

# UKRAINE

## DAMAGE ASSESSMENTS Learning Needs ASSESSMENT 2025

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# LIST OF ACRONYMS

The following acronyms are used throughout this report:

<b>BoQ</b>	Bill of Quantities
<b>CHS</b>	Core Humanitarian Standard
<b>EWB</b>	Engineers Without Borders
<b>HNRP</b>	Humanitarian Needs and Response Plan
<b>LNA</b>	Learning Needs Assessment
<b>MHPSS</b>	Mental Health and Psychosocial Support
<b>NGO</b>	Non-Governmental Organisation
<b>NFI</b>	Non-Food Item
<b>NDT</b>	Non-Destructive Testing
<b>OCHA</b>	United Nations Office for the Coordination of Humanitarian Affairs
<b>QA</b>	Quality Assurance
<b>QC</b>	Quality Control
<b>RDNA</b>	Rapid Damage and Needs Assessment
<b>SNFI</b>	Shelter and Non-Food Items
<b>SoW</b>	Scope of Work
<b>UN</b>	United Nations
<b>WASH</b>	Water, Sanitation and Hygiene

# EXECUTIVE SUMMARY

Ukraine continues to face unprecedented levels of destruction following the full-scale Russian invasion that began in February 2022. Widespread damage to housing and critical infrastructure has created an urgent need for large-scale damage assessments and repair, rehabilitation, and reconstruction efforts. As of December 2024, total damages were estimated at US\$176 billion, with housing the most affected sector. These conditions have placed significant demands on both technical and non-technical responders involved in damage assessment and shelter-related interventions.

RedR UK has been supporting humanitarian and engineering capacity in Ukraine since 2022. This Learning Needs Assessment (LNA) was conducted to inform the adaptation and development of training programmes for responders involved in damage assessments across Ukraine, ensuring they are relevant, context-specific, and aligned with identified capacity gaps.

The LNA was primarily based on an online survey (118 respondents), with informal stakeholder discussions conducted during a field visit used to contextualise findings. Respondents included technical responders (64%), such as engineers and construction professionals, and non-technical responders (36%), including assessment officers, project managers, and community-focused staff. The survey was available in both English and Ukrainian and remained open for 18 days.

Findings indicate strong existing capacity in construction quality control, non-structural repairs, and core humanitarian principles. However, substantial gaps remain in conflict-specific technical competencies. Technical responders reported low confidence in blast effects on structures, load calculations, and retrofitting buildings for blast resistance. Non-technical responders expressed limited confidence in construction-related topics, safety measures during construction, and local building techniques. Across both groups, respondents highlighted the importance of personal safety, mental health, and coordination.

Learning preferences strongly favoured blended delivery models combining live online sessions with self-paced modules, delivered mid-week and primarily in the afternoon, with an average availability of approximately two hours per week.

This report presents the findings of the LNA and provides evidence-based recommendations for RedR UK and partners to strengthen responder capacity for damage assessments and reconstruction efforts in Ukraine. Seven priority recommendations are proposed, addressing conflict-specific technical capacity, foundational skills for non-technical responders, responder wellbeing and safety, and preferred learning delivery modalities.

## SUMMARY OF MAIN FINDINGS

### Capacity strengths

- Technical responders reported high confidence in construction quality assurance and quality control, non-structural repairs, preparation of technical documents, and rapid damage assessment methodologies.
- Non-technical responders demonstrated strong competence in core humanitarian principles, accountability, community engagement, and quality and accountability standards.
- A significant proportion of respondents across both groups have direct, hands-on experience conducting damage assessments since 2022.

### Capacity gaps

- Technical responders showed the lowest confidence in conflict-related engineering competencies, particularly:

- Retrofitting buildings to enhance blast resistance
- Load calculations and structural modelling
- Understanding blast effects on structures
- Non-technical responders reported limited confidence in:
  - Construction safety measures
  - Local building techniques and cultural considerations
  - Technical aspects of damage assessment, repair, and retrofitting
- Many responders across both groups have entered the humanitarian sector since 2022, indicating limited prior exposure to humanitarian standards and operating environments.

### Contextual and operational challenges

- Both technical and non-technical responders face high workloads, security constraints, and emotional strain due to working in an active conflict setting.
- Access to specialised assessment tools and technologies is limited, particularly for non-technical staff.
- Learning opportunities must be flexible and time-efficient due to operational pressures.

### Learning preferences

- Respondents strongly preferred blended learning approaches combining live interactive sessions with self-paced online modules.
- Most respondents could commit approximately two to five hours per week to learning.
- Preferred training days were Tuesday to Thursday, with sessions ideally scheduled in the afternoon.
- A combination of individual and group-based assignments was favoured.

## SUMMARY OF RECOMMENDATIONS

Based on the findings of this Learning Needs Assessment, seven priority recommendations are proposed to strengthen damage assessment capacity in Ukraine. These recommendations address identified technical and non-technical capacity gaps, as well as preferred modes of learning delivery.

- **Recommendation 1:**  
Strengthen advanced, conflict-specific technical capacity for engineers, with a particular focus on blast effects on structures, load calculations, and retrofitting buildings to enhance blast resistance.
- **Recommendation 2:**  
Build capacity in in-depth structural evaluation, complex repairs, and safe demolition to support decision-making that goes beyond rapid damage classification.
- **Recommendation 3:**  
Provide foundational technical training for non-technical responders involved in damage assessments, focusing on construction safety, local building techniques, and basic assessment methodologies.
- **Recommendation 4:**  
Strengthen project management and construction oversight skills for non-technical staff, including cost estimation, bills of quantities preparation, technical reporting, and quality assurance.
- **Recommendation 5:**  
Integrate personal safety, security, and mental health considerations across all training programmes to address the operational realities of working in an active conflict environment.
- **Recommendation 6:**  
Deliver training through flexible, blended learning modalities that align with respondents' availability, scheduling preferences, and access constraints.

- **Recommendation 7:**  
Adopt modular and progressive training pathways that accommodate different experience levels and support sustained capacity development over time.

## INTRODUCTION

### 1.1 BACKGROUND

Ukraine has been facing a full-scale Russian invasion since 24 February 2022, resulting in severe impacts on the population, infrastructure, and essential services. 12.7 million people are in urgent need of humanitarian assistance according to the OCHA Humanitarian Needs and Response Plan (HNRP). An estimated 3.7 million people have been internally displaced, while 6.9 million refugees have been recorded to moving to the US and Europe. The damage to infrastructure has exacerbated in the last three years, reaching a total worth of US\$176 billion between February 2022 and December 2024, as outlined in the Fourth Rapid Damage and Needs Assessment (RDNA4) conducted by the World Bank. The most affected sector is housing, with an estimated loss of US\$57.6 billion.

While a single, exhaustive public database of all local entities conducting detailed damage assessments in Ukraine is not readily available, a significant and growing capacity exists at the local level, supported by a framework of national and international collaboration. Publicly accessible reports and initiatives from the Ukrainian government, international financial institutions, and non-governmental organisations provide substantial evidence of this local capability.

At the forefront of the national effort are various Ukrainian government bodies. The Ministry for Communities, Territories and Infrastructure Development and the Ministry of Digital Transformation have been central in coordinating damage assessment through digital tools. A key example is the "Register of Damaged and Destroyed Property", which allows citizens and local authorities to document damage directly, forming a crucial grassroots-level data source.

RedR has been training thousands of responders in Ukraine since February 2022 on humanitarian and engineering skills and is continuing to do so with partners across the humanitarian and development sector.

This LNA has been carried out to inform the adaptation and development of a training programme for both technical and non-technical responders involved in damage assessments across Ukraine, it identifies prioritised topics and capacity gaps.

Ultimately, the LNA was designed to:

- Assess current capacity gaps and learning needs amongst responders to the on-going reconstruction efforts in Ukraine.
- Assess capacity strengths amongst responders involved in reconstruction efforts and recommend how humanitarian partners can best utilise these.
- Support revision and adaptation of modules for the structural detailing and blast-induced damage assessment training course for engineers in Ukraine.
- Enable RedR UK to respond to the needs of the response in ways that are most appropriate and relevant.

All data collected as part of this Learning Needs Assessment was gathered in accordance with ethical research principles. Participation in the survey and interviews was voluntary, and informed consent was obtained from all participants prior to data collection. Survey respondents were required to confirm consent through an opt-in mechanism before proceeding.

No personally identifiable information has been included in this report. Data has been securely stored and analysed in aggregated form to ensure confidentiality and anonymity. Findings are presented solely for the purpose of improving learning and capacity-building support for responders involved in damage assessments in Ukraine.

## 1.2 METHODOLOGY

The primary LNA data was collected using a branched online survey created by RedR UK’s Engineering in Emergencies team utilising previous LNAs and past iterations of Ukraine damage assessment trainings. The survey was disseminated through RedR’s contacts in Ukraine, including Engineers Without Borders – Denmark (EWB), both the national Shelter & Non-food Items (SNFI) cluster in Ukraine and the sub-cluster south, previous training participants in Ukraine had received the online survey link, and multiple stakeholders who RedR’s Associate Director of Engineering and Climate Change met during a field visit, which informed contextual understanding but did not form a primary data source for analysis.

The survey was open for 18 days between 26<sup>th</sup> June and 14<sup>th</sup> July and was provided in both English and Ukrainian. A total of 118 responses were received, 76 of which self-described as technical responders, and 42 as non-technical responders – *more details of respondent profiles in the next section*. By selecting either technical or non-technical options, a different set of questions was open to each respective group.

