SAFE HOSPITALS CHECKLIST

1. Elements relating to the GEOGRAPHIC LOCATION of the health facility (mark with an X where applicable).

1.1 Hazards Refer to hazard maps. Request the Hospital Disaster Committee to provide the map(s) showing safety hazards at the site of the building.	Hazard Level				OBSERVATIONS
	No hazard	Hazard level			
		LOW	AVERAGE	HIGH	
1.1.1 Geological phenomena					
Earthquakes Rate the hazard level of the hospital in terms of geotechnical soil analyses.	☐	☐	☐	☐	
Volcanic eruptions Refer to hazard maps of the region to rate the hospital's exposure to hazard in terms of its proximity to volcanoes, volcanic activity, routes of lava flow, pyroclastic flow, and ash fall.	☐	☐	☐	☐	
Landslides Refer to hazard maps to rate the level of hazard for the hospital in terms of landslides caused by unstable soils (among other causes).	☐	☐	☐	☐	
Tsunamis Refer to hazard maps to rate the level of hazard for the hospital in terms of previous tsunami events caused by submarine seismic or volcanic activity.	☐	☐	☐	☐	
Others (specify) ..... Refer to hazard maps to identify other geological phenomena not listed above. Specify the hazard and rate the corresponding hazard level for the hospital.	☐	☐	☐	☐	
1.1.2 Hydro-meteorological phenomena					
Hurricanes Refer to hazard maps to rate the hazard level of the hospital in terms of hurricanes. It is helpful to take into account the history of such events when rating the hazard level of the facility.	☐	☐	☐	☐	
Torrential rains Rate the hazard level for the hospital in relation to flooding due to intensive rainfall, based on the history of such events.	☐	☐	☐	☐	
Storm surge or river flooding Rate the hospital's level of exposure to storm surge or river flooding hazards based on previous events that did or did not cause flooding in or around the hospital.	☐	☐	☐	☐	
Landslides Refer to geological maps to rate the hospital's level of exposure to landslide hazards caused by saturated soil.	☐	☐	☐	☐	
Others (specify) ..... Refer to hazard maps to identify other hydro-meteorological hazards not listed above. Specify the hazard and rate the corresponding hazard level for the hospital.	☐	☐	☐	☐	

1.1.3 Social phenomena					
Population gatherings Rate the hospital's exposure to hazard in relation to the type of population it serves, its proximity to population gatherings and prior events that have affected the hospital.	☐	☐	☐	☐	
Displaced populations Rate the hospital's exposure to hazard in terms of people who have been displaced as a result of war, socio-political circumstances, or due to immigration and emigration.	☐	☐	☐	☐	
Others (specify) ..... If other social phenomena affect the safety of the hospital, specify them and rate the level of hazard for the hospital accordingly.	☐	☐	☐	☐	
1.1.4 Environmental phenomena					
Epidemics With reference to any past incidents at the hospital and specific pathogens, rate the hospital's exposure to hazards related to epidemics.	☐	☐	☐	☐	
Contamination (systems) With reference to any past incidents involving contamination, rate the hospital's exposure to hazards from contamination of its systems.	☐	☐	☐	☐	
Infestations With reference to the location and past incidents at the hospital, rate the hospital's exposure to hazards from infestations (flies, fleas, rodents, etc.).	☐	☐	☐	☐	
Others (specify) ..... With reference to any past incidents at the hospital, specify any other environmental phenomena not included above that might compromise the level of safety of the hospital.	☐	☐	☐	☐	
1.1.5 Chemical and/or technological phenomena					
Explosions With reference to the hospital's surroundings, rate the hospital's exposure to explosions.	☐	☐	☐	☐	
Fires With reference to the exterior of the hospital building, rate the hospital's exposure to external fires.	☐	☐	☐	☐	
Hazardous material spills With reference to the hospital's surroundings, rate the hospital's exposure to hazardous material spills.	☐	☐	☐	☐	
Others (specify) ..... Specify and rate other chemical or technological hazards in the area where the hospital is located.	☐	☐	☐	☐	

1.2 Geotechnical properties of the soil					
Liquefaction With reference to the geotechnical soil analysis at the hospital site, rate the level of the facility's exposure to hazards from saturated and loose subsoil.	☐	☐	☐	☐	
Clay soils With reference to soil maps, rate the hospital's exposure to hazards from clay soil.	☐	☐	☐	☐	
Unstable slopes Refer to geological maps and specify the hospital's exposure to hazards from the presence of slopes.	☐	☐	☐	☐	

Comments on the results of Form 2, Module 1. The evaluator should use the space below to comment on the results of this module (1), and provide his/her name and signature.

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

Name/signature of evaluator .....

2. Elements related to the structural safety of the building

Columns, beams, walls, floor slabs, etc., are structural elements that form part of the load-bearing system of the building. These elements should be evaluated by structural engineers.

