

Disaster Risk Reduction

Sphere Thematic Sheets (TS) explain Sphere's relevance for a specific theme. Here, we encourage Sphere users to mainstream Disaster Risk Reduction (DRR) into their work and highlight to DRR specialists how Sphere supports their work.



The Sphere Handbook does not explicitly mention DRR in its principles and standards. However, there is a direct and strong link between the two. This TS gives a brief overview of the concept of DRR and explores the mutual relevance of Sphere and DRR activities, common principles and approaches anchored in both, as well as a focus on Sphere's technical chapters. The document is complemented by [further online content](#).

Mainstreaming Disaster Risk Reduction in Emergency Response

While Sphere standards focus on the disaster response phase, they need to be solidly anchored and integrated in prevention, mitigation, preparedness, and recovery activities: *“Relief aid must strive to reduce future vulnerabilities to disaster as well as meeting basic needs”* (NGO Code of Conduct, Principle 8)

Definition: Disaster risk reduction (DRR) is the concept and practice of reducing the risk of disaster through systematic efforts to analyse and manage causal factors. It includes reducing exposure to hazards, lessening the vulnerability of people and property, wise management of land and the environment, and improving preparedness for adverse events (Sphere definition of DRR). This implies the following key elements of DRR*: (1) Analysis of risks, vulnerabilities and capacities, (2) Reduction of exposure, (3) Reduction of vulnerabilities and (4) Enhancing capacities

*please see [online glossary](#) for definitions of various DRR-related terms used in this TS

Disasters related with natural hazards are increasing in frequency and intensity, many of them exacerbated by climate change. In addition, many communities, and especially vulnerable people, face “man-made” hazards and risks as well as complex crises.

The Sendai Framework for Disaster Risk Reduction (SFDRR), endorsed by the UN General Assembly in March 2015, is the key global reference for managing disaster risks. It marks a **clear shift in focus from disaster management towards integrated and anticipatory disaster risk management**; from managing events to managing the processes that create risks. This means that all actions need to consider the context, understand the underlying drivers that lead to disaster risks¹, reduce existing risks and avoid new ones.

1. Underlying drivers can be poverty, inequality and environmental degradation, among others.

The SFDRR also highlights the need to mainstream disaster risk reduction in the full disaster management cycle, including emergency response, which has long been the focus of humanitarian response.

DRR, embedded in the wider resilience framework, contributes to reducing the human impact of a crisis and the financial cost of humanitarian response. It builds resilience, i.e. the ability to withstand the effects of disasters by preventing new risks and reducing existing ones. DRR strengthens capacities, especially of vulnerable groups, to deal with shocks and stresses, and it builds an enabling environment. Social inclusion is a key contribution to resilience building (see below). It is also important to link with the authorities in planning and implementation and to consider the capacities and weaknesses of political and public management structures, which are often one of the main risk factors.

Common principles and approaches in Sphere and DRR

While Sphere does not explicitly address DRR, its content is directly relevant for DRR planning and activities. Sphere's foundation chapters (Humanitarian Charter, Protection Principles and Core Humanitarian Standard) focus on protection, inclusion and organisational responsibilities, which provide a solid ground for translating DRR into practice.

Both Sphere and the Sendai Framework follow a people-centred and rights-based approach. Below are key elements from the Sphere Handbook and corresponding sections of the Sendai Framework.

Towards human dignity: building on capacities to reduce risk

Understanding people's vulnerabilities and exposure to hazards is the basis for a qualitative and accountable design of interventions in the field of DRR. Throughout its Handbook, Sphere provides guidance for assessments and continuous analysis of the operational context, including complex crises. It also emphasises the need to build on capacities of different population groups and support their active involvement in programme design and implementation (see *Handbook introduction: "What is Sphere?"*)

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- *SFDRR Priority 1 "Understanding Disaster Risk" implies that policies and practices should be based on an understanding of all disaster risk dimensions of vulnerability, capacity, exposure of persons and assets, as well as hazard characteristics and the environment.*
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The **Humanitarian Charter** commits to putting people at the centre of humanitarian response and recognises the right to life with dignity and protection, as well as the right of access to humanitarian assistance without discrimination.

