

## Annex III

# Adopting an analytical framework on risk and resilience: a proposal for more proactive, coordinated and effective United Nations action

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## Introduction

1. The 2030 Agenda for Sustainable Development represents humanity's goals for the next 13 years. However, in the context of increasingly frequent, severe and complex natural and human-induced threats, there is growing concern that numerous crises will set back efforts to achieve these goals. Several concepts — including risk, resilience and prevention — have been identified as having the potential to create an analytical framework for a more proactive, coordinated and effective approach to addressing these crises. The creation of such a framework will be critical to maintaining the universal norms and standards that the United Nations represents in this challenging period. Recognizing the importance of this issue, in May 2016, the High-Level Committee on Programmes formed an informal task team to explore the linkages among the concepts and to determine whether they could serve as “common threads” across the humanitarian and development, peace and security and human rights pillars to bring greater coherence to United Nations efforts in this area. Representing the agreed outcomes of the Committee process, this paper proposes an analytical framework on risk and resilience that the United Nations can use to maximize the effectiveness and impact of its support to the achievement of the Sustainable Development Goals.

## I. Key findings

2. In its deliberations, the Committee has agreed upon four broad findings:
- **Risk and resilience can serve as useful framing concepts for addressing crises more proactively.** The two concepts have evolved into almost mirror opposites of each other, associated with a similar spectrum of actions,<sup>1</sup> but with resilience representing the positive ability to manage the potential negative consequences of risk. Within this context, prevention can be understood as one of the possible actions that can be taken to reduce risk and increase resilience. While recognizing the overarching nature of risk and resilience, it was strongly felt that the concepts of “prevention” and “vulnerability should not be lost in any new approach.
  - **A risk and resilience approach needs to reflect a complex, interconnected reality.** Risks arise from multiple, interrelated threats and vulnerable conditions, which can be generated externally (e.g., drought or cyclone) or internally (e.g., poor policy choices). They have complex drivers and knock-on effects that must be understood. At the same time, resilience can relate to multiple levels and take a wide variety of forms. Any new approach for addressing crises in a more proactive, coordinated and effective manner needs to account for and bring

<sup>1</sup> Resilience is associated with actions such as “prevent, resist, absorb, adapt, respond and recover”, while disaster risk management describes relevant efforts as prospective (avoiding creation of new risk), corrective (reducing existing risks, including preparedness, early warning and mitigation) and compensatory (managing residual risks, including response and recovery). The concepts are therefore associated with a similar spectrum of actions.

greater clarity to these complexities and be able to function at multiple levels, ranging from the global to the subnational. In so doing, the approach must strike a balance between capturing a complex reality and remaining simple enough to be operationally relevant and useful.

- **Risk and resilience can serve as “common threads” across United Nations pillars.** Many of the actions associated with risk and resilience under the humanitarian and development pillar are already echoed in the approaches of other pillars, such as “sustaining peace” under peace and security, and “protection” under human rights. However, any new approach needs to be broad and flexible enough to incorporate existing tools and to allow each of the pillars to contribute as part of a collective whole.
- **The use of terms should be harmonized.** In order to ensure that these efforts are effective, the United Nations requires a harmonized set of terminology. Risk, resilience and related concepts have evolved for different purposes at different times in different contexts, often in isolation from each other, with different usages by different communities of practice. However, drawing on existing harmonization efforts, any new approach should be based on agreed definitions that span and are relevant to all the United Nations pillars (see appendix).

3. These findings have shaped and informed the approach proposed under this analytical framework on risk and resilience.

## II. Proposed analytical framework on risk and resilience

4. Based on these findings, the Committee concluded that three elements could be combined to create a more proactive and coordinated approach to addressing all types of potential threats that could set back progress on the Sustainable Development Goals:

- **Systems thinking to identify risks and their complex interrelationships.** Systems thinking can be used to describe the fundamental relationships among risks and other sustainable development issues at multiple levels — global, regional, national and subnational;
- **Risk and resilience equation to identify measures to lower risks.** A risk and resilience equation can be used to organize the efforts across pillars to lower the risks and to define collective outcomes;
- **Prevention lens to guide the implementation of these measures.** A prevention lens<sup>2</sup> can be used to ensure, to the extent possible, that a proactive approach is taken when implementing measures to increase resilience and lower risks and impacts.