2.1 Prior events affecting hospital safety	Safety level			OBSERVATIONS
	LOW	AVERAGE	HIGH	
1. Has there been prior structural damage to the hospital as a result of natural phenomena? Determine whether structural reports indicate that the level of safety has been compromised. IF SUCH AN EVENT HAS NOT OCCURRED IN THE VICINITY OF THE HOSPITAL, LEAVE BOXES BLANK. *Low = Major damage; Average = Moderate damage; High =Minor damage.*	☐	☐	☐	
2. Was the hospital built and/or repaired using current safety standards? Verify whether the building has been repaired, the date of repairs, and whether repairs were carried out using standards for safe buildings. *Low = Current safety standards not applied; Average = Current safety standards partially applied; High = Current safety standards fully applied.*	☐	☐	☐	
3. Has remodelling or modification affected structural behavior of the facility? Verify whether modifications were carried out using standards for safe buildings. *Low = Major remodelling or modifications have been carried out; Average = Moderate remodelling and/or modifications; High = Minor remodelling and/or modifications or no modifications were carried out.*	☐	☐	☐	
2.2 Safety of the structural system and type of materials used in the building	**Safety level**			**OBSERVATIONS**
	LOW	AVERAGE	HIGH	
4. Condition of the building *Low = Deterioration caused by weathering; cracks on the first floor and irregular height of buildings; Average = Deterioration caused only by weathering; High = Good; no deterioration or cracks observed.*	☐	☐	☐	
5. Construction materials used *Low = Rust with flaking; cracks larger than 3mm; Average = Cracks between 1 and 3 mm or rust powder present; High = Cracks less than 1 mm; no rust.*	☐	☐	☐	
6. Interaction of non-structural elements with the structure *Low = Separation of less than 0.5% of the height of the partition/joint; Average = Separation between 0.5 and 1.5% of the height of the partition/joint; High = Separation above 1.5% of the partition/joint.*	☐	☐	☐	
7. Proximity of buildings (hazards of pounding, wind tunnel effects, fires, etc.) *Low = Separation is less than 0.5% of the height of the shorter of two adjacent buildings; Average = Separation is between 0.5% and 1.5% of the height of the shorter of two adjacent buildings; High = Separation is more than 1.5% of the height of the shorter of two adjacent buildings.*	☐	☐	☐	
8. Structural redundancy *Low = Fewer than three lines of resistance in each direction; Average = Three lines of resistance in each direction or lines without orthogonal orientation; High = More than three lines of resistance in each orthogonal direction of the building.*	☐	☐	☐	

9. Structural detailing, including connections *Low = Built before 1970; Average = Built between 1970 and 1990; High = Built after 1990 and according to standards.*	☐	☐	☐	
10. Safety of foundations *Low = Information is lacking or foundation depth is less than 1.5 m; Average = Plans and soil studies are lacking but foundation depth is more than 1.5 m; High = Plans, soil studies are available and foundation depth is more than 1.5 m.*	☐	☐	☐	
11. Irregularities in the plan (rigidity, mass, and resistance) *Low = Shapes are irregular and structure is not uniform; Average = Shapes are irregular but structure is uniform; Average = Shapes are regular, structure has uniform plan, and there are no elements that would cause torsion.*	☐	☐	☐	
12. Irregularities in height (rigidity, mass, and resistance) *Low = Height of storeys differs by more than 20% and there are significant discontinuous or irregular elements; Average = Storeys have similar heights (they differ by less than 20% but more than 5%) and there are few discontinuous or irregular elements; High = Storeys of similar height (they differ by less than 5%); there are no discontinuous or irregular elements.*	☐	☐	☐	
13. Structural resilience to various phenomena (meteorological, geological, among others) Estimate structural behavior in response to different hazards or dangers, other than earthquakes. *Low = Low structural resilience to natural hazards present at the site fo the hospital; Average = Satisfactory structural resilience; High = Excellent structural resilience.*	☐	☐	☐	

Comments on the results of Form 2, Module 2:

.....

.....

.....

.....

.....

.....

.....

.....

.....

Name/signature of evaluator.....

3. Elements related to non-structural safety

Non-structural elements do not form part of the load-bearing system of the building. They include architectural components, equipment, and systems that are necessary for the operation of the building.

3.1 Critical systems	Safety level			OBSERVATIONS
	LOW	AVERAGE	HIGH	
3.1.1 Electrical system				
14. Generator has capacity to meet 100% of demand Verify that the generator begins to operate within seconds of the hospital losing power, covering power demands for the entire hospital, particularly in the emergency department, intensive care unit, sterilization unit, operating theatres, etc. *Low = Generator can only be started manually or covers 0–30% of demand; Average = Generator starts automatically in more than 10 seconds or covers 31%–70% of demand; High = Generator starts automatically in less than 10 seconds and covers 71%–100% of demand.*	☐	☐	☐	
15. Regular tests of generator performance are carried out in critical areas Determine the frequency of generator performance tests that have satisfactory results. *Low = Tested every 3 months or more; Average = Tested every 1 to 3 months; High = Tested at least monthly.*	☐	☐	☐	
16. Generator protected from damage due to natural phenomena *Low = No; Average = Partially; High = Yes.*	☐	☐	☐	
17. Safety of electrical equipment, cables, and cable ducts *Low = No; Average = Partially; High = Yes.*	☐	☐	☐	
18. Redundant system for local electric power supply *Low = No; Average = Partially; High = Yes.*	☐	☐	☐	
19. Protection for control panel, overload breaker switch, and cables Check the accessibility as well as condition and operation of the central electrical control panel. *Low = No; Average = Partially; High = Yes.*	☐	☐	☐	
20. Lighting system for critical areas of the hospital Review lighting for emergency unit, intensive care unit, operating theatres, etc., testing the level of lighting in rooms and function of lighting fixtures. *Low = No; Average = Partially; High = Yes.*	☐	☐	☐	
21. External electrical systems installed on hospital grounds Verify the existence and capacity of external substations that provide power to the hospital. *Low = No electrical substations installed on hospitals grounds; Average = Substations installed but do not provide enough power to hospital; High = Electrical substations installed and provide enough power to the hospital.*	☐	☐	☐	

