**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 focused  Supports 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 data  Hazard maps | Medium |  |  |
|  | Vulnerability analysis | * Increased understanding of factors affecting vulnerability | Specific areas  Vulnerability for specific hazards  Sub-populations | Vulnerability data  Vulnerability 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 Evaluation  Training 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 |  |  |  |