5. The sections below describe each of these key elements of the analytical framework and illustrate their application with a hypothetical country example.<sup>3</sup>

<sup>2</sup> A prevention lens is consistent with the Secretary General’s larger vision for the United Nations approach to crises.

<sup>3</sup> Once the broad approach is agreed, more detailed, step-by-step guidance will be developed to explain how each element can be operationalized in practice.

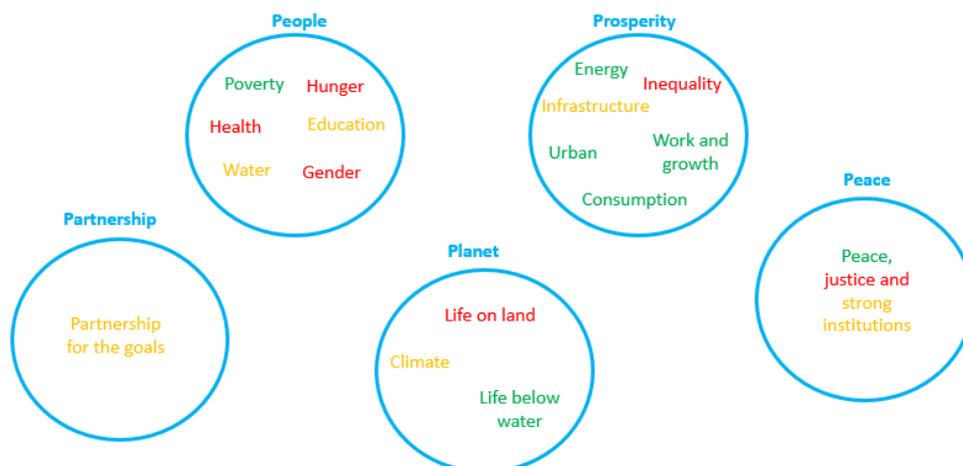
## A. Systems thinking to identify risks and their complex interrelationships

6. United Nations country teams are often able to describe the key risks in their context, whether they relate to an immediate crisis or longer-term development processes. There are a number of existing tools that have been developed to identify and prioritize risks, ranging from “likelihood and impact” matrices and the mapping of trends over time to sophisticated, multi-variable analysis.<sup>4</sup> The potential of real-time, predictive analytics and big data for decision-making can be utilized. However, it is sometimes difficult to fully grasp the complex interlinkages between these risks and other issues and therefore to make informed decisions about how best to address them. A systems thinking approach can help.

7. In order to understand the interlinkages and dynamics it is important to identify the “universe” of issues that may be relevant. In many cases, the 2030 Agenda can be used as a starting point since it represents a compilation of the range of possible sustainable development concerns facing countries. In order to visualize the relationships among them the issues can be grouped according to the five Ps presented in the 2030 Agenda: people, planet, prosperity, peace and partnership (see figure I).<sup>5</sup> While the headings of the Sustainable Development Goals can provide a guide, the actual characterization of the issues can depend on, and may be tailored to, the particular context.

Figure I

### Key development issues



8. Where helpful, the issues can be colour-coded (e.g. green for “on track”, amber for “not fully on track”, red for “off track”) as an indication of whether the country is making adequate progress in achieving the Sustainable Development Goals. This colouring may provide an initial indication of the sustainable development concerns — and therefore priorities — at the country or other levels. But it is critical to then map the interrelationships within the entire system. In some cases the development dynamic

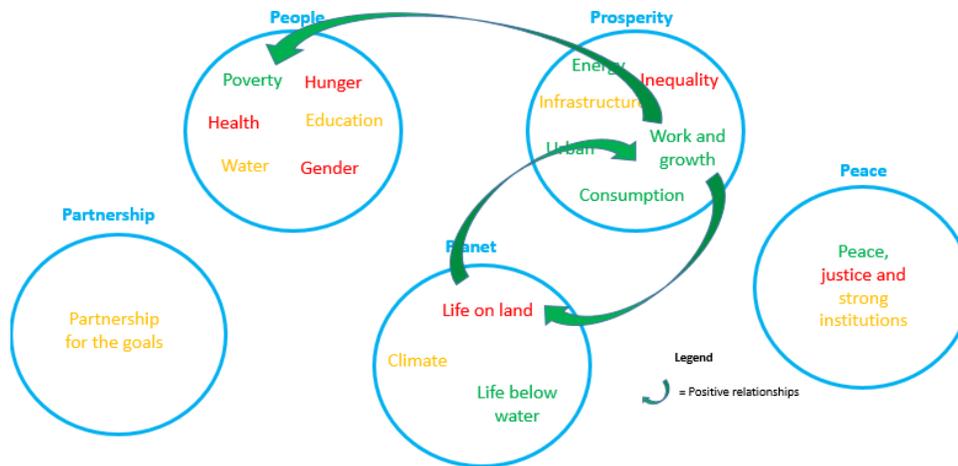
<sup>4</sup> Existing tools include the Index for Risk Management (INFORM) initiative, integrated context analysis, the Co-Benefits Risk Assessment (COBRA) screening model, resilience systems analysis and crisis risk dashboards, among others.