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- *SFDRR reflects these commitments:*

- *Guiding Principles include the protection of people and their assets while promoting and protecting all human rights, including the right to development.*
 - *Paragraph 19d calls for the inclusive, accessible and non-discriminatory participation of affected people.*
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Building on the Humanitarian Charter, the four **Protection Principles (PP)** focus on impartial and non-discriminatory assistance by helping to identify and address barriers to access and participation for all population groups. They provide a general protection-oriented lens for all humanitarian activities, focusing on do-no-harm (PP 1), impartial access to assistance, especially for vulnerable groups (PP 2), ensuring people's safe recovery (PP 3) and helping people claim their rights (PP 4).

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- *SFDRR Paragraph 5 calls for protecting people, communities and countries, their livelihoods, health, cultural heritage, socioeconomic assets and ecosystems, and thus strengthen their resilience.*
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All nine commitments of the **Core Humanitarian Standard (CHS)** are relevant for DRR, in particular commitments 1 to 4.

Commitment 1: Appropriateness and Relevance, calls for impartial assessments of the needs, capacities and vulnerabilities of different groups, including livelihood strategies, as well as the risks they face. This also means collecting disaggregated data and conducting a thorough analysis of contextual factors, such as climate variability and environmental degradation, which contribute to people's vulnerability.

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- *SFDRR Paragraph 1 calls for inclusive, risk-informed decision-making based on disaggregated data, complemented by traditional knowledge.*
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Commitment 2: Timely access to humanitarian assistance, addresses the use of forecasts and early warning systems for contingency planning before a crisis. This helps communities, authorities and organisations to respond quickly and allows affected people to protect their assets before their lives and livelihoods are put at risk.

➤ *SFDRR Priority 4: Enhancing disaster preparedness for effective response.*

Commitment 3: Building local capacities, do-no-harm and build back better (link to PP1), recognises local communities as first responders. Local capacities include existing community hazard and risk assessments, community disaster preparedness plans and committees. These committees ideally represent different groups and address their specific needs, capacities and exposure to risk.

➤ *SFDRR Priority 2: Strengthening disaster risk governance to manage disaster risk. SFDRR Priority 3: Investing in disaster risk reduction for resilience.*

Building back better, for example with hurricane- and earthquake-resistant structures, should work with locally available materials and respect socio-cultural conditions (see [Sphere Shelter chapter](#)). It should also avoid creating new risks to a community, for example by relocating people to areas exposed to other natural hazards or conflict potential. Building back better should also support the communities' resilience and preparedness, for example through [livelihood diversification](#) (see [Sphere Food security chapter – Livelihoods](#)).

➤ *SFDRR Priority 4: Enhancing disaster preparedness for effective response, and to “Build Back Better” in recovery, rehabilitation and reconstruction.*

Commitment 4: Humanitarian response calls for the participation and engagement of communities and people at all stages. This also applies to assessments, which are essential for any DRR component, and is in close alignment with Commitment 1.

➤ *SFDRR Paragraph 19d calls for society-wide engagement and partnership, as well as inclusive, accessible and non-discriminatory participation.*

Inclusive, gender-sensitive and people-centred approach

Disasters strike entire populations, but certain population groups are disproportionately affected by a wide range of barriers, which constitute potential risk factors.

Examples include:

- social and cultural barriers such as the lack of quality education, prejudice or stigma;
- economic barriers such as poverty or informal employment;
- legal barriers such as unrecognised rights or land and property issues;
- physical barriers such as lacking access to an evacuation road or lack of basic services.

There is often a correlation between these risk factors. All these barriers are addressed in the Sphere and Partner standards².

