analysis
* Describes potential consequences of event
* Describes existing capacities and gaps
* Identifies priorities and recommendation
 | Event focused | * Situational analysis report
* Priorities and recommended actions
 | Low | Public health (event) situational analysis | Supports grading process |
| Component analysis | Hazard analysis | * Analysis and mapping of hazards
 |  | Hazard dataHazard maps | Medium |  |  |
|  | Vulnerability analysis | * Increased understanding of factors affecting vulnerability
 | Specific areasVulnerability for specific hazardsSub-populations | Vulnerability dataVulnerability maps | Medium |  |  |
|  | Capacity assessment | * Analyses capacities for planning
* Used for capacity development programmes
* Used for health emergency risk management plans
 | Assessment of capabilities for managing risks of emergencies |  |  | Joint External EvaluationTraining needs analyses |  |
|  | Resource mapping | Emergency response planning | Event focused |  |  | * Health Emergency Resource Availability MonitoringSystems
* SARA – Health facility assessment tool
 |  |
| Needs/recovery assessments | e.g. MIRA, PDNA, PCNA |  |  |  |  |  |  |
| Historical data |  | Emergency response planning |  | Event record | Low |  |  |
|  | Global burden of disease | Estimates and projections of morbidity, mortality and DALYs to quantify the burden of diseases, injuries, and [risk factors](https://en.wikipedia.org/wiki/Risk_factor) |  | * Tables
* Maps
* Graphs
 |  |  |  |