Data was analysed using Microsoft Forms dashboard, and Excel. While most survey questions were quantitative in nature, several sections allowed respondents to provide qualitative narrative responses. It was used to identify priority training needs for both respondent groups, as well as previous experiences, and preferred training modalities.

## 1.3. RESPONDENT PROFILES

This section summarises the characteristics of survey respondents, including their geographic distribution, organisational affiliation, level of experience, and role in relation to damage assessment activities. These profiles provide important context for interpreting the learning needs identified and ensure that recommendations are appropriately tailored to the audience.

Responders were asked where their primary place of operation in Ukraine is, the survey included all 24 provinces (oblasts) of Ukraine, however the survey responders only accounted for 15 locations, with the majority of responses coming from Kharkiv and Mykolaiv (21 responses), and Dnipro (20 responses), figure 1 contains the detailed breakdown of responses by region.

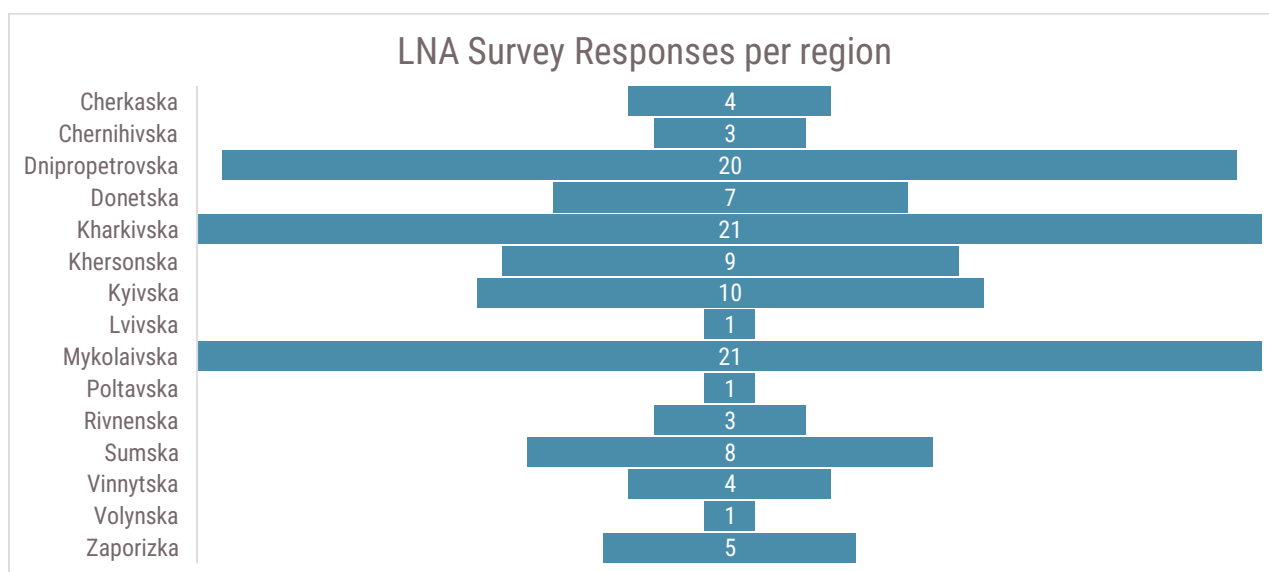


Figure 1: LNA Survey Responses per region

Whilst the survey sample is representative to some severely affected locations when compared to mapping data from the World Bank RDNA4, no responses have been received from the affected oblasts of Luhansk (located in southeast Ukraine, adjacent to the Russian border), or Odessa (located in the southwest of Ukraine).

Below is a spatial comparison between the rate of LNA Survey responses received and RDNA4 data outlining the estimated reconstruction needs of Ukraine, which reflects the extent of damage in each region.

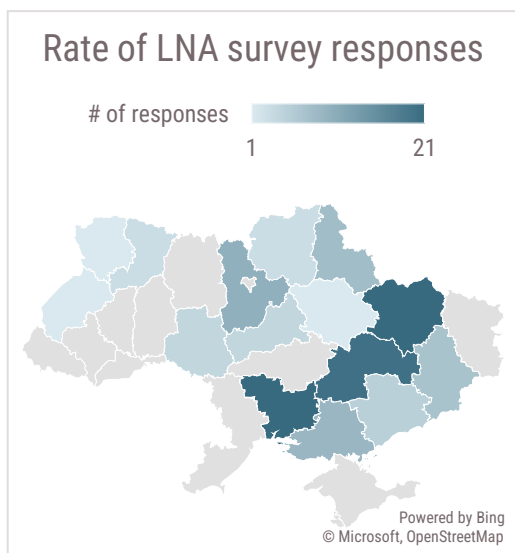


Figure 2: Rate of LNA survey responses

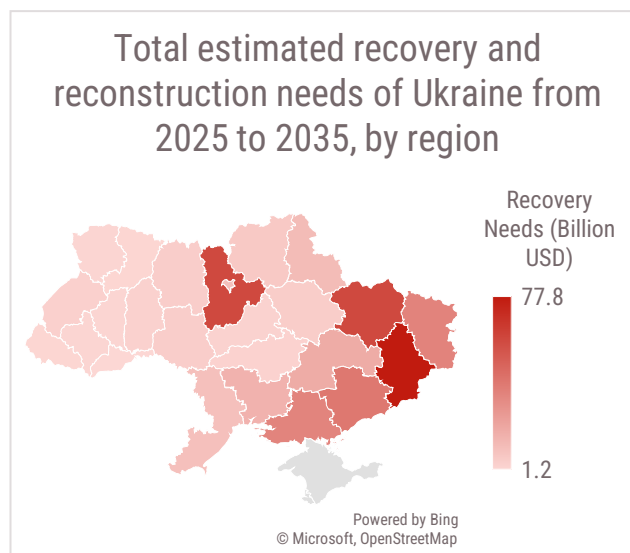


Figure 3: Reconstruction needs of Ukraine 2025-2035

When asked about type of organisation that responders work for, the majority (65%) mentioned working for Non-Governmental Organisations (NGOs), followed by 11% working for Community-based organisations (CBOs), 4% at United Nations agencies, 3% each for governmental and Red Crescent societies, and less than 1% each working for academic institutions and private sector. 15 respondents (13%) selected the 'Other' option, some of which work in local government, or local community groups.

Table 1: Respondents type of organisation

Type of organisation	# of respondents
Government	3
NGO	77
Red Cross / Red Crescent	3
Academic Institution	1
Private Sector	1
Community-based organisation	13
UN Agency	5
Other	15

In terms of respondents level of professional experience, the majority of respondents (42%) said they have over 10 years of experience, this is likely because of the way the survey was distributed (i.e. through the clusters where experienced senior individuals usually sit), however, as outlined later in this report, many respondents have joined the humanitarian sector in the last 3 years – since the Russian 2022 attacks; followed by professionals with 4 to 10 years of experience (19%), professionals with 1 to 4 years of experience (18%), recent graduates with less than a year of experience (5%), and finally individuals with no experience (16%); no students responded to the survey.

