

Methodological Note - 2020 Calculation of Yemen Shelter Severity Scores

This methodological note explains how the **2020 Shelter Severity Scores**, highlighting Shelter and NFI needs per district in Yemen, were calculated as part of the Shelter Secondary Data Review (SDR), conducted by REACH on behalf of the Yemen Shelter Cluster. Since the calculations were not linked to a single statistically representative survey and there are some information gaps in the reviewed literature, the severity scores should be considered as **indicative** estimates.

Determination of Severity Score at District level

The determination of severity scores at district level is based on an adaptation of the *Shelter Cluster's original Severity Categorization for the Yemen HNO 2020*. Since the Yemen HNO has not been produced to date, the original categorisation was adapted in consultation with the Yemen Shelter Cluster depending on the availability of quality data (see Table 1). Certain indicators were prioritised based on the Shelter Cluster's contextual understanding of the indicator's influence on Shelter-related needs.

Only assessments conducted by NGOs or UN agencies were reviewed to allow for a minimum quality of data. In total, REACH reviewed the following nine assessments for the calculation of severity scores:

1. REACH CCCM Site Reporting Analysis (available information for 471 IDP Sites across 56 districts and 10 governorates)
2. REACH Flood Susceptibility calculations
3. REACH Weatherization calculations
4. UNHCR INAT/PMT Analysis (available information for 171 districts)
5. Civilian Impact Monitoring Project (CIMP) infrastructure damage data (country-wide assessment with reported incidents for 111 districts)
6. OCHA 2020 population estimates
7. CCCM Master List for IDP Sites (available information for 175 districts)
8. Shelter Cluster Severity Score calculations 2019
9. Shelter Cluster Refugee & IDP data 2018-2020

The findings of the SDR were weighted and aggregated per district according to the following steps:

- For each district, each indicator was calculated based on available secondary data.
- Following, each indicator was assigned a severity score based on the 6-point severity scale (see Table 1)

- **Total severity scores** per district were calculated in a two-step process:
 - All indicators were aggregated based on their unique weight. In case information for certain indicators were missing, the remaining indicators were inflated proportionally.
 - To bolster the calculations in case of missing information, total 2019 Shelter Severity scores per district were used as a baseline. Depending on the aggregated weight of available 2020 indicators, 2020 Shelter severity scores were merged with 2019 Shelter Severity Scores using different weights:

Aggregated weight of 2020 indicators	Weight of 2019 Severity Scores
>=30%	70%
>=40%	60%
>=50%	50%
>=60%	40%
>=70%	30%
=>80%	20%
>=90%	10%

Example: District YE0000 has a 2020 severity score of 1.7, calculated with seven available indicators (having an aggregated weight of 0.41%). The 2019 Shelter Severity Score for district YE0000 was 5.

Adjusted 2020 severity score = $(1.7 \times 0.4) + (5 \times 0.6) = 3.68 = \underline{4}$

Additional notes

Each assessment was related to one specific indicator, thus there were no instances where multiple datasets had to be combined for one indicator.

Overall, all assessments, except REACH CCCM Site Reporting Analysis and CCCM Master List (referring to IDP needs only), include information applicable to the host population, IDPs and returnees. Accordingly, while most indicators speak to the needs for all population groups, some are specific to IDP shelter-related needs (see Table 1).

Review of proposed 2020 Shelter Severity Scores

To allow for inclusion of expert judgment, the calculated severity scores were submitted to the Shelter Cluster for review. This review included a comparison between the 2019 and 2020 figures, and comprised an informed discussion involving the Shelter Cluster to determine if suggested severity scores reflect the current situation on the ground.

Table 1: Adapted Shelter Cluster's Severity Categorisation for HNO 2020 (February 2020)