To be effective, DRR interventions need to engage both local actors and affected communities, including the leadership of at-risk groups and create an enabling environment to allow local leaders to understand and address risks. The Sendai Framework's call for “empowerment and inclusive, accessible and non-discriminatory participation” (Paragraph 19d) reflects this broad approach.

Both policy makers and practitioners need to understand barriers and the related underlying risk factors. The Sphere standards help them achieve this because they address specific barriers at the conceptual, process and implementation levels. In so doing, Sphere contributes to understanding and addressing underlying risk factors and their interdependence.

2. Stigma and exclusion: all HSP standards; Livelihoods: Sphere FSN chapter and LEGS and MERS standards; education: INEE standards

Data – disaggregated at a minimum by sex, age and disability (SADDD) – supports informed decision-making and estimating the number of people at disproportionate risk in the event of a disaster. It also supports efforts to involve all relevant population groups in planning and practice and to take their respective needs and capacities into account. Disaggregated data often lacks information on persons with **disabilities**. The Washington Group Questions can help making them visible as a group across all age groups.³

! *“What is Sphere?” SADDD Disaggregation table. Humanitarian Inclusion Standards for older people and people with disabilities.*

Disasters exacerbate existing inequalities and vulnerabilities. Women and girls are often disproportionately affected.⁴ Taking into account different gender roles within communities and empowering women to fully participate in DRR planning and programming contributes to better community resilience. It also builds on women’s capacity as drivers for change, including their increased control over assets. Therefore, DRR should have an appropriate gender focus in action plans and include gender-sensitive assessments of such things as cash transfer mechanisms, markets and supply chains. Sphere addresses gender across the Handbook.

Accurate population data (SADDD) will also support effective collaboration and networking between governmental and non-governmental actors when it comes to translating DRR frameworks and strategies into practice and addressing concrete barriers to access and participation.

Examples of linkages between Sphere’s technical chapters and DRR

The Sphere technical chapters offer practical guidance for developing, adjusting and/or monitoring and evaluating DRR interventions. The Sphere standards are expressions of inalienable rights leading to a life with dignity. The rights spelled out in one technical chapter are linked to the rights in all other chapters: water and sanitation, food, shelter and health. Progress in achieving the Sphere Minimum Standards in one area influences progress in other areas. Therefore, close coordination and collaboration support an effective response.

Understanding risks, vulnerabilities and capacities before, during and after a crisis helps provide appropriate assistance, identify ways for communities to recover, improve their livelihoods and anticipate future disasters. In this spirit, all Sphere guidance can be used to strengthen DRR. Here are a few non-exhaustive example from Sphere’s technical chapters.

Water, Sanitation and Hygiene Promotion (WASH)

Sphere’s WASH standards support the analysis of risks, exposure, vulnerabilities and capacities related to WASH, risk proofing for infrastructure and associated health issues. Examples include:

- Identifying capacities and infrastructure settings (WASH 1.1, 2.1 and 2.2);
- General public health risks associated with the availability of safe water (WASH 2.2);
- Management of water systems, like solar pumping or a piped water systems (WASH 2.1);
- Instalment of water points at identified evacuation points, including the stockpiling of gender-appropriate hygiene materials (WASH 1.3).

3. The Washington Group Questions provide a standardised measure of disability that can be used globally. The questions are increasingly used in national censuses. Their purpose is to identify key barriers limiting the participation of persons with disabilities.

4. see [Climate change impacts women more than men](#) and [Gender and disaster risk reduction](#).

The chapter has a strong focus on community engagement, which is particularly important for hygiene promotion, and it includes gender-sensitive hygiene needs.

Food Security and Nutrition (FSN) – Livelihoods

Livelihoods support during an emergency is likely to be more effective if it integrates preparedness activities that contribute to a community's capacities in the longer term. Some approaches included in Sphere are Cash for Work, Multi-Purpose Cash Assistance, distribution of seeds to farmers, supporting micro, small and medium enterprises and strengthening livestock livelihoods. The interventions should take into consideration the local market capacities. Livelihoods standards 7.1 and 7.2 support DRR elements of capacity analysis, reducing vulnerabilities and enhancing capacities (see also the [LEGS](#), [MERS](#) and [MISMA](#) standards).