3.1.2 Telecommunications system				
22. Condition of antennas and antenna bracing Verify the condition of antennas and their bracing/supports. *Low = Poor or does not exist; Average = Satisfactory; High = Good.*	☐	☐	☐	
23. Condition of low-voltage systems (Internet and telephone connections/cables) Verify that cables are properly connected in strategic areas to avoid system overload. *Low = Poor or does not exist; Average = Satisfactory; High = Good.*	☐	☐	☐	
24. Condition of alternative communications systems Verify the condition of other communications systems: radio communications, satellite telephone, Internet, etc. *Low = Poor or does not exist; Average = Satisfactory; High = Good.*	☐	☐	☐	
25. Condition of anchors and braces for telecommunications equipment and cables Verify that telecommunications equipment (radios, satellite telephone, video conferencing system, etc.) is anchored for increased security. IF THE SYSTEM DOES NOT NEED ANCHORS OR BRACING, LEAVE BOXES BLANK. *Low = Poor; Average = Satisfactory; High = Good.*	☐	☐	☐	
26. Condition of external telecommunications systems installed on hospital grounds Verify that external telecommunications systems do not interfere with communications of the hospital. *Low = External telecommunications systems cause major interference with hospital communications; Average = External telecommunications system cause moderate interference with hospital communications; High = External communications cause no interference with hospital communications.*	☐	☐	☐	
27. Site has adequate conditions for telecommunications systems *Low = Poor or does not exist; Average = Satisfactory; High = Good.*	☐	☐	☐	
28. Safety of internal communications systems Verify the condition of loudspeakers, public address system, speaker systems, etc. *Low = Poor or does not exist; Average = Satisfactory; High = Good.*	☐	☐	☐	
3.1.3 Water supply system				
29. Water tank has permanent reserve that is sufficient to provide at least 300 litres daily, per bed, for 72 hours Verify that water storage is sufficient to satisfy user demand for three days. *Low = Sufficient for 24 hours or less; Average = Sufficient for more than 24 hours but less than 72 hours; High = Guaranteed to cover at least 72 hours.*	☐	☐	☐	
30. Water storage tanks are protected and in secure locations Visit the water tanks to determine the safety of the installations and of the site. *Low = The site is susceptible to structural or non-structural failure; Average = Failure would not cause collapse of tank; High = Low possibility of functional failure.*	☐	☐	☐	

31. Alternative water supply to major distribution network Identify the agency or mechanism to supply or restore water service to the hospital should the public water system fail. *Low = Provides less than 30% of demand; Average = Provides 30% to 80% of demand; High = Provides more than 80% of daily demand.*	☐	☐	☐	
32. Condition of water distribution system Verify condition and proper performance of water distribution system, including storage tanks, valves, pipes, and connections. *Low = Less than 60% are in good operational condition; Average = Between 60% and 80% are in good condition; High = Above 80% are in good condition.*	☐	☐	☐	
33. Supplementary pumping system Identify the existence and operation of the supplementary pumping system in case water supply is interrupted. *Low = There is no back-up pump and operational capacity does not meet daily demand; Average = All pumps are in satisfactory condition; High = All pumps and back-up systems are operational.*	☐	☐	☐	
3.1.4 Fuel storage (gas, gasoline, diesel)				
34. Fuel tanks have at least 5-day capacity Verify that the hospital has fuel storage tanks of adequate size and safety. *Low = Fuel storage is not secured and has less than 3-day fuel capacity; Average =Fuel storage has some security and has 3-5 days fuel capacity; High = Fuel storage is secure and has capacity for 5 or more days.*	☐	☐	☐	
35. Fuel tanks and/or cylinders are anchored and in a secure location *Low = There are no anchors and the tank enclosure is unsafe; Average = Anchors are inadequate; High = Anchors are in good condition and the tank enclosure is adequate.*	☐	☐	☐	
36. Safe location of fuel storage Verify that the tanks containing combustible liquids are accessible but at a safe distance from the hospital. *Low = There is risk of failure and that tanks are not accessible; Average = One of the two conditions have been met; High = The fuel storage tanks are accessible and they are located in a secure site.*	☐	☐	☐	
37. Safety of the fuel distribution system (valves, hoses, and connections) *Low = Less than 60% of system is in good operational condition; Average = between 60% and 80% of system is in good operational condition; High = More than 80% of system is in good operational condition.*	☐	☐	☐	
3.1.5 Medical gases (oxygen, nitrogen, etc.)				
38. Sufficient medical gas storage for minimum of 15-day supply *Low = Less than 10-day supply; Average = Supply for between 10 and 15 days; High = Supply for at least 15 days.*	☐	☐	☐	
39. Anchors for medical gas tanks, cylinders, and related equipment *Low = Anchors are lacking; Average = Quality of anchors is inadequate; High = Anchors are of good quality.*	☐	☐	☐	
40. Availability of alternative sources of medical gases *Low = Alternative sources are lacking or are below standard; Average = Alternative sources exist but are in satisfactory condition; High = Alternative sources exist and are in good condition.*	☐	☐	☐	
41. Appropriate location for storage of medical gases *Low = Storage is not accessible; Average = Storage is accessible but hazards exist; High = Storage is accessible and there are no hazards.*	☐	☐	☐	

42. Safety of medical gas distribution system (valves, pipes, connections) *Low = Less than 60% of system is in good working condition; Average = Between 60% and 80% of system is in good working condition; High = More than 80% of system is in good working condition.*	☐	☐	☐	
43. Protection of medical gas tanks and/or cylinders and related equipment *Low = No areas are used exclusively for this equipment and there are no qualified personnel to operate it; Average = Areas are used exclusively for this equipment but personnel are not trained to operate it; High = There are areas used exclusively for this equipment and it is operated by qualified personnel.*	☐	☐	☐	
44. Adequate safety in storage areas *Low = No areas are reserved for storage of medical gases; Average = Areas are reserved for storage of medical gases but safety measures are inadequate; High = There are areas reserved for storage of medical gases and the site does not present risks.*	☐	☐	☐	
3.2 Heating, ventilation, and air-conditioning (HVAC) systems in critical areas	**Safety level**			**OBSERVATIONS**
	LOW	AVERAGE	HIGH	
45. Adequate supports for ducts and review of flexibility of ducts and piping that cross expansion joints *Low = Supports are lacking and connections are rigid; Average = Supports are present **or** connections are flexible; High = Supports are present and connections are flexible.*	☐	☐	☐	
46. Condition of piping, connections, and valves *Low = Poor; Average = Satisfactory; High = Good.*	☐	☐	☐	
47. Condition of anchors for heating and/or hot water equipment *Low = Poor; Average = Satisfactory; High = Good.*	☐	☐	☐	
48. Condition of anchors for air-conditioning equipment *Low = Poor; Average = Satisfactory; High = Good.*	☐	☐	☐	
49. Location of enclosures for HVAC equipment *Low = Poor; Average = Satisfactory; High = Good.*	☐	☐	☐	
50. Safety of enclosures for HVAC equipment *Low = Poor; Average = Satisfactory; High = Good.*	☐	☐	☐	
51. Operating condition of HVAC equipment (boiler, air-conditioning systems, exhaust, etc.) *Low = Poor; Average = Satisfactory; High = Good.*	☐	☐	☐	
3.3 Office and storeroom furnishings and equipment (fixed and movable) including computers, printers, etc.	**Safety level**			**OBSERVATIONS**
	LOW	AVERAGE	HIGH	
52. Anchors for shelving and safety of shelf contents Verify that shelves are anchored to the walls and/or are braced and that contents are secured. *Low = Shelving is not attached to walls; Average = Shelving is attached but contents are not secured; High = Shelving is attached and contents are secured.*	☐	☐	☐	
53. Safety of computers and printers Verify that computer tables are anchored and table wheels are locked. *Low = Poor; Average = Satisfactory; High = Good or does not require anchor.*	☐	☐	☐	