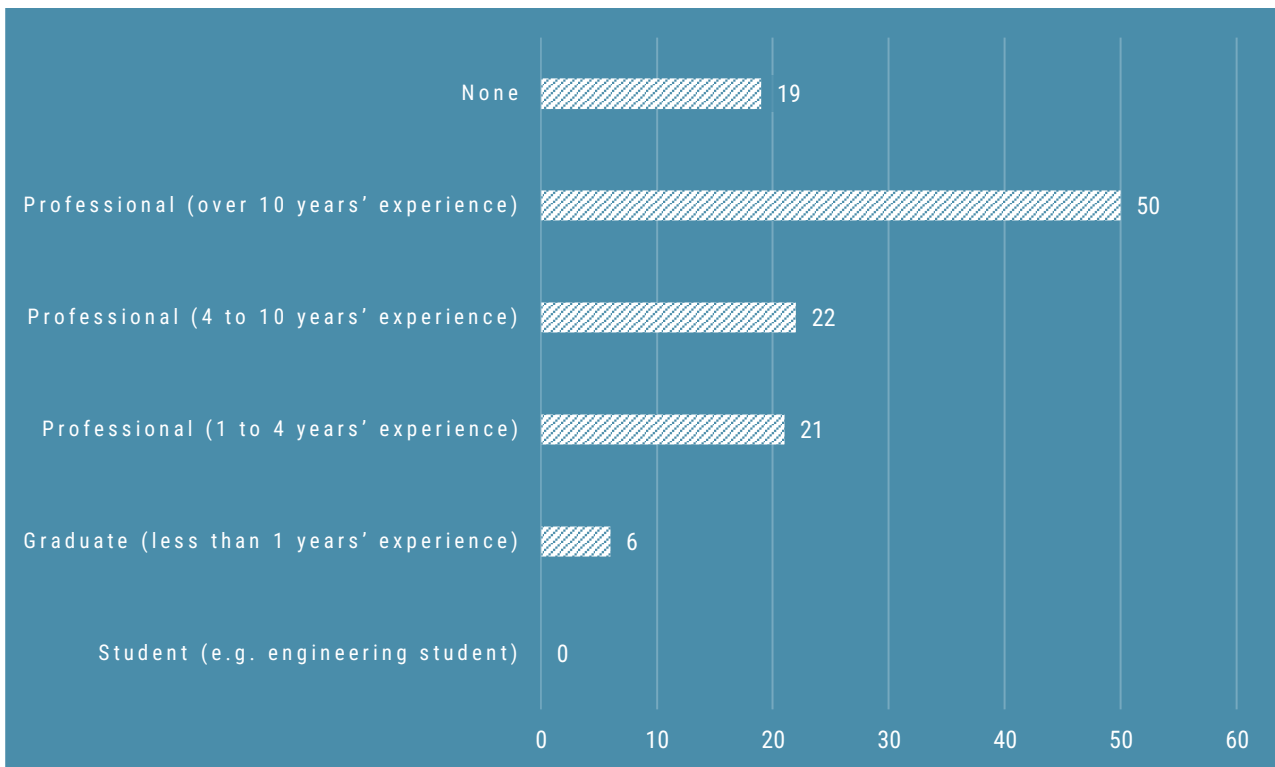


Figure 4: Respondents' level of expertise

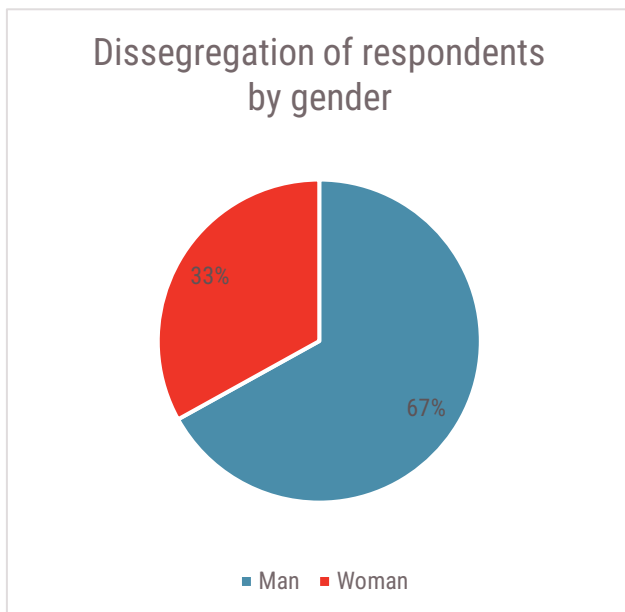


Figure 5: Respondents' gender desegregation

67% of respondents identified as men, and the remaining 33% identified as women, with no respondent identifying as non-binary or preferring not to say. The ratio of 2:1 between men to women has not changed since RedR's LNA from 2023, which cites "it is typical of engineering to be weighted towards men".

Finally, the survey categorised respondents as 'Technical Responder' and 'Non-technical responder', to aid respondents into accurately describing their role, RedR defined the terms as following:

- **Technical responder:** individuals with professional qualifications or extensive experience in engineering, architecture, or construction, responsible for evaluating structural damage, assessing repair viability, and guiding technical aspects of shelter interventions. Their role ensures the safety, quality, and technical soundness of damage assessments and resulting shelter solutions.

- **Non-technical responder:** individuals focused on community engagement, humanitarian principles, and social data collection, primarily responsible for identifying the human impact of damage, assessing household vulnerabilities, and ensuring the assessment process is inclusive and people-centred. They ensure the broader humanitarian needs are captured alongside structural damage. In addition to responders involved in the logistics and administrative needs for damage assessments.

76 of respondents (64%) described themselves as technical responders, and the remaining 42 respondents (36%) subsequently described themselves as non-technical responders. It is worth noting that the survey didn't provide a 'none of the above' option, however, since all respondents were able to answer the rest of the survey questions, this suggests that only those interested in the topic of damage assessments had responded to the survey.

The survey used branching logic to ensure relevance of questions to respondents' roles. Participants identifying as technical responders were directed to detailed engineering and structural assessment questions, while non-technical responders were presented with questions focused on humanitarian competencies, coordination, and oversight functions.

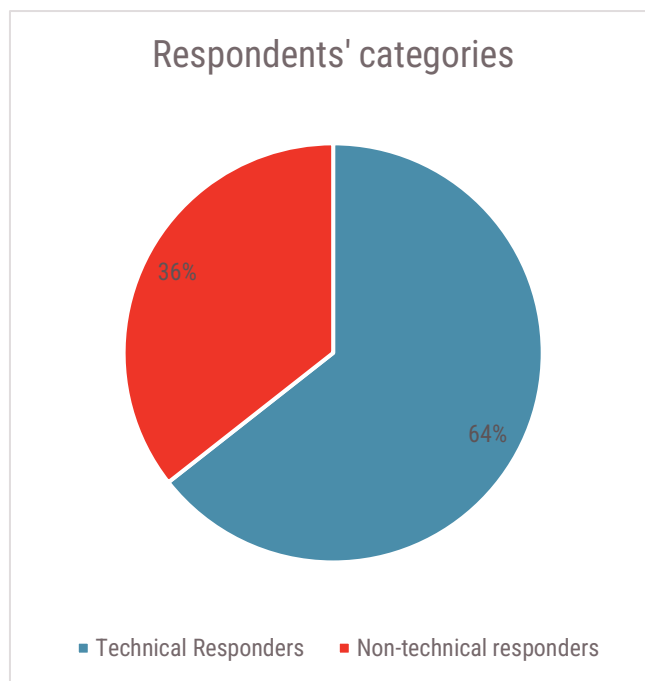


Figure 6: Respondents' technical/non-technical categorisation

## 1.4 LIMITATIONS

This LNA has several limitations that should be considered when interpreting the findings.

First, the sample was obtained through convenience and purposive sampling using RedR UK's existing networks and cluster coordination mechanisms. While responses were received from multiple highly affected regions, some oblasts with significant damage were not represented. As such, results may not be fully generalisable to all geographic areas of Ukraine.

Second, survey findings are based on self-reported assessments of knowledge and confidence. Self-assessment may introduce response bias, with respondents either overstating or understating their competencies. However, findings reflect consistent trends observed across a relatively large and diverse sample and are supported by qualitative responses included in the survey.

Third, the gender balance of respondents reflects the male-dominated profile typical of engineering and construction sectors, which may limit the extent to which gender-specific learning needs are captured.

Finally, the use of an online survey may have excluded potential respondents with limited internet access or digital literacy. Despite these constraints, the LNA provides a robust overview of priority learning needs and is sufficient to inform programme design. All capacity findings reflect self-reported confidence rather than externally validated technical competence and should be interpreted accordingly.

# FINDINGS

Since respondents were asked to describe their role in relation to damage assessments, this section disaggregates findings between technical and non-technical responders.

## 2.1 Technical Responders

Since the escalation of war in 2022, 62 of the 76 technical responders have been involved in damage assessments, building repairs or demolition, respondents were given the opportunity to elaborate more on their experiences, providing qualitative data as well.

The following word clouds visually represent the frequency of key terms used by respondents when describing their roles, activities, building types, and damage contexts. The size of each word reflects how often it was mentioned across qualitative responses, highlighting dominant themes rather than providing a comprehensive inventory of activities. Word clouds indicate dominant qualitative themes rather than exact frequency counts and are intended to support interpretation alongside quantitative findings.



For example, the most frequently used role descriptors included *engineer*, *expert*, and *project manager*, reflecting both technical and decision-making responsibilities within the sample.

Figure 8: Respondents' role descriptions word cloud

Respondents described their involvement with damaged buildings in Ukraine, noting that assessments and inspections were often conducted interchangeably, after which repair and restoration work took place.



Figure 9: Respondents' activities word cloud

The term 'buildings' is most frequently referenced when describing the structures where these activities have been carried out, encompassing houses, facilities, and schools. Other types of structures, such as power plants, bridges, and telecommunication towers, are mentioned less often.