<sup>5</sup> While the Sustainable Development Goals represent the “universe” of issues, there may be contextual factors, such as history and culture, which may influence the dynamic and might need to be incorporated into the approach.

will generate risks that need to be foreseen, while in other cases the risks may be known and the interrelationships need to be clarified.

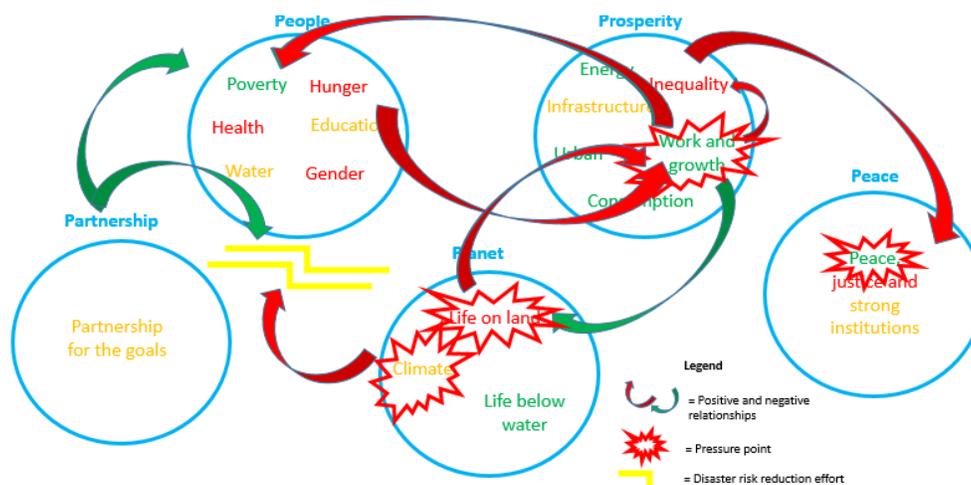
9. A hypothetical example may help to fix ideas. A country may be achieving high rates of economic growth and poverty reduction by rapidly consuming its natural resources, such as timber. Graphically, the use of “life on land” in the form of timber leads to the high economic growth and the reduction of poverty (see figure II). At first glance, the country seems to be on a strong development path.

Figure II  
Initial mapping of dynamics



10. However, the underlying dynamics suggest fundamental risks to sustaining this development (see figure III). The country has not invested sufficiently in the other aspects of “people”: addressing undernutrition, providing universal education, addressing gender disparities and ensuring adequate health services. As a result, the human capital basis for future economic growth is being undermined. At the same time, the consumption of the finite natural resources is quickly eroding the current foundations of economic growth, which in turn may lead to economic collapse, increasing poverty and the exacerbation of inequalities. The resulting tension presents a real threat of political instability and violent conflict, especially with upcoming elections. Moreover, the country faces the external risks of repeated natural hazards, such as cyclones and droughts, which set back development gains.

Figure III  
Fundamental dynamics and key risks



11. Currently, the partners are working on human capital and disaster risk management but the dynamics point to other areas of concern: the diversification of growth (Goal 8), climate and environmental resource management (Goals 13 and 15) and the prevention of violent conflict (Goal 16). Because of the interconnections, these risks result both from the current way that the development system is internally functioning (e.g., unsustainable use of natural resources) and from threats that arise at least in part externally (e.g., cyclones). The risk areas might become the focus of collective outcomes.<sup>6</sup> At the same time, the potential solutions — such as investment in human capital — can simultaneously improve the “functioning” of the system and reduce risk and increase resilience. It is in the overlap that leverage within the system can be found and that appropriate actions can be identified to achieve the collective outcomes.