Nr	Indicators	Thematic Areas	No need for external humanitarian assistance		Need for humanitarian assistance		Acute and immediate need for humanitarian assistance			POTENTIAL SOURCES	Assessed population groups	WEIGHT
			0	1	2	3	4	5	6			
			Minimal severity	Minor severity	Moderate severity	Significant severity	Major severity	Severe severity	Critical severity			
1	Proportion of IDPs/ returnees and Host Population	Shelter, NFI	Normal situation. No IDPs or returnees.	IDPs and/or returnees constitute (>0%, <4%) of population	IDPs and/or returnees constitute (>=4%, <7%) of population	IDPs and/or returnees constitute (>=7, <10%) of population	IDPs and/or returnees constitute (>=10, <12%) of population	IDPs and/or returnees constitute (>=12, <16%) of population	IDPs and/or returnees constitute (>=16%) of population	OCHA population estimates + SC refugee/IDP data	IDP/returnee /Host population	10%
2	Percentage of populated areas susceptible to floods ¹	Shelter, NFI	No (0%) populated areas within the district susceptible to floods	(>=0%, <10%) of populated areas within the district susceptible to floods	(>=10%, <25%) of populated areas within the district susceptible to floods	(>=25, <50%) of populated areas within the district susceptible to floods	(>=50, <75%) of populated areas within the district susceptible to floods	(>=75, <90%) of populated areas within the district susceptible to floods	Majority (>= 90%) of populated areas within the district susceptible to floods	REACH Flood susceptibility calculations	IDP/returnee /Host population	6%
3a	Presence of extreme summer temperatures (% of summer days in populated areas above 43°C)	NFI	No (0%) populated areas within the district susceptible to extreme summer temperatures	(>0%, <10%) of populated areas within the district susceptible to extreme summer temperatures	(>=10%, <25%) of populated areas within the district susceptible to extreme summer temperatures	(>=25, <50%) of populated areas within the district susceptible to extreme summer temperatures	(>=50, <75%) of populated areas within the district susceptible to extreme summer temperatures	(>=75, <90%) of populated areas within the district susceptible to extreme summer temperatures	(>= 90%) of populated areas within the district susceptible to extreme summer temperatures	REACH weatherization calculation	IDP/returnee /Host population	2%
3b	Presence of extreme winter temperatures (% of winter nights in populated areas below 10°C)	NFI	No (0%) populated areas within the district susceptible to extreme winter temperatures	(>0%, <10%) of populated areas within the district susceptible to extreme winter temperatures	(>=10%, <25%) of populated areas within the district susceptible to extreme winter temperatures	(>=25, <50%) of populated areas within the district susceptible to extreme winter temperatures	(>=50, <75%) of populated areas within the district susceptible to extreme winter temperatures	(>=75, <90%) of populated areas within the district susceptible to extreme winter temperatures	(>= 90%) of populated areas within the district susceptible to extreme winter temperatures	REACH weatherization calculations	IDP/returnee /Host population	2%
4	Percentage of IDP households reporting access to general market (Goods)	Shelter, NFI	All (100%) IDP households report access to markets in site or in close proximity	Almost all (>=90%, 100%) IDP households report access to markets in site or in close proximity	Over three quarters (>=75%, <90%) of IDP households report access to markets in site or in close proximity	Over half (>=50%, <75%) of IDP households report access to markets in site or in close proximity	More than a quarter (>=25%, <50%) of IDP households report access to markets in site or in close proximity	Less than a quarter (>=10%, <25%) of IDP households report access to markets in site or in close proximity	Very few (>=0%, <10%) of IDP households report access to markets in site or in close proximity	REACH CCCM Site Reporting	IDP	2%

¹ The flood susceptibility analysis was informed by satellite images to measure Yemen's hydrological, physical and topographical parameters. Calculations were based on a 1-7 susceptibility scale.