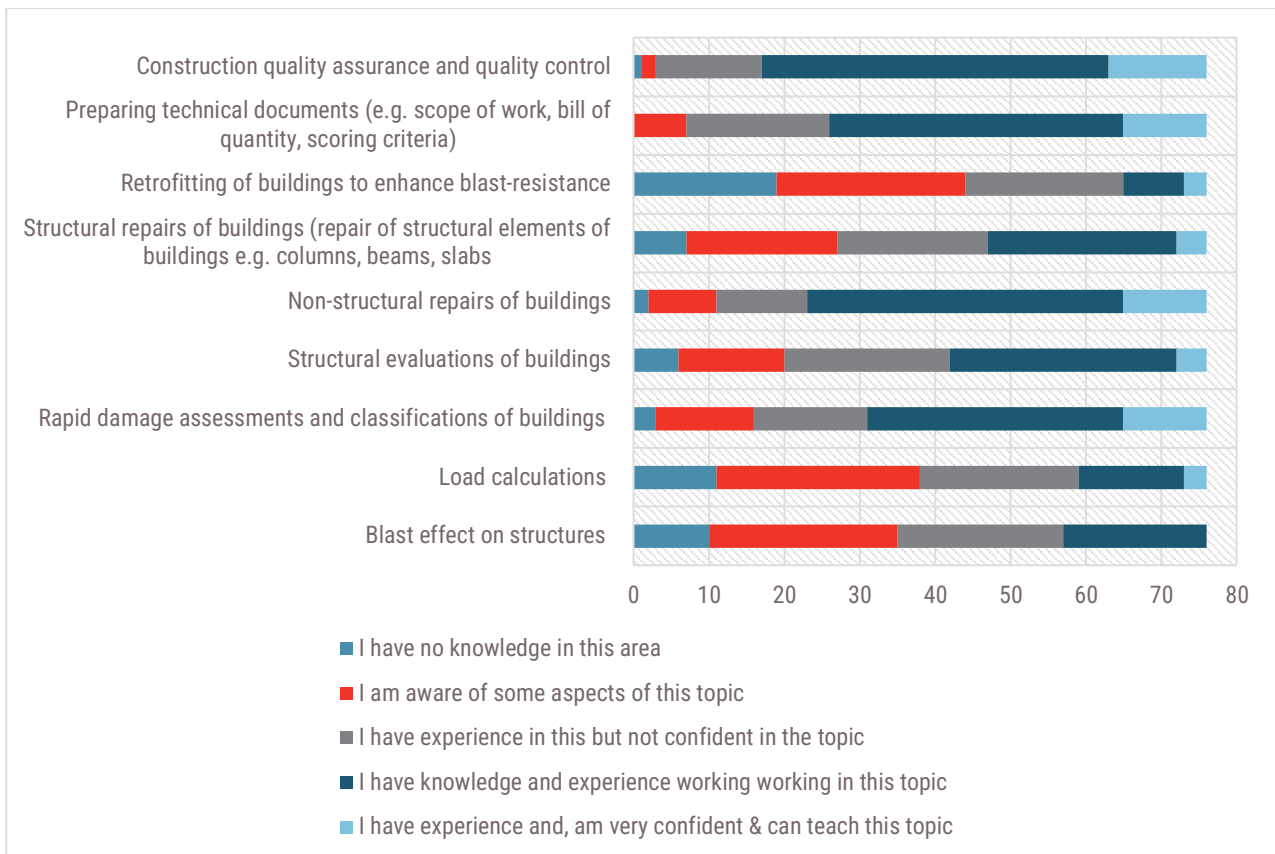


Figure 12: Respondents' technical capacities

Respondents were most confident in *Construction quality assurance and quality control* with 59 respondents saying they have experience and are very confident & can teach this topic and have knowledge and experience working in the topic. This is followed with 53 respondents saying they have knowledge, experience and confidence in *Non-structural repairs of buildings*, 50 respondents self-assessing high knowledge, experience and confidence of *Preparing technical documents (e.g. scope of work, bill of quantity, scoring criteria)*, and 45 respondents scoring their experience with *Rapid damage assessments and classifications of buildings* highly.

The capacity area with the lowest confidence level (44 respondents) was *Retrofitting of buildings to enhance blast-resistance*, closely followed with *Load calculations* (38 respondents), and *Blast effect on structures* with 35 respondents.

By using a weighted average across all scorings (1 being no knowledge on the topic and 5 being very confident and ability to teach the topic), the topics with most competence are rated as follows:

Table 2: Weighted average of confidence levels in technical topics for technical respondents

Capacity topic / area	Weighted Average
<b>1. Construction quality assurance and quality control</b>	3.89
<b>2. Preparing technical documents (e.g. scope of work, bill of quantity, scoring criteria)</b>	3.71
<b>3. Non-structural repairs of buildings</b>	3.67
<b>4. Rapid damage assessments and classifications of buildings</b>	3.49
<b>5. Structural evaluations of buildings</b>	3.16
<b>6. Structural repairs of buildings (repair of structural elements of buildings e.g. columns, beams, slabs)</b>	2.99
<b>7. Blast effect on structures</b>	2.66
<b>8. Load calculations</b>	2.62

<b>9.Retrofitting of buildings to enhance blast-resistance</b>	2.36
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Respondents were asked what kind of tools they use when conducting damage assessments, the majority answered by using measuring tapes and rules, followed by camera and safety gear.

*Table 3: Tools used by technical respondents*

<b>Technology or tool used</b>	<b>Frequency</b>
<b>A Measuring Tape or a ruler</b>	66
<b>A Camera</b>	49
<b>Safety Gear: This includes safety helmets, safety glasses, safety shoes, and gloves</b>	46
<b>Visual inspection only</b>	36
<b>Other Structural Assessment Tools: Such as plumb bobs, laser levels, and spirit levels to assess the structural integrity of the building</b>	33
<b>A hammer</b>	20
<b>Infrared Thermometers: to detect areas where insulation may be missing or damaged</b>	12
<b>Other</b>	10
<b>Laser scanning devices</b>	8
<b>A Drone</b>	3
<b>Ground Penetrating Radar: to detect any voids or anomalies in the building's foundation</b>	1

In addition to the above tools selected, some respondents also added some specific tools that were not already listed these are as follows:

- Multiple NDT tools including Schmidt hammer, rebar scanning tool, microscope for cracks inspection, caliper etc, mostly depends on building typology
- special ultrasonic equipment, optical instruments (level, theodolite), calipers, magnetic reinforcers
- Special markers on the wall to see if cracks are moving forward or foundation shrinkage
- A software package for calculating estimates
- I have all surveying equipment: tape measures, levels, theodolites, electronic total stations, GPS receivers, laser scanner (all equipment is available)

The survey asked participants to rank technical topics that would be relevant to respondents and have the greatest impact on their teams and work. The list of topics included:

1. Blast effect on structures
2. Load calculations and computer modelling
3. Rapid damage assessments and classifications of buildings
4. Structural evaluations of buildings
5. Non-structural repairs of buildings
6. Structural repairs of buildings (repair of structural elements of buildings e.g. columns, beams, slabs)
7. Retrofitting of buildings to enhance blast-resistance
8. Safe demolition of damaged buildings
9. Preparing technical documents (e.g. scope of work, bill of quantity, scoring criteria)
10. Construction quality assurance and quality control

The graph in the next page shows topic priorities based on respondents' weighted rankings.

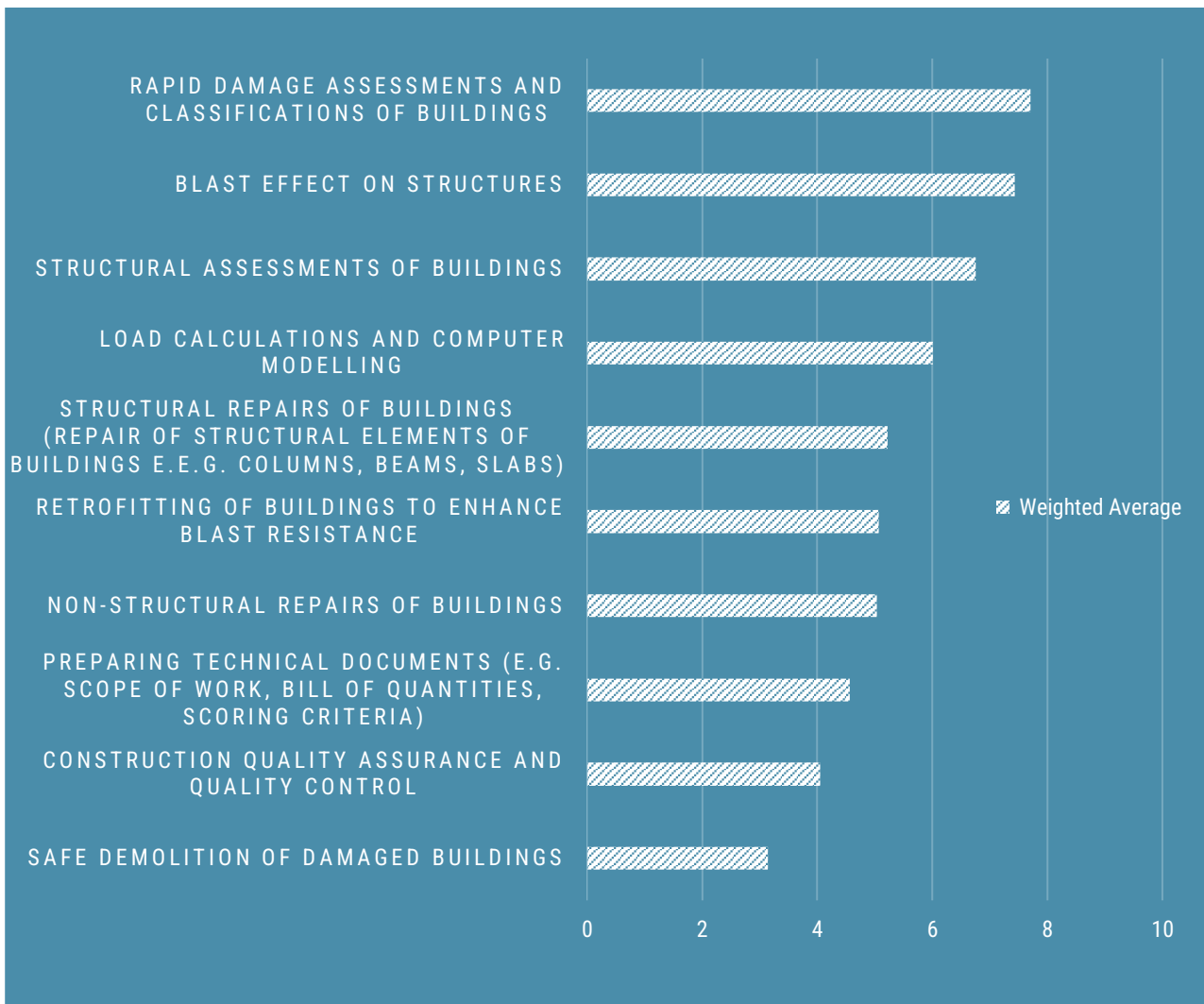


Figure 13: Priority technical topics for technical responders

Additionally, respondents were asked about their priority non-technical topics, including:

1. Coordination (with the international relief system)
2. Monitoring and evaluation
3. Accountability to affected populations
4. Protection (including safeguarding and ensuring non-harmful practices)
5. Gender and inclusion mainstreaming in projects (ensuring all work takes account for different needs)
6. Humanitarian principles and practice
7. Communication and community engagement
8. Personal safety and security
9. Mental health for you and your team

By calculating a weighted average of respondents' rankings, the prioritised topics are presented in the graph in the next page.