54. Condition of office furnishings and other equipment Check anchors and/or bracing on furnishings in offices. *Low = Poor; Average = Satisfactory; High = Good or does not require anchor.*	☐	☐	☐	
3.4 Medical and laboratory equipment and supplies used for diagnosis and treatment	**Safety level**			**OBSERVATIONS**
	LOW	AVERAGE	HIGH	
55. Medical equipment in operating theatres and recovery rooms Verify that lamps, equipment for anaesthesia, and surgical tables are operational and that table or cart wheels are locked. *Low = The equipment is in poor condition or it is not secured; Average = The equipment is in fair condition or not properly secured; High = Equipment is in good condition and is secured.*	☐	☐	☐	
56. Condition and safety of radiology and imaging equipment Verify that the X-ray and imaging equipment is in good condition and is secured. *Low = The equipment is in poor condition or it is not secured; Average = The equipment is in fair condition or not properly secured; High = Equipment is in good condition and is secured.*	☐	☐	☐	
57. Condition and safety of laboratory equipment *Low = The equipment is in poor condition or it is not secured; Average = The equipment is in fair condition or not properly secured; High = Equipment is in good condition and is secured.*	☐	☐	☐	
58. Condition and safety of medical equipment in emergency services unit *Low = The equipment is in poor condition or it is not secured; Average = The equipment is in fair condition or not properly secured; High = Equipment is in good condition and is secured.*	☐	☐	☐	
59. Condition and safety of medical equipment in intensive or intermediate care unit *Low = The equipment is in poor condition or it is not secured; Average = The equipment is in fair condition or not properly secured; High = Equipment is in good condition and is secured.*	☐	☐	☐	
60. Condition and safety of equipment and furnishings in the pharmacy *Low = The equipment is in poor condition or it is not secured; Average = The equipment is in fair condition or not properly secured; High = Equipment is in good condition and is secured.*	☐	☐	☐	
61. Condition and safety of equipment in the sterilization unit *Low = The equipment is in poor condition or it is not secured; Average = The equipment is in fair condition or not properly secured; High = Equipment is in good condition and is secured.*	☐	☐	☐	
62. Condition and safety of medical equipment for neonatal care *Low = The equipment is lacking, is in poor condition, or is not secured; Average = The equipment is in fair condition or not properly secured; High = Equipment is in good condition and is secured.*	☐	☐	☐	
63. Condition and safety of medical equipment and supplies for burn management *Low = The equipment is lacking, is in poor condition, or it is not secured; Average = The equipment is in fair condition or not properly secured; High = Equipment is in good condition and is secured.*	☐	☐	☐	
64. Condition and safety of medical equipment for nuclear medicine and radiation therapy IF THE HOSPITAL DOES NOT HAVE THESE SERVICES, LEAVE BOXES BLANK. *Low = The equipment is lacking, is in poor condition, or it is not secured; Average = The equipment is in fair condition or not properly secured; High = Equipment is in good condition and is secured.*	☐	☐	☐	
65. Condition and safety of medical equipment in other services *Low = More than 30% of equipment is at risk of material or functional failure and/or equipment puts the entire service's operation at direct or indirect risk; Average = Between 10% and 30% of equipment is at risk of loss; High = Less than 10% of equipment is at risk of loss.*	☐	☐	☐	