The Appendix *Delivering assistance through markets*, which includes cash-based programming and supply chain analysis, provides essential DRR components for understanding the strengths and weakness of economies in disaster-prone areas ([What is Sphere? Appendix](#)).

Shelter and settlement

The Shelter and settlement standards offer both pre- and post-disaster guidance. This latter often overlaps with preparedness guidance for the next disaster. Location and settlement planning (Shelter standard 2) focuses on preparing disaster-prone areas with shelter interventions that promote the greater resilience of buildings. The standard is connected to related areas in WASH, protection, livelihoods and education (see also [INEE standards](#)).

Post-disaster and preparedness guidance includes “build back better” (Shelter standard 5). It is important to work with local governments and communities towards common agreements and to respect culturally sensitive processes and settings when planning improved housing or settlements. Gender sensitivity, including protection needs, WASH needs, and equal access to facilities must be considered.

Shelter standard 7 addresses environmental sustainability. It is relevant for DRR in its entirety, and much of the standard can be applied to other sectors.

Camps are often affected by natural hazards such as cyclones and flooding. Building shelters with DRR methodologies can include safe locations, consideration of site drainage, constructing robust and wind-safe structures, building on top of poles to prevent flooding, planting trees and plants for natural protection against wind and water, and creating protective barriers against landslides ([Shelter chapter introduction on “build back better” even in temporary settings, and Shelter standard 7](#)).

Ensuring that communities are continuously aware of early warning and early action systems, including evacuation spots and stockpiling, is an additional approach in alignment with Sphere.

Health

Disasters affect the health of individuals as well as the functioning of health systems. Accordingly, DRR interventions should contribute both to strengthening the general population's health and health system capacity, as well as general community preparedness to better manage health crises when they emerge.

Referral and health care mapping are essential preventative actions for prioritising health services at the country level or at the closest operational level in acute emergencies ([Health standard 1.1](#)). Coordination and collaboration with national healthcare structures and the ministry of health are the basis for all healthcare interventions⁵. Healthcare workforce data and readiness information should be shared with health ministries and other relevant bodies both locally and nationally ([Health standard 1.2, KA5](#)).

A key DRR activity is to ensure that health data is updated and ready to use even in crisis situations. This assumes that the data is available and correct. DRR is also about improving community awareness and monitoring potential health crises.

5. It is crucial to resource health system structures that have emergency contingency measures, both financially and with human resources and training. A prominent example of how preparedness can make or break a health system is the global COVID-19 response.