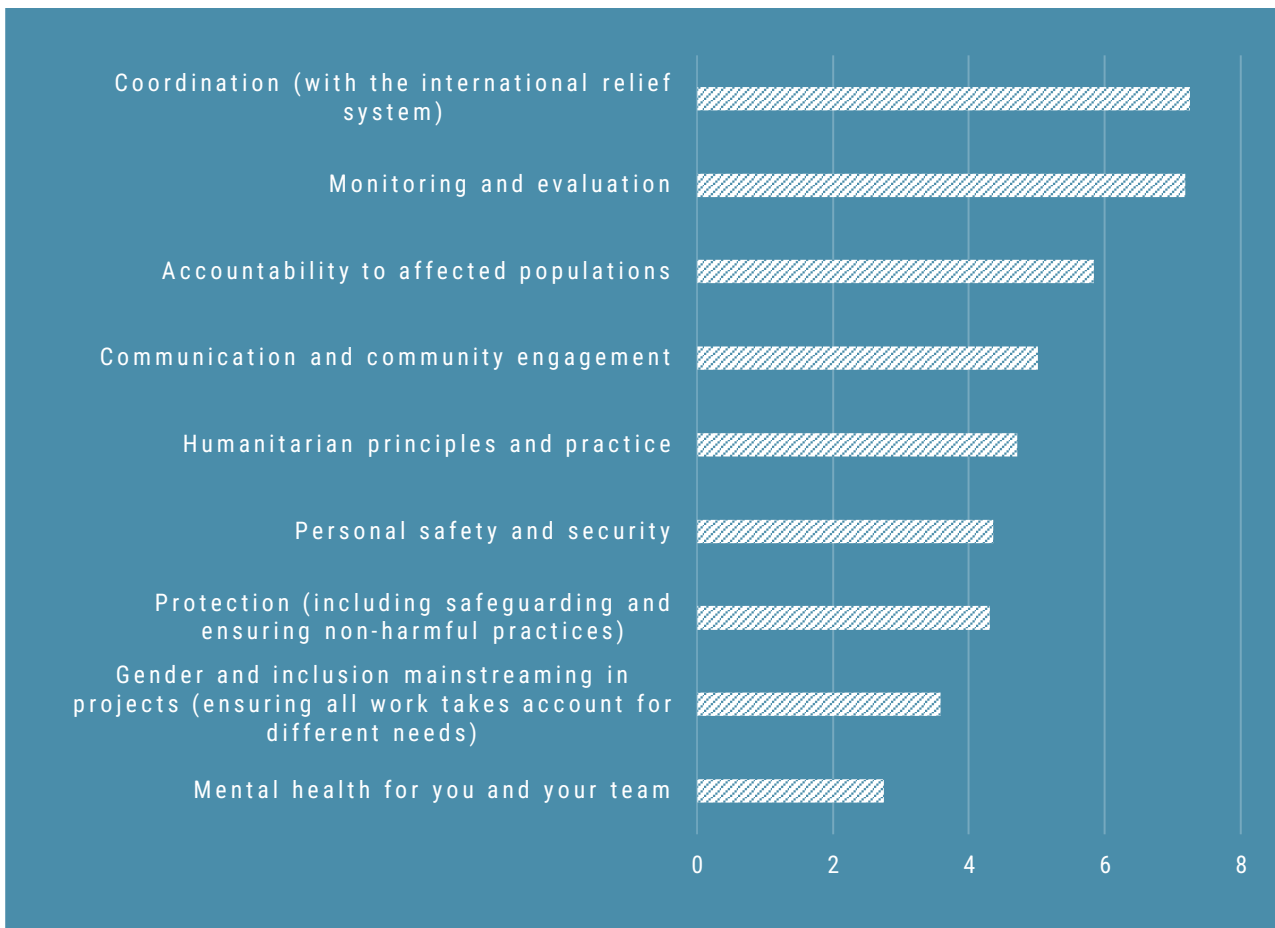


Figure 14: Priority non-technical topics for technical responders

## 2.2 Non-Technical Responders

50% of the 42 non-technical responders have been involved in damage assessments in Ukraine since the escalation of war in 2022. When elaborating on their experiences, 19 narrative responses were provided, of which only three respondents mentioned their exact roles, which were “Project manager of emergency relief supplies in the form of construction materials”, “coordinator of a housing rehabilitation project”, and an “Assessment officer - creating a unified assessment system, supporting teams, developing tools for data collection and use”.

Most of the respondents’ activities focused mainly on supporting the registration of private damaged households, assessment of non-structural damage, identification of beneficiaries, as well as light and medium repairs as noted by at least one respondent, the work was limited to damage related to “windows, facades, interior decoration”.

When asked about their humanitarian experience, similar to technical responders, the majority of the 42 respondents (50%) mentioned that they have 1 to 3 years of experience in the sector, followed by 19% with over 5 years of experience, and 17% with 3 to 5 years of experience, 10% newly joining the sector with less than 1 years of experience, and only 5% of respondents declared that they “have never worked with NGOs or in humanitarian response”.

Respondents were asked to rate their knowledge and confidence in each of the following areas:

- Sphere Standards and their application in humanitarian response
- Core Humanitarian Principles (Humanity, Neutrality, Impartiality, and Independence)
- Core Humanitarian Standard (CHS)
- Quality and Accountability in the humanitarian sector
- Community participation & community engagement

- Accessibility for people with disabilities
- Safety measures during construction
- Local building techniques and cultural considerations

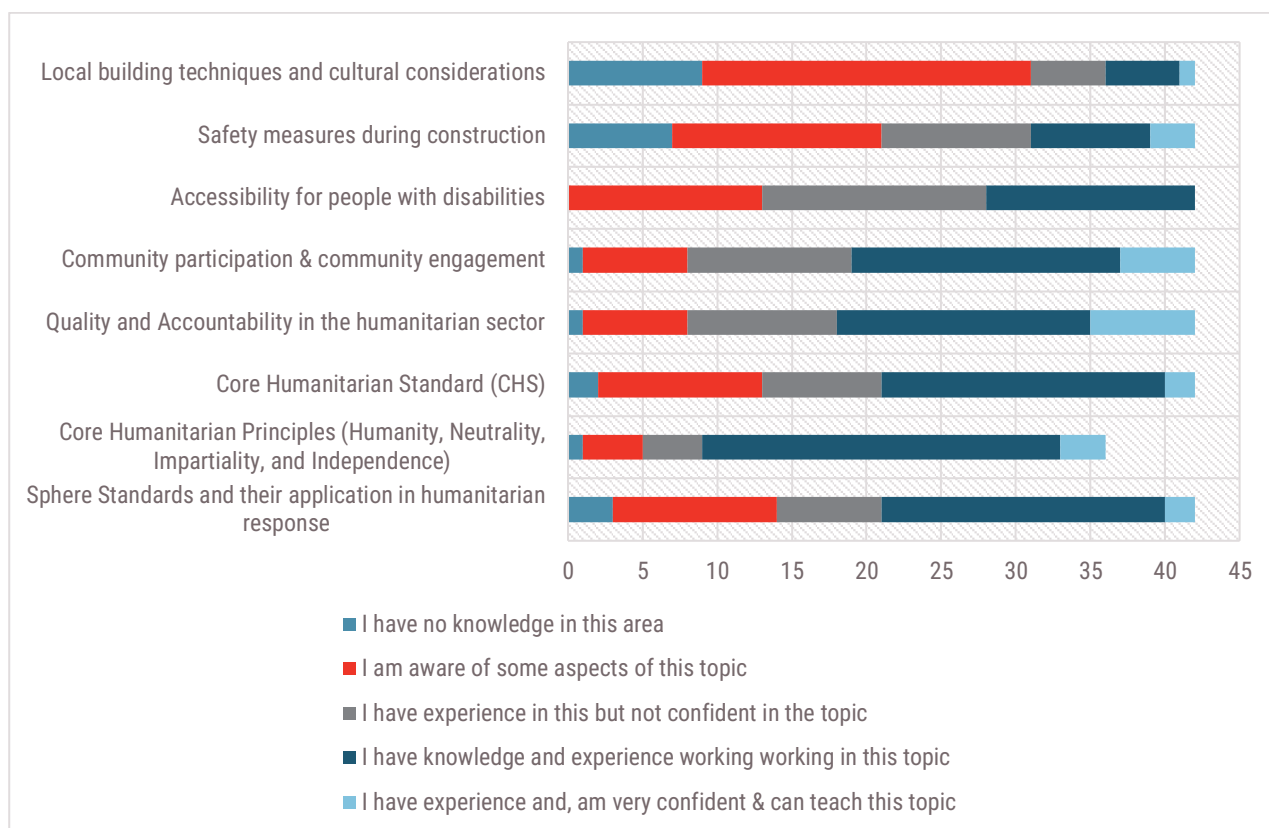


Figure 15: Confidence levels in humanitarian standards for non-technical respondents

Respondents were most confident in *Core Humanitarian Principles (Humanity, Neutrality, Impartiality, and Independence)* with 27 respondents saying they have knowledge experience and are very confident & can probably teach this topic. This is followed with 24 respondents saying they have knowledge, experience and confidence in *Quality and Accountability in the humanitarian sector*, 23 respondents self-assessed their high knowledge, experience and confidence of *Community participation & community engagement*, and 21 respondents scoring their experience with *Sphere Standards and their application in humanitarian response* and *Core Humanitarian Standard (CHS)* highly.