66. Anchors for shelving and safety of medical contents *Low = Shelves are anchored or shelf contents are secured in less than 20% of cases; Average = Shelves are anchored or shelf contents are secured in 20% to 80% of cases; High = More than 80% of shelves are anchored and the contents of shelves are secured (or shelving and contents do not require anchors).*	☐	☐	☐	
3.5 Architectural elements	**Safety level**			**OBSERVATIONS**
	LOW	AVERAGE	HIGH	
67. Condition and safety of doors and entrances *Low =Subject to damage and damage to element(s) would impede the performance of this and other components, systems, or operations; Average = Subject to damage but damage to element(s) would not impede function; High = No or minor potential for damage that would impede the performance of this and other components, systems, or operations.*	☐	☐	☐	
68. Condition and safety of windows and shutters *Low =Subject to damage and damage to element(s) would impede the performance of this and other components, systems, or operations; Average = Subject to damage but damage to element(s) would not impede function; High = No or minor potential for damage that would impede the performance of this and other components, systems, or operations.*	☐	☐	☐	
69. Condition and safety of other elements of the building envelope (outside walls, facings, etc.) *Low =Subject to damage and damage to element(s) would impede the performance of this and other components, systems, or operations; Average = Subject to damage but damage to element(s) would not impede function; High = No or minor potential for damage that would impede the performance of this and other components, systems, or operations.*	☐	☐	☐	
70. Condition and safety of roofing *Low =Subject to damage and damage to element(s) would impede the performance of this and other components, systems, or operations; Average = Subject to damage but damage to element(s) would not impede function; High = No or minor potential for damage that would impede the performance of this and other components, systems, or operations.*	☐	☐	☐	
71. Condition and safety of parapets (wall or railing placed to prevent falls on roofs, bridges, stairs, etc.) *Low =Subject to damage and damage to element(s) would impede the performance of this and other components, systems, or operations; Average = Subject to damage but damage to element(s) would not impede function; High = No or minor potential for damage that would impede the performance of this and other components, systems, or operations.*	☐	☐	☐	
72. Condition and safety of perimeter walls and fencing *Low =Subject to damage and damage to element(s) would impede the performance of this and other components, systems, or operations; Average = Subject to damage but damage to element(s) would not impede function; High = No or minor potential for damage that would impede the performance of this and other components, systems, or operations.*	☐	☐	☐	
73. Condition and safety of other outside elements (cornices, ornaments, etc.) *Low = Element(s) subject to damage and damage would impede the performance of this and other components, systems, or operations; Average = Element(s) subject to damage but damage would not impede function; High = No or minor potential for damage that would impede the performance of this and other components, systems, or operations.*	☐	☐	☐	

74. Safe conditions for movement outside of building *Low = Damage to structure or road and walkways will impede access to buildings or endanger pedestrians; Average = Damage to structure or road and walkways will not impede pedestrian access, but will impede vehicle access; High = No or minor potential for slight damage which will not impede pedestrian or vehicle access.*	☐	☐	☐	
75. Safe conditions for movement inside the building (corridors, stairs, elevators, exit doors, etc.) *Low = Subject to damage and damage to element(s) will impede movement inside building and endanger occupants; Average = Damage to elements will not impede movement of people but will impede movement of stretchers, wheeled equipment; High = No or minor potentional for slight damage which will not impede movement of people or wheeled equipment.*	☐	☐	☐	
76. Condition and safety of internal walls and partitions *Low = Element(s) subject to damage and damage would impede the performance of this and other components, systems, or operations; Average = Element(s) subject to damage but damage would not impede function; High = No or minor potential for damage that would impede the performance of this and other components, systems, or operations.*	☐	☐	☐	
77. Condition and safety of false or suspended ceilings IF THE HOSPITAL DOES NOT HAVE FALSE OR SUSPENDED CEILINGS, LEAVE BOXES BLANK. *Low = Element(s) subject to damage and damage would impede the performance of this and other components, systems, or operations; Average = Element(s) subject to damage but damage would not impede function; High = No or minor potential for damage that would impede the performance of this and other components, systems, or operations.*	☐	☐	☐	
78. Condition and safety of internal and external lighting systems *Low = Element(s) subject to damage and damage would impede the performance of this and other components, systems, or operations; Average = Element(s) subject to damage but damage would not impede function; High = No or minor potential for damage that would impede the performance of this and other components, systems, or operations.*	☐	☐	☐	
79. Condition and safety of fire protection system *Low = Element(s) subject to damage and damage would impede the performance of this and other components, systems, or operations; Average = Element(s) subject to damage but damage would not impede function; High = No or minor potential for damage that would impede the performance of this and other components, systems, or operations.*	☐	☐	☐	
80. Condition and safety of elevator system IF THERE ARE NO ELEVATORS, LEAVE BOXES BLANK. *Low = Element(s) subject to damage and damage would impede the performance of this and other components, systems, or operations; Average = Element(s) subject to damage but damage would not impede function; High = No or minor potential for damage that would impede the performance of this and other components, systems, or operations.*	☐	☐	☐	
81. Condition and safety of stairways *Low = Element(s) subject to damage and damage would impede the performance of this and other components, systems, or operations; Average = Element(s) subject to damage but damage would not impede function; High = No or minor potential for damage that would impede the performance of this and other components, systems, or operations.*	☐	☐	☐	
82. Condition and safety of floor coverings *Low = Element(s) subject to damage and damage would impede the performance of this and other components, systems, or operations; Average = Element(s) subject to damage but damage would not impede function; High = No or minor potential for damage that would impede the performance of this and other components, systems, or operations.*	☐	☐	☐	

83. Hospital access routes *Low = Element(s) subject to damage and damage would impede the performance of this and other components, systems, or operations; Average = Element(s) subject to damage but damage would not impede function; High = No or minor potential for damage that would impede the performance of this and other components, systems, or operations.*	☐	☐	☐	
84. Other architectural elements, including emergency signs *Low = Element(s) subject to damage and damage would impede the performance of this and other components, systems, or operations; Average = Element(s) subject to damage but damage would not impede function; High = No or minor potential for damage that would impede the performance of this and other components, systems, or operations.*	☐	☐	☐	

Comments on the results of Form 2, Module 3:

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

Name/signature of evaluator .....

4. Safety based on functional capacity of hospital

The level of preparedness of hospital staff for major emergencies and disasters as well as the level of implementation of the hospital disaster plan.