Examples of DRR measures at different stages of the disaster management cycle

Technical sector	Disaster Management Cycle			
	Prevention / Mitigation	Preparedness	Response	Rehabilitation and Reconstruction
WASH	<ul style="list-style-type: none"> Assess risks/weaknesses of WASH infrastructure Improve infrastructure Protect water sources Reduce dependence from disaster-prone services 	<ul style="list-style-type: none"> Prepare for changes in water quality Install water supply at identified evacuation points Raise awareness on hygiene promotion and water borne diseases 	<ul style="list-style-type: none"> Use qualitative structures and resistant materials Integrate awareness-raising and training activities in humanitarian response 	<ul style="list-style-type: none"> Repair structures considering local capacities "Build Back Better", ensuring increased disaster resistance and easy maintenance"
Food Security and Nutrition	<ul style="list-style-type: none"> Promote crop/livelihood diversification, strengthening existing livelihood Improve post-harvest management 	<ul style="list-style-type: none"> Stockpile key resources (e.g. seeds, fertilisers, vaccines) Support food/livestock related contingency and emergency response planning 	<ul style="list-style-type: none"> Ensure that interventions strengthen markets and does not bypass them Identify alternative food sources 	<ul style="list-style-type: none"> Promote risk-sensitive approaches towards rehabilitation of livelihoods Contribute to repair of critical infrastructure
Shelter and Settlement	<ul style="list-style-type: none"> Support establishment and reinforcement of building codes Retrofit potentially at-risk structures 	<ul style="list-style-type: none"> Stockpile shelter-equipment and pre-qualify suppliers Identify shelter concepts and sources of material 	<ul style="list-style-type: none"> Support access to safe, secure and dignified sheltering Provide technical trainings on safer shelter construction 	<ul style="list-style-type: none"> Select safe construction sites Train local builders in safe construction techniques
Health	<ul style="list-style-type: none"> Use education to build a culture of health Ensure that safe hospitals and other health facilities continue to function post disaster 	<ul style="list-style-type: none"> Stockpile essential drugs Predefine processes and responsibilities (e.g. referral systems) 	<ul style="list-style-type: none"> Mainstream infection prevention and control (IPC) in emergency health services Select accessible and safe settings for provision of emergency health services 	<ul style="list-style-type: none"> Re-construct hospitals and other health facilities considering risk sensitive setting, design and construction in compliance with building codes.

Sphere for DRR interventions throughout the disaster management cycle

DRR interventions are integrated in various phases throughout the overall disaster management cycle. The Sphere standards are applicable for many of these interventions.

The table above, complementary to the examples discussed in the section above, shows selected examples. A more exhaustive matrix with references to relevant Sphere technical chapters, as well as case studies, are accessible online via the [Sphere & DRR webpage](#).

Specific themes

The following are examples of links between DRR and other important themes.

Complex and protracted emergencies can result from different hazards or, more often, from a complex combination of both natural and "man-made" factors of vulnerability. Food insecurity, epidemics, conflicts and population displacement are examples.

In such emergencies, DRR and humanitarian response measures go hand in hand. Emergency response programmes should consider DRR components at all times and adapt continuously in response to changing needs, capacities and context (CHS 1.3). This includes understanding vulnerabilities, building on capacities and ensuring inclusive participation of the affected population when facing and preparing for multiple hazards and shocks.

DRR and climate change adaptation (CCA) have similar aims and mutual benefits. They both focus on reducing people's vulnerabilities by improving methods to anticipate, withstand, cope with and recover from hazards.⁶

Sphere emphasises the impact of increasingly variable and extreme weather on food security. It calls for considering CCA in livelihood interventions, such as the selection of adapted seed varieties (FSN 7.1 and 7.2).

It is important to establish linkages with meteorological offices and global centres of expertise on climate research. The UN Framework Convention on Climate Change (UNFCCC) addresses the urgent need to implement CCA and DRR strategies. The [2016 Paris Agreement](#) builds on that Framework. Furthermore, sustainable energy solutions, such as alternative fuel sources in order to prevent cutting down trees and sustainable waste management should be considered.

Overall, the most vulnerable should be put at the centre of solutions and viewed as drivers of change rather than as victims of climate impacts (see also section on inclusive approach above). In a well-planned response which involves the community, vulnerable groups can themselves identify and implement the adaptation solutions that serve their needs best.

Outlook

DRR and Sphere share common principles and approaches, which can be strengthened and made more explicit. This would strengthen both the humanitarian and DRR sectors within the overall disaster management cycle.

Therefore, the next Sphere Handbook revision may consider including DRR-specific content, which is particularly relevant for public administration, central governments and local authorities, and strengthening the Handbook's focus on economic, social, cultural and governance dimensions.

With this in mind, Sphere may be well placed as convenor for several DRR-related discussions which offer a natural link to humanitarian response. These include the use of technology, the link between DRR and the environment and enhancing political commitment to DRR in developing countries. Other important DRR discussions cover rapid and unplanned urbanisation as a driver of risks, complex disasters linked to pandemics and climate change, population displacement and linkages between conflict, disasters, gender issues, vulnerabilities and fragile states.