## B. Risk and resilience equation to identify measures to lower risks

12. Each of these risk areas can then be examined using the risk and resilience equation to identify the set of actions across the United Nations pillars that would help address the concerns. While it is acknowledged that there are many possible formulations of the equation and it does not represent an actual quantitative, mathematical relationship, there is some broad consensus on the elements across the pillars:

$$\text{Risk} = \frac{\text{Threat} \times \text{Vulnerability}}{\text{Capacity}}$$

<sup>6</sup> It is critical both to make progress towards achieving the Sustainable Development Goals and to address potential threats that can set back that progress. Collective outcomes could be focused on either of these highly interrelated areas, but in this paper on risk and resilience, the primary focus is on the threats that might set back the progress.

13. Since resilience can involve efforts to reduce threat<sup>7</sup> and vulnerability and increase capacities,<sup>8</sup> it might be argued that the equation could be read as indicating that resilience is the inverse of risk: Risk = 1/Resilience. However, caution must be used to avoid making oversimplistic relationships. While risk is a technical concept for which quantitative measures are often sought, resilience has normative connotations and is more difficult to measure.<sup>9</sup>

14. Nevertheless, even with these caveats, the value of the equation is that it enables the United Nations system to come together around a single approach (i.e., the equation) to analyse risks and plan jointly a collective response. It allows the United Nations system to identify what each organization, across the pillars, is doing to reduce threats and vulnerabilities and to increase capacities related to a specific risk, with due attention to the linkages to other risks. As a result, instead of a fragmented, incoherent approach, it becomes possible to develop a mutually reinforcing, complementary strategy to increase overall resilience and reduce overall risk in a given situation that draws on the expertise across the system.

15. In our example, the threat of violent conflict (Goal 16) creates the risk of serious negative consequences across pillars: humanitarian needs and setbacks to development efforts, insecurity and human rights violations. The risk and resilience equation can be used to organize, jointly as a system, cross-pillar efforts (see figure IV).

Figure IV  
Cross-pillar actions to reduce risk and increase resilience

Risk Description	Resilience Actions			
	Pillar	Reduce threat	Reduce vulnerability	Increase capacity
<b>Conflict leads to humanitarian needs and development setbacks, insecurity and widespread rights violations</b>	Peace and security	<ul style="list-style-type: none"> <li>Reduction of political exclusion and inequalities</li> <li>Preventive diplomacy and mediation</li> </ul>	<ul style="list-style-type: none"> <li>Good governance</li> <li>Inclusive grievance mechanisms</li> </ul>	<ul style="list-style-type: none"> <li>Institution strengthening</li> </ul>
	Humanitarian and development	<ul style="list-style-type: none"> <li>Economic diversification</li> <li>Reduction of socioeconomic exclusion and inequalities</li> </ul>	<ul style="list-style-type: none"> <li>Social safety nets</li> <li>Environmental resource management</li> </ul>	<ul style="list-style-type: none"> <li>Human capital strengthening</li> <li>Institution strengthening</li> </ul>
	Human rights	<ul style="list-style-type: none"> <li>Civilian control over security forces strengthened</li> </ul>	<ul style="list-style-type: none"> <li>Improvement of the enabling environment</li> </ul>	<ul style="list-style-type: none"> <li>Strengthening of human rights commission</li> </ul>

<sup>7</sup> In this formulation, a “threat” represents a combination of hazards and their characteristics, including location, likelihood and intensity, on the one hand, and exposure to these hazards, on the other.

<sup>8</sup> The actions associated with resilience and risk management would need to “map” onto these categories of threat, vulnerability and capacity. That is, efforts to “resist” might focus on reducing vulnerability and increasing capacity. Similarly, “corrective” risk management, involving preparedness, early warning and mitigation, might be directed at threat, vulnerability and capacity.

<sup>9</sup> For both risk and resilience, acceptable thresholds must be defined and agreed.

16. Anticipating a potential violent conflict, the peace and security pillar could reduce the threat by helping to minimize political exclusion and engaging in preventive diplomacy and mediation, while the humanitarian and development pillar might support longer-term economic diversification and reduce economic and social exclusions and inequalities in an effort to address an underlying driver of discontent. At the same time, the United Nations pillars could work in a complementary manner to lower vulnerability by focusing on good governance and inclusive grievance mechanisms, supporting safety nets and environmental resource management and strengthening the enabling environment for human rights. Finally, the country's capacity could be increased by institution strengthening, human capital investments and the enhancement of the human rights commission.

