



# RESILIENCE CAPACITY BUILDING, REFLECTION AND LEARNING: THE DYNAMIC RESILIENCE WHEEL (DReW)

Vulnerable communities are constantly affected by multiple — and often simultaneous — shocks and stressors (e.g. environmental, socio-economic, political). Resilience has been adopted widely in the international development field as an approach to strengthening the capacity of those communities to absorb the impacts of shocks and stressors, adapt to change and potentially transform.

But despite the growing number of resilience initiatives and research conducted in this field,<sup>1</sup> there is still a tangible gap between resilience theory/conceptualization and development practice. This gap often translates into a weak or superficial integration of resilience principles in the project design, planning, implementation, monitoring and/or evaluation.

Ensuring a solid resilience technical capacity of project stakeholders, including a collective understanding of what resilience means and what it entails in the context of the project, is crucial for addressing this gap and achieving sustainable impacts.

**This document presents the Dynamic Resilience Wheel (DReW), an interactive tool and visual aid designed to build and strengthen resilience technical capacity of project stakeholders and facilitate reflection and learning processes in resilience initiatives.**

The DReW is a contribution to bridging the gap between resilience conceptualization and development practice, as it helps practitioners to:

- Visualize the key components involved in resilience building;
- Identify and document the dynamic interactions that take place between those components (i.e. different pathways towards the achievement of development outcomes);
- Gain a more in-depth understanding of resilience technical concepts and their application to development practice (e.g. through practical examples and key resilience questions, further explained below).

These factors are key in empowering project stakeholders and strengthening resilience throughout the project cycle, as they improve their ability to identify and assess progress and make informed adjustments utilizing a resilience 'lens'.

The following sections describe the components of the DReW and its contribution to resilience practice, including its main strengths and limitations based on a pilot conducted in Nepal.



**Lutheran World Relief**  
SUSTAINABLE DEVELOPMENT. LASTING PROMISE.

## DESCRIPTION OF THE TOOL

The Dynamic Resilience Wheel (Figure 1) provides a dynamic snapshot of the key components of resilience thinking in development environments. Composed of multiple rotating layers, DReW offers a dynamic lens to help learn about and apply the main factors that play a role in resilience building.

The DReW can be used in either printed or electronic form (coming soon to [lwr.org/resilience](http://lwr.org/resilience)). In both cases, the wheel should be accompanied by the Implementation Guide available in Annex 2, which provides definitions and examples of the DReW's components.

## WHAT DOES THE DReW OFFER TO DEVELOPMENT PRACTITIONERS?

- A visual representation of a dynamic resilience framework. The wheel serves as a visual aid to understanding the technical components of resilience and the way in which they interact together. It integrates different levels of analysis (scales), systems of focus (e.g. individual, households, community) and gender considerations.
- Definitions of the key technical components of resilience thinking (DReW's Implementation Guide, Annex 2).
- Practical examples of resilience concepts in development practice (DReW's Implementation Guide, Annex 2).
- A set of guiding questions to support resilience reflection and learning throughout the project cycle (DReW's Implementation Guide, Annex 2).