References

Sendai Framework https://www.preventionweb.net/files/43291_sendaiframeworkfordrren.pdf

The UN Framework Convention on Climate Change: <https://unfccc.int/>

Environmental protection and DRR – Community leaders guide: <https://www.undrr.org/publication/environmental-protection-and-disaster-risk-reduction-community-leaders-guide>

Inclusion:

- Humanitarian inclusion standards for older people and people with disabilities <https://spherestandards.org/resources/humanitarian-inclusion-standards-for-older-people-and-people-with-disabilities/>
- Dhaka Declaration on Disability and Disaster Risk Management https://www.preventionweb.net/files/47093_dhakadeclaration.pdf (2015) <https://www.preventionweb.net/english/policies/v.php?id=58486> (2018)
- IASC Guidelines on the inclusion of persons with disabilities in humanitarian action <https://interagencystandingcommittee.org/iasc-task-team-inclusion-persons-disabilities-humanitarian-action/documents/iasc-guidelines>
- Washington Group Short Set of Questions on Disability <http://www.washingtongroup-disability.com/washington-group-question-sets/short-set-of-disability-questions/>

6. CCA is relevant for climate-related hazards and considers forecasts and projections of future scenarios including new risks, while DRR relates to all hazards and looks more at historical events and existing risks.

Gender:

- Making it Count
<https://careclimatechange.org/wp-content/uploads/2019/06/Making-It-Count-EN.pdf>
- Fuller view of girls' lived realities in defined program areas: <https://www.popcouncil.org/research/girl-roster>
- Empowering children and youth to guide DRR action – UNDRR guidelines: <https://www.preventionweb.net/publications/view/67704>
- IASC GBV Guidelines
<https://interagencystandingcommittee.org/working-group/documents-public/iasc-guidelines-integrating-gender-based-violence-interventions>
- GBV Minimum Standards
https://www.unfpa.org/sites/default/files/pub-pdf/GBVIE.Minimum.Standards.Publication.FINAL_ENG_.pdf

Resilience and CCA:

- Care's Climate Change and Resilience website hosts a wealth of relevant documents:
<https://careclimatechange.org>
- Groupe URD Network for DRR and CCA:
<https://www.urd.org/en/network/the-disaster-risk-reduction-network/>

Environment and DRR

- Sphere Thematic Sheet: Reducing the environmental impact of humanitarian response
<https://spherestandards.org/wp-content/uploads/Sphere-thematic-sheet-environment-EN.pdf>

- Useful website for environment and DRR:
 - EHA Connect: <https://ehaconnect.org/themes/disaster-risk-reduction/>
 - Ecosystem-based DRR: <https://www.unenvironment.org/explore-topics/disasters-conflicts/what-we-do/risk-reduction/ecosystem-based-disaster-risk>
 - Nature-based solutions: <https://pedrr.org/>

Humanitarian Standards Partnership:

Sphere works with six other standard-setting initiatives, all based on shared values and principles and also relevant for DRR work with humanitarian standards: <https://www.spherestandards.org/humanitarian-standards/standards-partnership/>

- Age and Disability Consortium (ADCAP) (2018): Humanitarian Inclusion Standards for Older People and People with Disabilities
- Alliance for Child Protection in Humanitarian Action (2019): Minimum Standards for Child Protection in Humanitarian Action (CPMS)
- Cash Learning Partnership (CaLP) (2018): Minimum Standard for Market Analysis (MISMA)
- Inter-Agency Network for Education in Emergencies (INEE) (2010): Minimum Standards for Education: Preparedness, Response, Recovery
- LEGS Project (2014): Livestock Emergency Guidelines and Standards (LEGS)
- SEEP Network (2017): Minimum Economic Recovery Standards (MERS)
- Sphere (2018): Humanitarian Charter and Minimum Standards in Humanitarian Response

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