17. These efforts across the pillars would contribute to different aspects of addressing the risk and resilience equation, sometimes overlapping and often reinforcing but creating a unified, holistic and integrated approach to the risk that recognizes the interlinkages in the United Nations responses. They could therefore all align to support a collective outcome around preventing the occurrence of violent conflict.

### **C. Prevention lens to guide implementation of these measures**

18. A prevention lens for these collective outcomes can help ensure a more proactive approach in efforts to increase resilience and reduce risk. It would mean having prevention, rather than reaction, as the default approach and would involve acting early, forcefully and consistently. Acting early would entail a “no regrets” policy but would be informed by the best data and analysis available and clear trigger points. Acting forcefully would involve taking actions commensurate to the scale of the risk. Acting consistently means that prevention efforts would not be limited to stopping a threat from materializing but would involve preventing greater negative consequences as well, including knock-on effects, at each stage of a crisis. This view of prevention is already echoed across United Nations pillars. Public health speaks of primary, secondary and tertiary prevention, suggesting that it is an integral part of containing an evolving situation at each stage. Similarly, the “sustaining peace” and “human rights up front” initiatives are focused on taking a more proactive approach.

19. In our example, the United Nations and partners are anticipating the threat of violence and consciously trying to prevent it from materializing by acting early and forcefully to address drivers of conflict (Goal 16). But a prevention lens suggests that this larger aim can be pursued at other points. If despite these efforts violence erupts, the peace and security actors could employ a range of other tools, including the deployment of a peace operation following Member State authorization to contain its spread and limit the potential knock-on effects; development actors could strengthen institutions; humanitarian actors could meet emergency needs in a conflict-sensitive manner that avoids doing harm and, where possible, contributes to peace; and human rights actors could monitor and respond to violations and work to prevent new ones.

## **III. Way forward**

20. By providing a means to address, proactively and holistically, potential setbacks to progress on the Sustainable Development Goals, this analytical framework on risk and resilience could serve as an essential tool for supporting United Nations system-wide efforts to achieve the 2030 Agenda. Given its emphasis on bringing together the different United Nations pillars around collective outcomes and its applicability to all types of threats, it represents an attempt to operationalize the humanitarian-

development-peace-human rights nexus and complements existing initiatives, such as the “New Way of Working” initiative of the Agenda for Humanity and the United Nations System Strategic Approach on Climate Change Action.

21. There are several potential practical uses of the approach proposed under this framework:

- **Helping coordinate more effective United Nations interventions at the country level.** The framework could be used to help the United Nations to identify, through joint analysis, the key risks, existing capacities at different levels of society and collective outcomes for action. This would better assure mutually reinforcing programming and help articulate the coherent cross-pillar actions required under successive United Nations Development Assistance Frameworks to support the achievement of the Sustainable Development Goals.
- **Providing a key topic for staff development across the system.** To enhance its ability to implement this approach, the United Nations could pursue capacity strengthening on systems thinking and co-creation — two skills identified at the core of the CEB-endorsed United Nations System Leadership Framework — both for the whole system, by the United Nations System Staff College, and as an integral part of agency-level training efforts.
- **Bringing greater conceptual clarity to many pillar-specific approaches to managing risk and building resilience.** This analytical framework may assist in harmonizing and enhancing coherence across pillar-specific risk and resilience efforts. It can help demonstrate the linkages and complementarities among them, identify how they each contribute to collective outcomes and clarify any pillar-specific needs and requirements.

22. To operationalize this approach, it is recommended that after a joint launch, the analytical framework should be piloted in selected countries through the UNDAF process, led by resident coordinators with the strong support of United Nations country teams. At the regional and global levels, relevant United Nations Development Group mechanisms should guide the implementation and use of the analytical framework. Such future efforts should build on existing United Nations strategies and draw on the expertise of agencies already working on risk management and building resilience.

23. To fully achieve the 2030 Agenda, it is critical both to make progress towards the Sustainable Development Goals and at the same time to proactively address threats that could set back that progress. The analytical framework on risk and resilience is intended to provide an approach for addressing potential setbacks. When combined with effective efforts to make progress on the Sustainable Development Goals, it could help promote a more comprehensive and integrated system-wide engagement, as called for by the 2030 Agenda. It is therefore hoped that this conceptual-level work can make a contribution to broader strategic efforts of the United Nations, including, above all, the Secretary-General’s reform initiatives.