# DYNAMIC RESILIENCE WHEEL

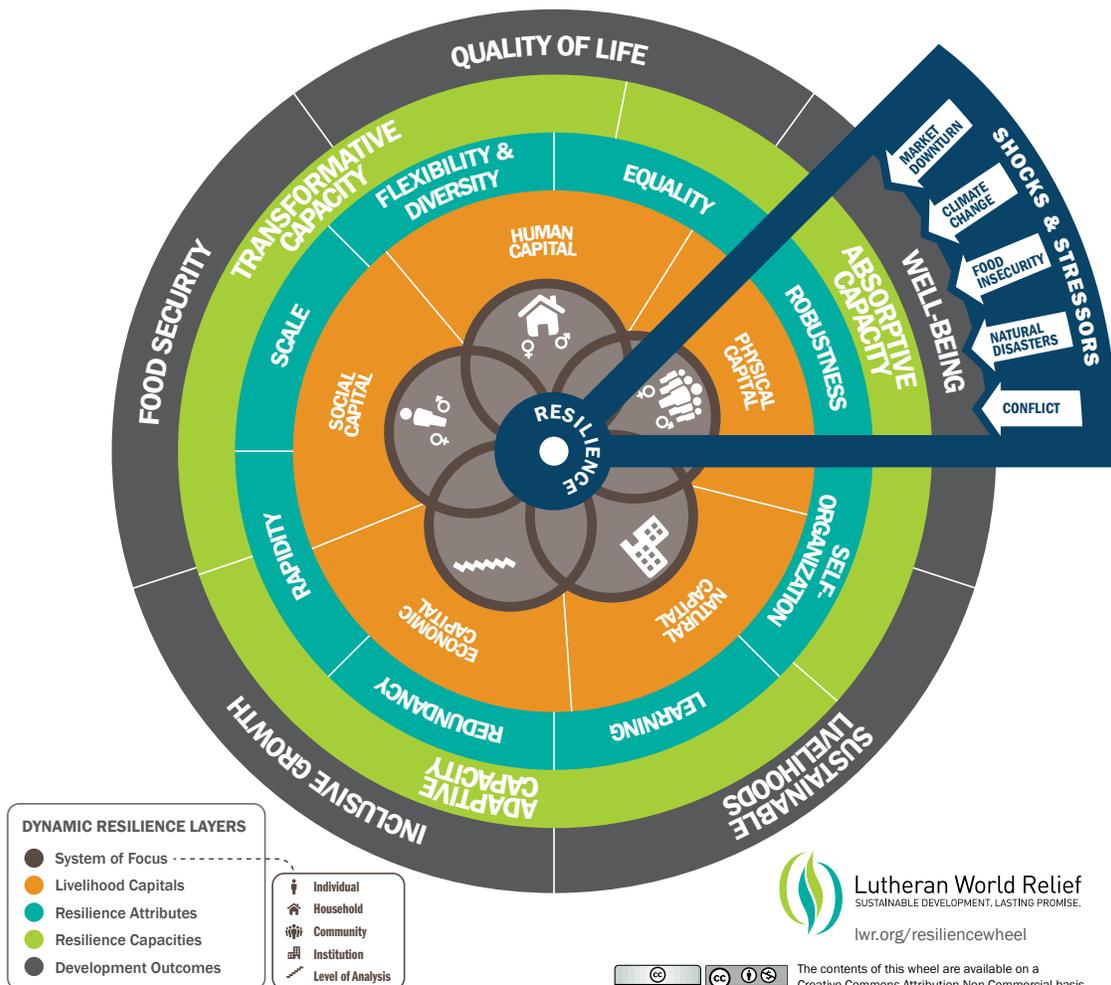


Figure 1. The Dynamic Resilience Wheel (DReW)

## WHAT IS THE DReW's CONTRIBUTION TO RESILIENCE PRACTICE?

- It provides practitioners with a visual aid for resilience capacity building and empowerment. It helps them visualize and learn about the components of a resilience framework that integrates livelihood capitals and resilience attributes (Annex 1) and links their role to the achievement of development outcomes.
- It helps practitioners to deepen the process of resilience reflection and learning throughout the project cycle. It offers a new, dynamic perspective for resilience thinking through DReW's rotating layers that allow practitioners to experiment conceptually and explore the interactions among multiple factors needed to build resilience.
- It contributes to strengthening the process of project design, mid-term and end-term resilience reflection and learning by helping practitioners address a series of key resilience questions.

## WHEN CAN THE DReW BE USED BY DEVELOPMENT PRACTITIONERS?

Resilience capacity building, reflection and learning are all processes that take place throughout the project cycle. The DReW can be used as a support tool at different stages of a project:

### IN THE STAGE OF PROJECT DESIGN AND PLANNING:

- To integrate key resilience technical concepts into the project's design and ensure that project stakeholders understand and are able to apply those concepts.
- To inform the design of the project's theory of change and needs assessment from a holistic resilience perspective.