4.1 Organization of the Hospital Disaster Committee and the Emergency Operations Center. Assess the level of organization achieved by the Hospital Disaster Committee.	Level of organization			OBSERVATIONS
	LOW	AVERAGE	HIGH	
85. Committee has been formally established to respond to major emergencies or disasters Obtain a copy of the Committee's terms of reference and verify that the list of members corresponds to current personnel. *Low = Committee does not exist; Average = Committee exists but is not functioning; High = Committee exists and is functioning.*	☐	☐	☐	
86. Committee membership is multi-disciplinary Verify that the positions on the Committee are occupied by personnel from diverse disciplines (for example, hospital director, chief of nursing, maintenance engineer, head of emergency services, medical director, chief of surgery, chief of laboratory and support services, among others). *Low = 0–3 disciplines represented; Average = 4–5 disciplines represented; High = 6 or more disciplines represented.*	☐	☐	☐	
87. Each member is aware of his/her specific responsibilities Verify that members' assigned responsibilities are in writing, describing their specific roles. *Low = Responsibilities not assigned; Average = Responsibilities have been officially assigned; High = All members know and comply with their responsibilities.*	☐	☐	☐	
88. Space is designated for the hospital Emergency Operations Centre (EOC) Verify that a room has been designated for operational command and that all means of communication are present (telephone, fax, Internet, etc.). *Low = Nonexistent; Average = Space has been officially assigned; High = EOC exists and is functional.*	☐	☐	☐	
89. The EOC is in a protected and safe location Take into account accessibility, safety, and protection when checking the room used for the EOC. *Low = The room for the EOC is not in a safe location; Average = The EOC is in a safe location is but it is not easily accessible; High =The EOC is in a safe, protected, and easily accessible location.*	☐	☐	☐	
90. The EOC has a computer system and computers Verify that the EOC has Internet and intranet connections. *Low = No; Average = Incomplete; High = The EOC has all computer system requirements*	☐	☐	☐	
91. Both internal and external communications systems in the EOC function properly Determine whether the switchboard (telephone central for re-routing calls) has a paging or a public address system and the operators know the emergency codes and how to use them. *Low = Does not function or is nonexistent; Average = Partly functional; High = Complete and functional.*	☐	☐	☐	
92. The EOC has an alternative communications system Determine whether, besides the switchboard, there is an alternative communications system (e.g. cellular, two-way radio, etc.). *Low = Nonexistent; Average = Incomplete; High = Yes.*	☐	☐	☐	
93. The EOC has adequate equipment and furnishings Verify that there are desks, chairs, power outlets, lighting, water supply, and drainage. *Low = No; Average = Incomplete; High = Yes.*	☐	☐	☐	

94. An up-to-date telephone directory is available in the EOC Confirm that the directory includes all support services needed in an emergency (randomly check telephone numbers). *Low = No; Average = Directory exists but is not up-to-date; High = Available and current.*	☐	☐	☐	
95. "Action Cards" available for all personnel Verify that action cards describe the assigned duties of each hospital staff member in case of an internal or external disaster. *Low = No; Average = Insufficient (numbers and quality); High = All staff members have cards.*	☐	☐	☐	
4.2 Operational plan for internal or external disasters	**Level of implementation**			**OBSERVATIONS**
	LOW	AVERAGE	HIGH	
96. Strengthen essential hospital services The plan specifies actions to be taken before, during, and after a disaster in the hospital's essential services (emergency room, intensive care unit, sterilization unit, operating theatre, among others). *Low = Plan does not exist or exists only as a document; Average = Plan exists and personnel have been trained; High = Plan exists, personnel have been trained, and resources are in place to carry out the plan.*	☐	☐	☐	
97. Procedures to activate and deactivate the plan Verify that there are procedures for how, when, and by whom the plan is activated/ deactivated. *Low = Plan does not exist or exists only as a document; Average = Plan exists and personnel have been trained; High = Plan exists, personnel have been trained, and resources are in place to carry out the procedures.*	☐	☐	☐	
98. Special administrative procedures for disasters Verify that the plan includes procedures for contracting personnel and for procurements in case of disaster. *Low = Procedures do not exist or exist only in a document; Average = Procedures exist and personnel have been trained; High = Plan exists, personnel have been trained, and resources are in place to carry out the procedures.*	☐	☐	☐	
99. Financial resources for emergencies are budgeted and guaranteed Verify that the hospital has a specific budget for use in disaster situations. *Low = Not budgeted; Average = Funds will cover less than 72 hours; High = Funds are guaranteed for 72 hours or more.*	☐	☐	☐	
100. Procedures for expanding usable space, including the availability of extra beds The plan identifies physical spaces that can be equipped to treat mass casualties. *Low = Space for expansion has not been identified; Average = Space has been identified and personnel have been trained to carry out the expansion; High = Procedures exist, personnel have been trained, and resources are in place to carry out expansion of space.*	☐	☐	☐	
101. Procedures for admission to the emergency department The plan specifies the places and personnel responsible for carrying out triage. *Low = Procedures do not exist or exist only in a document; Average = Procedures exist and personnel have been trained; High = Procedures exist, personnel have been trained, and resources are in place to implement them.*	☐	☐	☐	

102. Procedures to expand emergency department and other critical services The plan should indicate actions needed to expand hospital services (for example, drinking water supply, power, wastewater). *Low = Procedures do not exist or exist only in a document; Average = Procedures exist and personnel have been trained; High = Procedures exist, personnel have been trained, and resources are in place to implement them.*	☐	☐	☐	
103. Procedures to protect patients' medical records The plan indicates how medical and other critical patient records can be safely moved. *Low = Procedures do not exist or exist only in a document; Average = Procedures exist and personnel have been trained; High = Procedures exist, personnel have been trained, and resources are in place to implement them.*	☐	☐	☐	
104. Regular safety inspections are conducted by the appropriate authority Note the expiration and/or refill dates of fire extinguishers and of flow tests for fire hydrants. Examine logbooks that record equipment tests and dates of inspections by civil defence personnel. *Low = Inspections do not occur; Average = Incomplete or outdated inspection; High = Inspections are complete and up-to-date.*	☐	☐	☐	
105. Procedures for hospital epidemiological surveillance Verify that the hospital's Epidemiologic Surveillance Committee has specific procedures for disaster incidents or treatment of mass casualties. *Low = Procedures do not exist or exist only in a document; Average = Procedures exist and personnel have been trained; High = Procedures exist, personnel have been trained, and resources are in place to implement them.*	☐	☐	☐	
106. Procedures for preparing sites for temporary placement of dead bodies and for forensic medicine Verify that the plan includes specific arrangements for pathology and a site for the placement of multiple cadavers. *Low = Procedures do not exist or exist only in a document; Average = Procedures exist and personnel have been trained; High = Procedures exist, personnel have been trained, and resources are in place to implement them.*	☐	☐	☐	
107. Procedures for triage, resuscitation, stabilization, and treatment *Low = Procedures do not exist or exist only in a document; Average = Procedures exist and personnel have been trained; High = Procedures exist, personnel have been trained, and resources are in place to implement them.*	☐	☐	☐	
108. Transport and logistics support Confirm that the hospital has ambulances and other official vehicles. *Low = Ambulances and vehicles for logistic support are not available; Average = There are insufficient vehicles; High = Appropriate vehicles in sufficient numbers are available.*	☐	☐	☐	
109. Food rations for hospital staff during the emergency The plan specifies actions for supplying food during the emergency and funds for these supplies are included in the budget. *Low = Nonexistent; Average = Covers less than 72 hours; High = Guaranteed for at least 72 hours.*	☐	☐	☐	
110. Duties assigned for additional personnel mobilized during the emergency *Low = Assignments do not exist or exist only in a document; Average = Duties are assigned and personnel have been trained; High = Duties are assigned, personnel have been trained, and resources are in place to mobilize the personnel.*	☐	☐	☐	