The capacity area with the lowest confidence level (31 respondents) was *Local building techniques and cultural considerations*, closely followed by *Safety measures during construction* (21 respondents). Only one topic related to *Accessibility for people with disabilities* had the majority of neutral respondents, with 15 stating they “have experience in this but not confident in the topic”.

By using a weighted average across all scorings (1 being no knowledge on the topic and 5 being very confident and ability to teach the topic), the topics with most competence are rated as follows:

Table 4: Weighted average of confidence levels in non-technical topics for non-technical respondents

Capacity topic / area	Weighted Average
<b>1. Core Humanitarian Principles (Humanity, Neutrality, Impartiality, and Independence)</b>	3.67
<b>2. Quality and Accountability in the humanitarian sector</b>	3.52
<b>3. Community participation &amp; community engagement</b>	3.45
<b>4. Core Humanitarian Standard (CHS)</b>	3.19
<b>5. Sphere Standards and their application in humanitarian response</b>	3.14

<b>6. Accessibility for people with disabilities</b>	3.02
<b>7. Safety measures during construction</b>	2.67
<b>8. Local building techniques and cultural considerations</b>	2.21

Respondents were also asked to rate their knowledge and confidence in each of the following technical areas:

- Develop construction work plans, critical paths and WBS (work breakdown structure).
- Cost estimation of construction works/tasks
- Preparing technical documents e.g. scope of work, bill of quantity, scoring criteria
- Masonry repair techniques
- Non-structural repairs of buildings, be it window replacement, roof repair, finishing work, etc
- Methodologies to conduct Building Retrofitting works
- Methodologies to conduct building repair works
- Rapid damage assessments and classifications of buildings
- Rapid visual screening techniques
- Use of assessment tools and technologies
- Prioritization of repair needs
- Documentation and reporting of damage
- Safety assessment procedures
- Non-structural damage identification

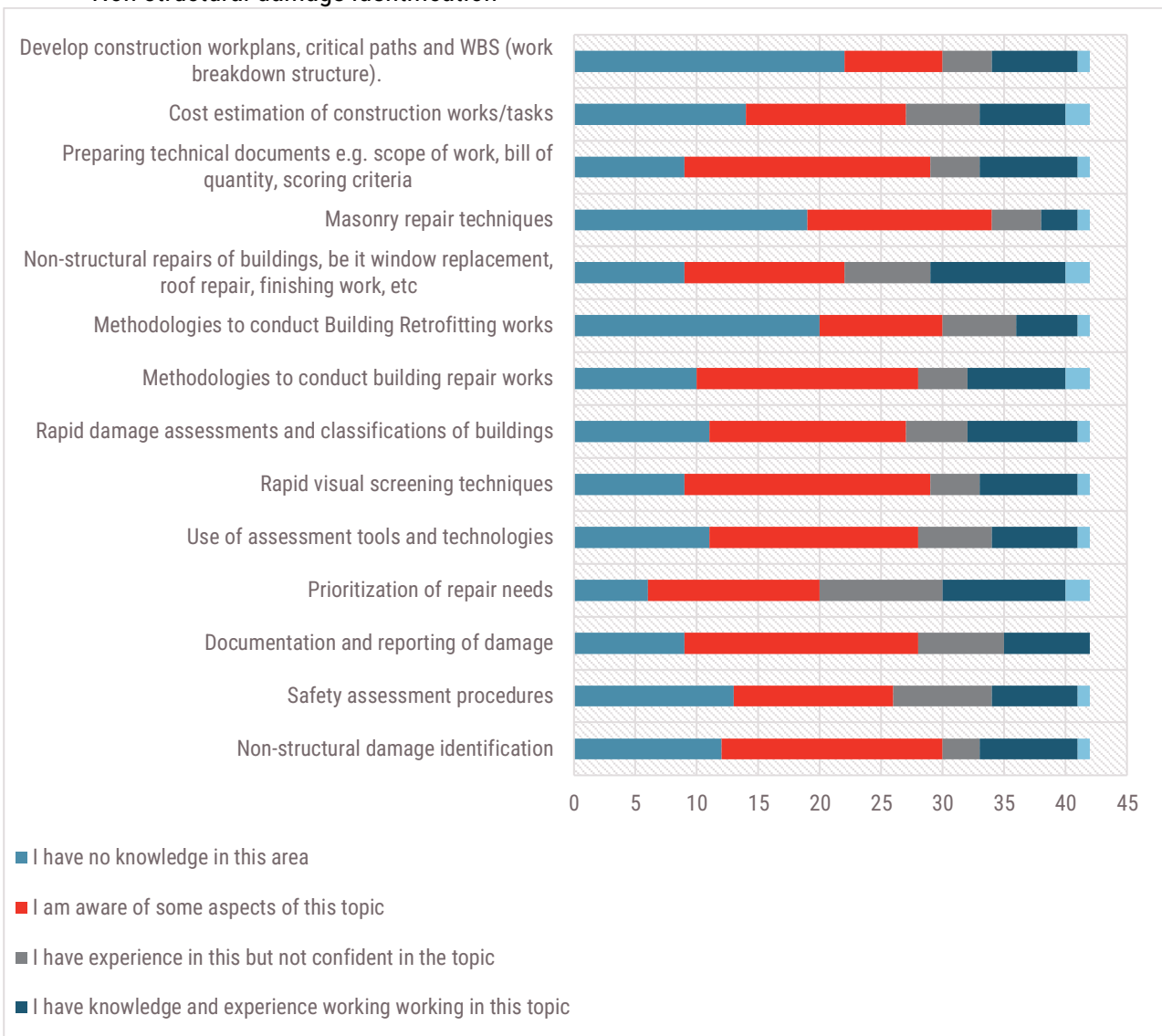


Figure 16: Weighted average of confidence levels in technical topics for non-technical respondents

Unlike previous humanitarian and operational topics, technical skills were limited among respondents: only 13 felt experienced in non-structural building repairs such as window replacement or roof repair, and just 10 rated themselves highly in rapid damage assessment and building repair methodologies. The weighted average shows lower scores for these topics:

Table 5: Weighted average of confidence levels in technical topics for non-technical respondents

Capacity topic / area	Weighted Average
<b>1. Prioritisation of repair needs</b>	2.71
<b>2. Non-structural repairs of buildings, be it window replacement, roof repair, finishing work, etc</b>	2.62
<b>3. Methodologies to conduct building repair works</b>	2.38
<b>4. Rapid damage assessments and classifications of buildings</b>	2.36
<b>5. Rapid visual screening techniques</b>	2.33
<b>6. Preparing technical documents e.g. scope of work, bill of quantity, scoring criteria</b>	2.33
<b>7. Cost estimation of construction works/tasks</b>	2.29
<b>9. Documentation and reporting of damage</b>	2.29
<b>10. Use of assessment tools and technologies</b>	2.29
<b>11. Non-structural damage identification</b>	2.24
<b>12. Develop construction work plans, critical paths and WBS (work breakdown structure)</b>	1.98
<b>13. Methodologies to conduct Building Retrofitting works</b>	1.98
<b>14. Masonry repair techniques</b>	1.86

Most non-technical respondents (30) rely on visual inspection for damage assessments, indicating limited awareness of specialised tools. This is further shown by their preference for measuring tapes and rulers (28) and safety gear (22). No respondent added any tools that were not on the list.

Table 6: Tools used by non-technical respondents

Tool or technology	Frequency
<b>Visual inspection only</b>	30
<b>A Measuring Tape or a ruler</b>	28
<b>Safety Gear: This includes safety helmets, safety glasses, safety shoes, and gloves</b>	22
<b>A Camera</b>	16
<b>A hammer</b>	8
<b>Other Structural Assessment Tools: Such as plumb bobs, laser levels, and spirit levels to assess the structural integrity of the building</b>	8
<b>Infrared Thermometers: to detect areas where insulation may be missing or damaged</b>	5
<b>Laser scanning devices</b>	4
<b>A Drone</b>	1
<b>Ground Penetrating Radar: to detect any voids or anomalies in the building's foundation</b>	0
<b>Other</b>	0

The survey asked participants to rank technical topics that would be relevant to respondents and have the greatest impact on their teams and work. The list of topics included:

1. Repair, retrofitting technical & damage assessment
2. Bomb shelter assessment
3. Quality Control and Quality Assurance in Construction
4. Cost estimation of construction works
5. Bills of quantities (BoQ) preparation
6. Technical report writing

Respondents' rankings were weighted to prioritise topics, as shown in the graph below:

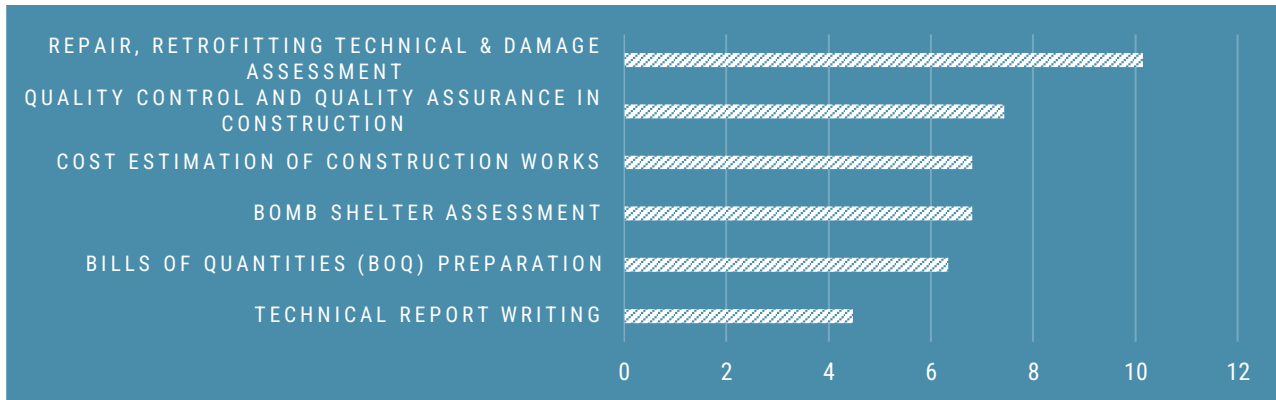


Figure 17: Priority technical topics for non-technical responders

Additionally, respondents were asked about their priority non-technical topics, including:

1. Coordination (with the international relief system)
2. Monitoring and evaluation
3. Accountability to affected populations
4. Protection (including safeguarding and ensuring non-harmful practices)
5. Gender and inclusion mainstreaming in projects (ensuring all work takes account for different needs)
6. Humanitarian principles and practice
7. Communication and community engagement
8. Personal safety and security
9. Mental health for you and your team

The graph below shows the prioritised topics, determined by calculating a weighted average of respondents' rankings.