### IN THE STAGE OF PROJECT IMPLEMENTATION:

- To support the mid-term reflection and learning about the project's progress.
- To foster discussion and knowledge exchange about resilience pathways among project stakeholders.

### IN THE STAGE OF PROJECT FINALIZATION:

- To identify resilience learning questions by looking more holistically at the project's impact on capitals, attributes and capacities at multiple levels.
- To foster discussions on resilience strategizing/future programming by helping practitioners consider future shocks and stressors.

## WHAT ARE THE COMPONENTS OF THE DReW?

The Dynamic Resilience Wheel consists of six inter-related layers. Each layer represents a key technical component of resilience thinking.<sup>2</sup> The layers are complementary and inter-dependent; there are constant interactions among them. The components of each layer are listed below.

### LAYER 1

**System of Focus:** individual, household, community and institution.

**Level of Analysis:** local, regional, national and international.

**Gender Aspects:** men, women, boys and girls.

### LAYER 2

**Livelihood Capitals:** social, economic, human, physical and natural.

### LAYER 3

**Resilience Attributes:** robustness, self-organization, learning, redundancy, scale, rapidity, flexibility and diversity and equality.

### LAYER 4

**Resilience Capacities:** absorptive, adaptive and transformative.

### LAYER 5

**Development Outcomes:** inclusive growth, food security, well-being, quality of life and sustainable livelihoods.

### LAYER 6

**Shocks and Stressors:** market downturn, climate change, food insecurity, natural disasters and conflict.

Acting together, livelihood capitals (layer 2) and resilience attributes (layer 3) contribute to building or strengthening resilience capacities (layer 4) of vulnerable systems. These capacities enable the achievement of development outcomes (layer 5) by allowing vulnerable systems (e.g. a community) to more effectively absorb/adapt/transform in the face of shocks and stressors (layer 6).

For each of these layers, the DReW provides practitioners with definitions of the concepts along with a series of (non-exhaustive) examples (Annex 2).

The examples provided in layer 5 and layer 6 were selected considering the programmatic focus of Lutheran World Relief (LWR). However, the content of these layers can be adapted to outcomes relevant to other sectors of development (e.g. health, education, water, security, inclusive markets), and the examples can be changed accordingly.

## ADDRESSING KEY RESILIENCE QUESTIONS

In addition to helping development practitioners become familiar with key technical terms related to resilience thinking and visualize the interactions among them, the layers of the wheel can be used to address five key resilience questions: ‘resilience to what?’, ‘resilience for what purpose?’, ‘resilience how?’, ‘resilience where?’ and ‘resilience for whom?’.

Each of these key questions includes a series of sub-questions, aimed at helping practitioners to deepen their reflection and learning about resilience throughout the project cycle. A sample of these sub-questions is provided in Figure 2. A more detailed list is available in the DReW’s Implementation Guide (Annex 2).

These questions can play an important role in informing the design of resilience initiatives and fostering reflection and learning about project impact at multiple levels (e.g. between and among local partners, community members, donor organizations).

The questions included in Figure 2 and in Annex 2 are non-exhaustive examples. They serve as a guide to strengthening the processes of resilience reflection and learning but should not be viewed as a set checklist for implementation. Development practitioners/project teams need to adapt, prioritize and/or select the appropriate sub-questions that would be most informative and relevant for the context of their project implementation.