111. Measures to ensure the well-being of additional personnel mobilized during the emergency The plan identifies where emergency personnel can rest, drink, and eat. *Low = Nonexistent; Average = Measures cover less than 72 hours; High = Measures are ensured for at least 72 hours.*	☐	☐	☐	
112. Cooperative arrangements with local emergency plan There are written arrangements regarding cooperation between the hospital and community authorities. *Low = No arrangements exist; Average = Arrangements exist but are not operational; High = Arrangements exist and are operational.*	☐	☐	☐	
113. Mechanism to prepare a census of admitted patients and those referred to other hospitals The plan has specific forms that facilitate the listing of patients during emergencies. *Low = Mechanism does not exist or exists only as a document; Average = Mechanism exists and personnel have been trained; High = Mechanism exists, personnel have been trained, and resources are in place to carry out the census.*	☐	☐	☐	
114. System for referral and counter-referral of patients *Low = System does not exist or exists only as a document; Average = System exists and personnel have been trained; High = System exists, personnel have been trained, and resources are in place to carry out the plan.*	☐	☐	☐	
115. Procedures for communicating with the public and media The hospital disaster plan specifies who is responsible for communicating with the public and media in case of disaster (generally the highest person in the chain of command at the time of the event). *Low = Procedures do not exist or exist only in a document; Average = Procedures exist and personnel have been trained; High = Procedures exist, personnel have been trained, and resources are in place to implement them.*	☐	☐	☐	
116. Procedures for response during evening, weekend, and holiday shifts *Low = Procedures do not exist or exist only in a document; Average = Procedures exist and personnel have been trained; High = Procedures exist, personnel have been trained, and resources are in place to implement them.*	☐	☐	☐	
117. Procedures for the evacuation of the facility Verify procedures to evacuate patients, visitors, and staff. *Low = Procedures do not exist or exist only in a document; Average = Procedures exist and personnel have been trained; High = Procedures exist, personnel have been trained, and resources are in place to implement them.*	☐	☐	☐	
118. Emergency and other exit routes are accessible Verify that exit routes are clearly marked and free of obstacles. *Low = Exit routes are not clearly marked and many are blocked; Average = Some exit routes are marked and most are clear of obstacles; High = All exit routes are clearly marked and free of obstacles.*	☐	☐	☐	
119. Simulation exercises and drills The plan is tested regularly through simulations and drills, which are evaluated and modified as appropriate. *Low = Plans are not tested; Average = Plans are tested, but not each year; High = Plans are tested annually and updated according to the results of the exercises.*	☐	☐	☐	

4.3 Contingency plans for medical treatment in disasters	Level of implementation			OBSERVATIONS
	LOW	AVERAGE	HIGH	
120. Earthquakes, tsunamis, volcanoes, and landslides IF THESE HAZARDS DO NOT EXIST WHERE THE HOSPITAL IS LOCATED, LEAVE THE BOXES BLANK. *Low = Plan does not exist or exists only as a document; Average = Plan exists and personnel have been trained; High = Plan exists, personnel have been trained, and resources are in place to carry out the plan.*	☐	☐	☐	
121. Social conflict and terrorism *B= Low = Plan does not exist or exists only as a document; Average = Plan exists and personnel have been trained; High = Plan exists, personnel have been trained, and resources are in place to carry out the plan.*	☐	☐	☐	
122. Floods and hurricanes IF THESE HAZARDS DO NOT EXIST WHERE THE HOSPITAL IS LOCATED, LEAVE THE BOXES BLANK. *Low = Plan does not exist or exists only as a document; Average = Plan exists and personnel have been trained; High = Plan exists, personnel have been trained, and resources are in place to carry out the plan.*	☐	☐	☐	
123. Fires and explosions. *Low = Plan does not exist or exists only as a document; Average = Plan exists and personnel have been trained; High = Plan exists, personnel have been trained, and resources are in place to carry out the plan.*	☐	☐	☐	
124. Chemical accidents OR exposure to ionizing radiation *Low = Plan does not exist or exists only as a document; Average = Plan exists and personnel have been trained; High = Plan exists, personnel have been trained, and resources are in place to carry out the plan.*	☐	☐	☐	
125. Pathogens with epidemic potential *Low = Plan does not exist or exists only as a document; Average = Plan exists and personnel have been trained; High = Plan exists, personnel have been trained, and resources are in place to carry out the plan.*	☐	☐	☐	
126. Psycho-social treatment for patients, families, and health workers *Low = Plan does not exist or exists only as a document; Average = Plan exists and personnel have been trained; High = Plan exists, personnel have been trained, and resources are in place to carry out the plan.*	☐	☐	☐	
127. Control of hospital-acquired infections Request the corresponding hospital manual and verify whether control procedures are in force. *Low = Manual does not exist or exists only as a document; Average = Manual exists and personnel have been trained; High = Manual exists, personnel have been trained, and resources are available to implement measures.*	☐	☐	☐	