5	Percentage of households whose primary shelter type is instable or in poor condition	Shelter	All (100%) of households are living in adequate shelter	(>0%, <20%) of households whose primary shelter type is instable or in poor condition	(>=20%, <40%) of households whose primary shelter type is instable or in poor condition	(>=40%, <60%) of households whose primary shelter type is instable or in poor condition	(>=60, <80%) of households whose primary shelter type is instable or in poor condition	(>=80, <90%) of households whose primary shelter type is instable or in poor condition	(>=90%) of households whose primary shelter type is instable or in poor condition	UNHCR INAT/PMT	IDP/returnee/Host population	24%
6a	Percentage of households impacted by armed violence ²	Shelter	No incidents recorded or civilian houses impacted	(>0%, <1%) civilian houses impacted by armed violence	(>=1%, <2%) civilian houses impacted by armed violence	(>=2%, <6%) civilian houses impacted by armed violence	(>=6%, <12%) civilian houses impacted by armed violence	(>=12%, <25%) civilian houses impacted by armed violence	(>=25%) civilian houses impacted by armed violence	CIMP	IDP/returnee/Host population	2%
6b	Percentage of the population living in locations where damage to homes is one of the most serious shelter issues ³	Shelter	No (0%) of population having damage to homes as one of most serious shelter issues	(>0%, <6%) of population living in locations where damage to homes as one of most serious shelter issues	(>=6%, <10%) of population living in locations where damage to homes as one of most serious shelter issues	(>=10, <15%) of population living in locations where damage to homes as one of most serious shelter issues	(>=15, <24%) of population living in locations where damage to homes as one of most serious shelter issues	(>=24, <50%) of population living in locations where damage to homes as one of most serious shelter issues	(>=50%) of population living in locations where damage to homes as one of most serious shelter issues	Shelter Severity Scores 2019	IDP/returnee/host population	12%
7	Percentage of people living in IDP hosting sites relative to total district population	Shelter	None (0%) of households are living in IDP hosting sites	Very few (>0%, <10%) households are living in IDP hosting sites	Less than a quarter (>=10%, <20%) of households are living in IDP hosting sites	More than a quarter (>=20%, <40%) of households are living in IDP hosting sites	Over half (>=40%, <60%) of households are living in IDP hosting sites	Over three quarters (>=60%, <80%) of households are living in IDP hosting sites	Almost all (>=80, <=100%) households are living in IDP hosting sites	CCCM Master List for IDP Sites	IDP	7%
8	Percentage of IDP households who have basic services (Electricity, cooking fuel) in sites or close proximity	NFI	All (100%) IDP households have basic services available in site or in close proximity	Almost all (>=90%, 100%) IDP households have basic services available in site or in close proximity	Over three quarters (>=75%, <90%) of IDP households have basic services available in site or in close proximity	Over half (>=50%, <75%) of IDP households have basic services available in site or in close proximity	More than a quarter (>=25%, <50%) of IDP households have basic services available in site or in close proximity	Less than a quarter (>=10%, <25%) of IDP households have basic services available in site or in close proximity	Very few (>=0%, <10%) of IDP households have basic services available in site or in close proximity	CCCM Site Reporting	IDP	2%

² Figures were calculated using 2020 CIMP data (01 January 2019 – 22 April 2020). Calculations were based on dividing the number of civilian houses reported to be impacted by armed violence by the number of households per district (based on OCHA 2020 population figures). It is assumed that one household lives in one house with an average household size of seven. Moreover, the number of civilian houses impacted are cumulative figures, and may include houses that have been hit multiple times.

³ Figures were calculated using 2019 Shelter severity scores, which include data up until end of 2018.

9	Percentage of IDP households with access to adequate sectoral services in shelters/sites or close proximity ⁴	Shelter, NFI	All IDP households (100%) have access to adequate sectoral services	Almost all (>=90, <100%) IDP households have access to adequate sectoral services	Over three quarters (>=75%, <90%) of IDP households have access to adequate sectoral services	Over half (>=50%, <75%) of IDP households have access to adequate sectoral services	More than a quarter (>=25%, <50%) of IDP households have access to adequate sectoral services	Less than a quarter (>=10%, <25%) of IDP households have access to adequate sectoral services	Very few (>=0%, <10%) IDP households have access to adequate sectoral services	CCCM Site Reporting	IDP	1%
10	Percentage of households facing eviction threats	Shelter	No households are facing eviction threats	Very few (>=1%, <10%) households are facing eviction threats	Less than a quarter (>=10%, <20%) of households are facing eviction threats	More than a quarter (>=20%, <40%) of households are facing eviction threats	Over half (>=40%, <60%) of HH are facing eviction threats	Over three quarters (>=60%, <80%) of households are facing eviction threats	Almost all (>=80, <=100%) of households are facing eviction threats	UNHCR INAT/PMT	IDP/returnee/Host population	10%
11	Percentage of households who can afford to pay rent regularly	Shelter	All households can afford to pay rental accommodation	(>= 80%, <100%) of households can afford to pay rental accommodation	(>= 60, <80%) of households can afford to pay rental accommodation	(>=40, <60%) of households can afford to pay rental accommodation	(>=20, <40%) of households can afford to pay rental accommodation	(>=10%, <20%) of households can afford to pay rental accommodation	(>=0%, <10%) of the households can afford to pay rental accommodation	UNHCR INAT/PMT	IDP/returnee/Host population	20%

⁴ Adequacy refers to at least 70% of population having access to functional essential services. Essential sectoral services include waste disposal, WASH, shelter, food, nutrition, protection, medical, NFI, cash assistance, livelihood, RRRM and education services.