Figure 18: Priority non-technical topics for non-technical responders

## 2.3 Learning Preferences

In this section various learning preferences are explored for both technical and non-technical responders collectively. A total of five questions were asked to ensure that RedR UK can provide not only the content that corresponds to the needs but also the format and time of delivery

Respondents were asked to rate their preferred mode of delivery for them and their teams based on their daily routine and environment.

The most popular form of learning being both the most ranked as respondents 1<sup>st</sup> choice (41 respondents) and scoring the most in terms of a weighted average was a *mixed programme, which has some interactive online sessions and some online modules you complete at your own pace*, and the second most popular choice with 38 respondents ranking as their 1<sup>st</sup> preference was *online live interactive sessions which you join at a specific time and discuss, interact and receive feedback from trainers and other participants*.

The least popular learning methods were on the job mentoring and coaching, with only 3 responses for each ranking them as their 1<sup>st</sup> choice.



Figure 19: Learning modality preferences

In terms of amount of time/hours available for learning, the most popular number of hours available to devote per week was two hours. The majority of respondents preferred between two and five hours per week, with only a few able to dedicate six hour and above, it should be noted that the maximum option offered in the survey was ten hours which was preferred only 5 times.

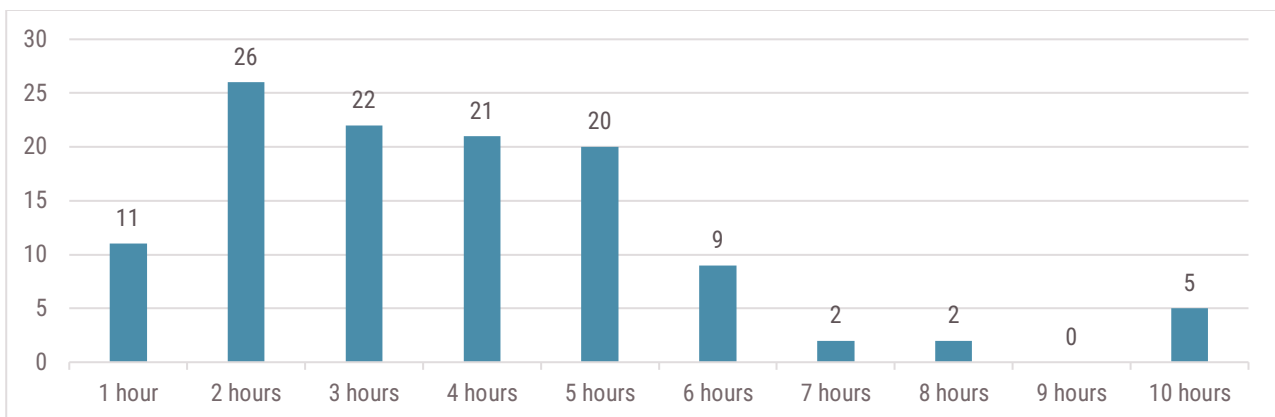


Figure 20: Weekly training commitment

Respondents were also asked on their preferred days of learning for both online and face-to-face methods with the option to select all that apply. The preferred days for learning were Tuesday, Wednesday and Thursday which shows a preference of conducting trainings and learning programmes in the middle of the week.

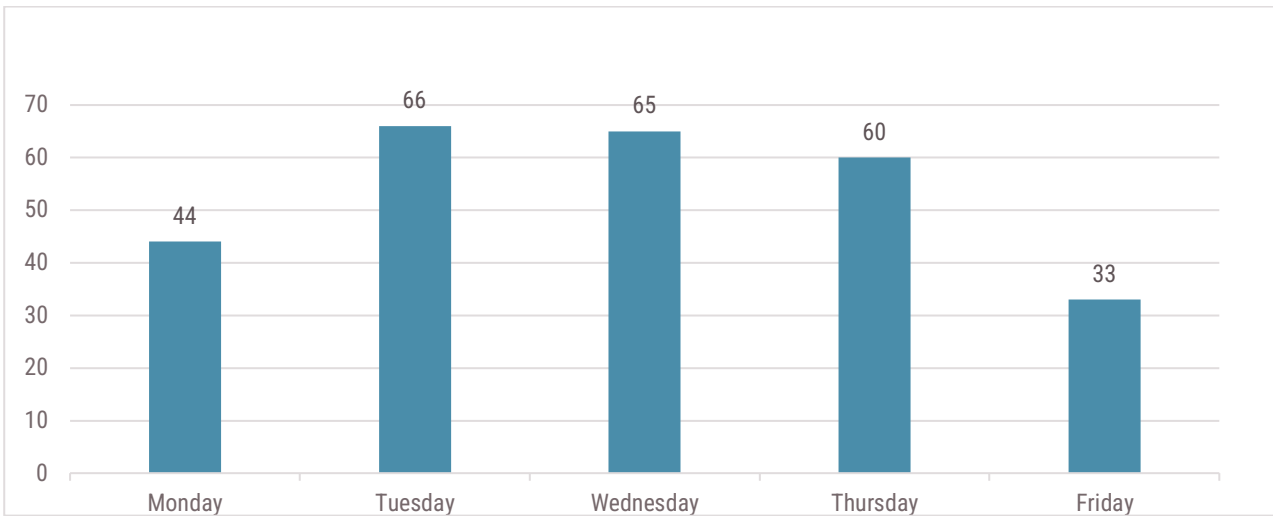


Figure 21: Day preferences for trainings

As for the time of day preferred for learning by the respondents, the majority (53.4%) preferred the afternoon between 1pm to 6 pm.

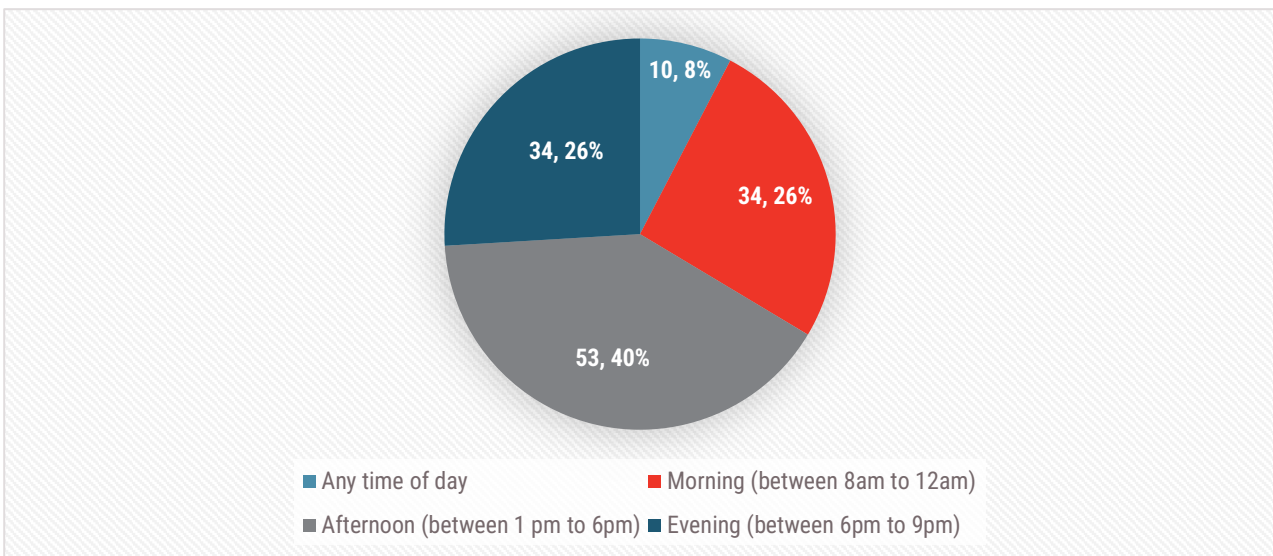


Figure 22: Time preferences for trainings

Finally, survey respondents were asked their preferences in relation to submitting learning tasks individually or with a group, the majority preferred a combination of both.