## Appendix

### Harmonized definitions

To the extent possible, the definitions used in this analytical framework on risk and resilience draw upon existing harmonization efforts, such as those of the Open-ended Intergovernmental Expert Working Group on Indicators and Terminology Relating to Disaster Risk Reduction (see list of sources below). Where definitions have been adjusted to be more encompassing of all United Nations pillars or alternatives have been used, an explanation is provided.

**Capacity:** The combination of all the strengths, attributes and resources available within an organization, community or society to manage and reduce risks and strengthen resilience. *(based on OEWG 2016)*

*Explanation:* This version of the OEWG 2016 definition removes the word “disaster” before the word “risks” to make the term “capacity” relevant to other types of risk as well.

**Exposure:** The situation of people, infrastructure, housing, production capacities and other tangible human assets located in hazard-prone areas. *(OEWG 2016)*

**Hazard:** A process, phenomenon or human activity, including violent conflict and human rights violations, that may cause loss of life, injury or other health impacts, property damage, social and economic disruption or environmental degradation. *(based on OEWG 2016)*

*Explanation:* The OEWG 2016 definition focused on disaster risk reduction, which deals with a range of natural, anthropogenic and socionatural hazards. However, it does not include violent conflict and human rights violations. These have therefore been explicitly added in the definition above.

**Prevention:** Activities and measures to avoid existing and new risks and the actual impacts of hazards. *(based on OEWG 2016)*

*Explanation:* This version of the OEWG 2016 definition removes the word “disaster” before the word “risks” to make it more encompassing of other hazards, such as violent conflict and human rights violations. It acknowledges that prevention avoids not only existing and new risks but the actual impacts of the hazards as well.

**Resilience:** The ability of individuals, households, communities, cities, institutions, systems and societies to prevent, resist, absorb, adapt, respond and recover positively, efficiently and effectively when faced with a wide range of risks, while maintaining an acceptable level of functioning and without compromising long-term prospects for sustainable development, peace and security, human rights and well-being for all. *(United Nations Development Group/Inter-Agency Standing Committee 2015)*

*Explanation:* This United Nations Development Group/Inter-Agency Standing Committee definition reflects the evolving understanding of resilience. It represents a broadening of the concept from its origins in the study of ecosystems and earlier conceptions that focused on absorptive, adaptive and transformative capacities in response to natural hazard events, with less emphasis on proactively preventing or resisting them. The OEWG 2016 definition is based on the earlier conceptions and therefore has not been used in this instance.

**Risk:** The potential loss of life, injury or destroyed or damaged assets which could occur to a system, society or a community in a specific period of time, determined

probabilistically as a function of hazard, exposure, vulnerability and capacity (i.e., Risk = Threat x Vulnerability/Capacity) *(based on OEWG 2016)*

*Explanation:* This definition of risk is identical to the OEWG 2016 definition of “disaster risk”. The word “disaster” has been removed to make it more encompassing of other types of risks. It makes an explicit link back to the “risk and resilience equation”.

**Threat:** A combination of hazard and exposure encompassing both the events that could occur and the people or assets potentially affected by them. *(based on INFORM 2017)*

*Explanation:* The term “threat” comes from the protection field and is used in its equivalent of the “risk and resilience equation”. It combines hazard and exposure, simplifying the risk and resilience equation, giving it a wider, more encompassing resonance that goes beyond natural hazards and reflecting a grouping used by the Index for Risk Management (INFORM) initiative. The OEWG 2016 report does not define the term and the wording here has been drawn from INFORM even though it does not explicitly use the term “threat”.

**Vulnerability:** The conditions determined by physical, social, economic and environmental factors or processes which increase the susceptibility of an individual, a community, assets or systems to the impacts of hazards. (OEWG 2016)

#### Sources

*INFORM 2017:* INFORM Global Model: Interpreting and Applying: guidance note

*OEWG 2016:* Report of the Open-Ended Intergovernmental Expert Working Group on Indicators and Terminology Relating to Disaster Risk Reduction

*UNDG/IASC 2015:* United Nations Development Group/Inter-Agency Standing Committee Principles on Fostering Resilience