4.4 Plans for the operation, preventive maintenance, and restoration of critical services Measure the level of availability, accessibility, and relevance of documents that are essential when responding to an emergency.	**Level of availability**			**OBSERVATIONS**
	LOW	AVERAGE	HIGH	
128. Electric power supply and back-up generators The maintenance division should provide the operations manual for the back-up electric generator as well as preventive maintenance records. *Low = Procedures do not exist or exist only in a document; Average = Procedures exist and personnel have been trained; High = Procedures exist, personnel have been trained, and resources are in place to implement them.*	☐	☐	☐	
129. Drinking water supply The maintenance division should provide the operations manual for the water supply system as well as records on preventive maintenance and water quality control. *Low = Procedures do not exist or exist only in a document; Average = Procedures exist and personnel have been trained; High = Procedures exist, personnel have been trained, and resources are in place to implement them.*	☐	☐	☐	
130. Fuel reserves The maintenance division should provide the operations manual for fuel supplies, as well as preventive maintenance records. *Low = Procedures do not exist or exist only in a document; Average = Procedures exist and personnel have been trained; High = Procedures exist, personnel have been trained, and resources are in place to implement them.*	☐	☐	☐	
131. Medical gases The maintenance division should provide the operations manual for medical gases supply, as well as preventive maintenance records. *Low = Procedures do not exist or exist only in a document; Average = Procedures exist and personnel have been trained; High = Procedures exist, personnel have been trained, and resources are in place to implement them.*	☐	☐	☐	
132. Standard and back-up communications systems *Low = Procedures do not exist or exist only in a document; Average = Procedures exist and personnel have been trained; High = Procedures exist, personnel have been trained, and resources are in place to implement them.*	☐	☐	☐	
133. Wastewater systems The maintenance division should ensure that hospital wastewater drains into the public sewage system and does not contaminate drinking water. *Low = Procedures do not exist or exist only in a document; Average = Procedures exist and personnel have been trained; High = Procedures exist, personnel have been trained, and resources are in place to implement them.*	☐	☐	☐	
134. Solid waste management The maintenance division should provide the operations manual for solid waste management, as well as records showing waste collection and subsequent disposal. *Low = Procedures do not exist or exist only in a document; Average = Procedures exist and personnel have been trained; High = Procedures exist, personnel have been trained, and resources are in place to implement them.*	☐	☐	☐	

135. Maintenance of the fire protection system The maintenance division should provide the operations manual for the fire protection systems, as well as records showing preventive maintenance on fire extinguishers and fire hydrants. *Low = Procedures do not exist or exist only in a document; Average = Procedures exist and personnel have been trained; High = Procedures exist, personnel have been trained, and resources are in place to implement them.*	☐	☐	☐	
4.5 Availability of medicines, supplies, instruments, and other equipment for use in emergency Verify the availability of essential supplies in the event of an emergency.	**Level of availability**			**OBSERVATIONS**
	LOW	AVERAGE	HIGH	
136. Medicines Check the availability of emergency medicines. The WHO list of essential drugs can be used as a reference. *Low = Nonexistent; Average = Supply covesr less than 72 hours; High = Supply is guaranteed for at least 72 hours.*	☐	☐	☐	
137. Items for treatment and other supplies Check that the sterilization unit has a supply of sterilized materials for use in an emergency (check the supply prepared for the following day). *Low = Nonexistent; Average = Supply covers less than 72 hours; High = Supply guaranteed for at least 72 hours.*	☐	☐	☐	
138. Instruments Verify the existence and maintenance of specific instruments used in emergencies. *Low = Nonexistent; Average = Supply covers less than 72 hours; High = Supply guaranteed for at least 72 hours.*	☐	☐	☐	
139. Medical gases Verify the phone numbers and addresses of medical gas supplier and ensure availability in an emergency from the supplier. *Low = Nonexistent; Average = Supply covers less than 72 hours; High = Supply guaranteed for at least 72 hours.*	☐	☐	☐	
140. Mechanical volume ventilators The Hospital Disaster Committee should provide documentation on quantity and conditions of use of this equipment. *Low = Nonexistent; Average = Supply covers less than 72 hours; High = Supply guaranteed for at least 72 hours.*	☐	☐	☐	
141. Electro-medical equipment The Hospital Disaster Committee should provide documentation on quantity and conditions of use of this equipment. *Low = Nonexistent; Average = Supply covers less than 72 hours; High = Supply guaranteed for at least 72 hours.*	☐	☐	☐	
142. Life-support equipment *Low = Nonexistent; Average = Supply covers less than 72 hours; High = Supply guaranteed for at least 72 hours.*	☐	☐	☐	
143. Personal protection equipment for epidemics (disposable) Verify the hospital's stocks of personal protection equipment for staff working in areas of initial contact and treatment. *Low = Nonexistent; Average = Supply covers less than 72 hours; High = Supply guaranteed for at least 72 hours.*	☐	☐	☐	

144. Crash cart for cardiopulmonary arrest The Hospital Disaster Committee should provide documentation on quantity, conditions of use, and locations of crash carts for treatment of cardiopulmonary arrest. *Low = Nonexistent; Average = Supply covers less than 72 hours; High = Supply guaranteed for at least 72 hours.*	☐	☐	☐	
145. Triage tags and other supplies for managing mass casualties The emergency department distributes and uses triage tags in case of mass casualties. Evaluate the supply in terms of the maximum capacity of the hospital. *Low = Nonexistent; Average = Supply covers less than 72 hours; High = Supply guaranteed for at least 72 hours.*	☐	☐	☐	

Comments on the results of Form 2, Module 4:

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

Name/signature of evaluator .....