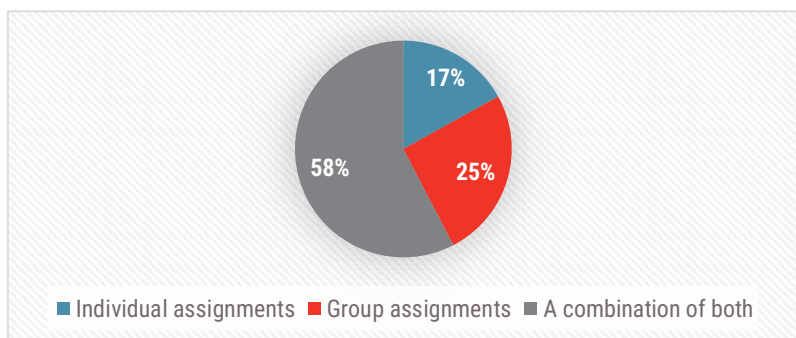


Figure 23: Learning task preferences

## 3. RECOMMENDATIONS

This section translates the findings of the Learning Needs Assessment into a set of clear, actionable, and prioritised recommendations. Each recommendation is directly grounded in the evidence presented in the findings section and is intended to guide programme design, sequencing, and delivery.

### **Recommendation 1: Strengthen advanced, conflict-specific technical capacity for engineers**

Technical responders demonstrated strong confidence in construction quality assurance, non-structural repairs, and preparation of technical documentation. However, the findings indicate clear, self-identified gaps in conflict-specific structural competencies that are essential in the Ukrainian context. The lowest confidence levels were reported in blast effects on structures, load calculations, and retrofitting buildings to enhance blast resistance.

This suggests a need to prioritise advanced technical training that directly addresses the effects of armed conflict on the built environment. Training should move beyond general construction competencies and focus on scenario-based application relevant to damaged and partially collapsed structures commonly observed across Ukraine.

Recommended actions under this priority include:

- Deliver advanced technical training modules on blast effects on structures, load calculations and structural modelling, and retrofitting techniques to enhance blast resistance.
- Ensure training content is practical and scenario-based, using typical Ukrainian building typologies and real-world damage patterns.
- Target this training primarily at experienced technical responders, enabling progression from rapid assessments to more complex structural decision-making.

### **Recommendation 2: Build capacity in in-depth structural evaluation and complex repairs**

While many technical responders have experience with rapid damage assessments and non-structural repairs, the findings highlight strong demand for more advanced skills. Structural evaluations of buildings, structural repairs, and safe demolition consistently ranked among the highest priority topics for further training.

This indicates a need for capacity building that extends beyond damage classification, supporting responders to undertake informed judgements on repair, strengthening, or demolition in complex and high-risk environments.

Recommended actions under this priority include:

- Develop intermediate and advanced training modules on detailed structural evaluations and repair-versus-demolition decision-making.
- Strengthen skills in structural repairs of key load-bearing elements, including columns, beams, slabs, and walls.
- Incorporate guidance on safe demolition practices suited to conflict and post-conflict settings.

### **Recommendation 3: Provide foundational technical training for non-technical responders involved in damage assessments**

Non-technical responders showed strong confidence in core humanitarian principles but significantly lower confidence in construction-related competencies. In particular, local building techniques, cultural considerations, safety measures during construction, and basic technical assessment skills were identified as key capacity gaps.

Given the essential roles non-technical responders play in assessments, beneficiary identification, monitoring, and project coordination, strengthening their technical understanding is critical to improving the overall quality and safety of damage assessment and repair activities.

Recommended actions under this priority include:

- Develop a foundational technical awareness course covering damage assessment processes, non-structural damage identification, and rapid visual screening techniques.
- Include basic construction safety and risk identification, as well as local building techniques and materials commonly used in Ukraine.
- Tailor training to non-technical audiences, focusing on practical understanding and effective coordination with technical staff rather than detailed calculations or design.

#### **Recommendation 4: Strengthen project management and construction oversight skills for non-technical staff**

Findings show that non-technical responders are often involved in managing and coordinating repair and rehabilitation activities, yet report limited confidence in technical oversight functions. Priority learning needs included cost estimation, bills of quantities preparation, technical reporting, and construction quality assurance.

Strengthening these competencies would enable non-technical staff to better manage contractors, monitor progress and quality, and support accountability across shelter and repair programmes.

Recommended actions under this priority include:

- Provide targeted training in cost estimation of construction works and preparation and interpretation of Bills of Quantities.
- Build capacity in technical report writing for damage assessments and construction activities.
- Introduce practical guidance on Quality Control and Quality Assurance within humanitarian construction projects.

#### **Recommendation 5: Integrate safety, security, and wellbeing into all training programmes**

Across both technical and non-technical responders, personal safety, security, and mental health emerged as consistently high priorities. Responders are operating in an active conflict environment, often under significant physical and psychological pressure.

These considerations should not be treated as stand-alone topics, but rather integrated across relevant training programmes to reflect operational realities.

Recommended actions under this priority include:

- Integrate personal safety and security considerations into all technical and field-focused training, including site safety and situational awareness.
- Incorporate mental health and psychosocial wellbeing components addressing stress management, burnout, and team wellbeing.
- Deliver these components in a practical and context-appropriate manner.

#### **Recommendation 6: Deliver training through flexible, blended learning modalities aligned with respondent preferences**

The LNA shows a clear preference for blended learning approaches combining live interactive online sessions with self-paced modules. Respondents reported limited availability for training, most commonly around two hours per week, and expressed preferences for mid-week, afternoon delivery.

Aligning delivery modalities with these preferences is critical to maximise participation, completion, and application of learning.

Recommended actions under this priority include:

- Deliver training through blended models that combine live interactive online sessions with self-paced learning.
- Design content in modular formats suitable for completion within two to five hours per week.
- Schedule live sessions primarily on Tuesdays, Wednesdays, or Thursdays, preferably between 13:00 and 18:00.
- Include a mix of individual and group-based learning activities.

### **Recommendation 7: Use modular and progressive training pathways to build long-term capacity**

Respondents represent a wide range of experience levels, with many having entered the humanitarian sector since 2022. A single, one-off training approach will not adequately address this diversity of needs or support sustained capacity development.

Adopting modular and progressive learning pathways would allow responders to build skills incrementally and access training appropriate to their roles and experience.

Recommended actions under this priority include:

- Structure training programmes into progressive pathways, from foundational to intermediate and advanced levels.
- Allow participants to enter pathways based on existing experience and role, whether technical or non-technical.
- Regularly review and update training content as reconstruction efforts and capacity needs evolve.

## **4. Annexes**

### **Annex 1: Learning Needs Assessment Survey Questionnaire**

#### **A. Respondent Profile**

A1. In which Oblast in Ukraine do you mainly operate?

A2. What type of organisation do you work for?

A3. What is your level of technical experience?

A4. What is your gender?

A5. Which of the following best describes your role?

A6. Since the full escalation of the war in February 2022, have you been involved in damage assessments, building repairs, and/or demolition?

A7. If yes, please outline your experience.

A8. What experience do you have working in the humanitarian sector?

#### **B. Technical Knowledge and Experience**

For each topic below, respondents were asked to rate their level of knowledge and experience.

B1. Blast effect on structures

B2. Load calculations and computer modelling

B3. Rapid damage assessments and classification of buildings

B4. Structural evaluations of buildings

B5. Non-structural repairs of buildings

- B6. Structural repairs of buildings (e.g. columns, beams, slabs)
- B7. Retrofitting of buildings to enhance blast resistance
- B8. Preparing technical documentation (e.g. scope of work, bills of quantities, scoring criteria)
- B9. Construction quality assurance and quality control
- B10. Safe demolition of damaged buildings

### **C. Tools and Technology**

C1. What tools or technologies do you currently use or have available to carry out damage assessments and related work?

*(e.g. measuring tools, visual inspection, safety gear, cameras, digital or structural assessment tools)*

### **D. Technical Training Needs**

D1. If RedR were to offer a learning programme to improve your capacity to respond to the crisis in Ukraine, which technical topics would have the greatest impact for you, your team, and your work?

D2. Are there any other technical topics or specific sub-topics not mentioned that are critical for your role and that you would like to receive training on?

### **E. Non-Technical and Humanitarian Competencies**

E1. In your opinion, which non-technical competencies are most critical for your current role?

E2. Are there any other non-technical topics not mentioned that are critical for your role and that you would like to receive training on?

Non-technical competency areas included:

- Humanitarian principles and practice
- Core Humanitarian Standard (CHS)
- Accountability to affected populations
- Community participation and engagement
- Protection and safeguarding
- Gender and inclusion
- Coordination with the humanitarian system
- Personal safety and security
- Mental health and psychosocial wellbeing
- Monitoring and evaluation

### **F. Damage Assessment and Repair Practices**

F1. Non-structural damage identification

F2. Safety assessment procedures

F3. Documentation and reporting of damage

F4. Prioritisation of repair needs

F5. Use of assessment tools and technologies

F6. Rapid visual screening techniques

F7. Methodologies for conducting building repair works

F8. Methodologies for conducting building retrofitting works

F9. Masonry repair techniques

F10. Cost estimation of construction works

F11. Development of construction work plans, critical paths, and work breakdown structures

### **G. Training Delivery Preferences**

G1. How many hours per week can you dedicate to training (including live sessions and self-study)?

G2. Based on your daily routine and environment, which training delivery modes would be most appropriate for you and your team?

G3. If training required assignments, would you prefer individual assignments, group assignments, or a combination of both?

G4. Which days of the week do you prefer for training?

G5. What time of day is most suitable for online training?

### **H. Follow-Up and Contact (Optional)**

H1. If you would like to be informed when this training is available, please provide your contact details (name, email address, and phone number).