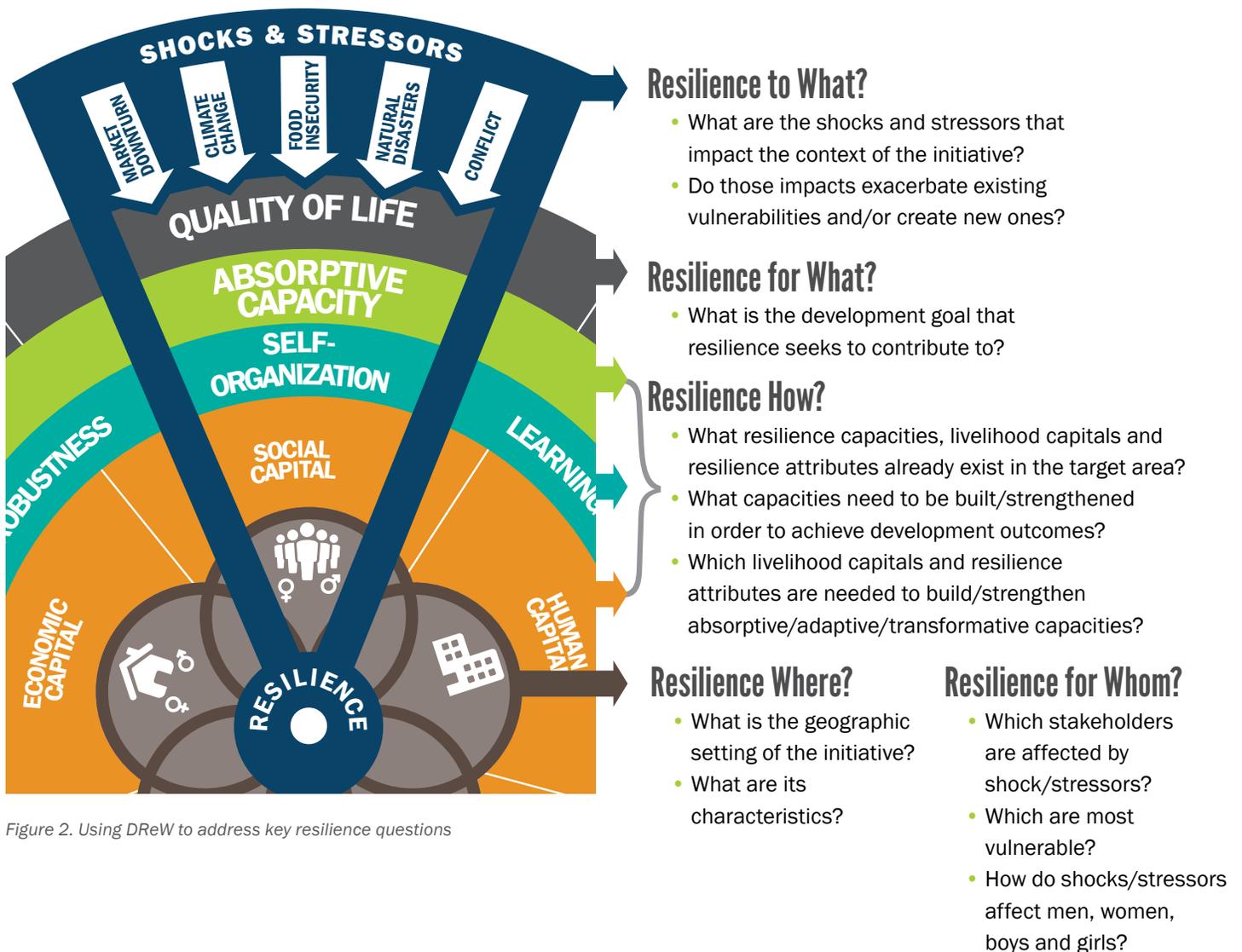


Figure 2. Using DReW to address key resilience questions

## HOW CAN PRACTITIONERS USE THE DReW?

While the role and contribution of the DReW will be different in each case as the tool can be adapted to the specific context and needs of a particular project, there are four general steps that are suggested for utilizing the wheel within a group/project setting:

### 1. PREAMBLE: SETTING THE CONTEXT

This initial step consists of a short preamble to the DReW. It offers a space to warm up to the technical concepts and become familiar with the broad principles of resilience thinking.<sup>3</sup> It can be conducted through different methods<sup>4</sup>, including:

- Participatory resilience storytelling (see Nepal pilot at [lwr.org/resilience](http://lwr.org/resilience)).
- Introduction to the concept of resilience and the key principles of resilience thinking. This could be done through a short presentation by the session's facilitator, or as a group discussion (see LWR's Resilience Approach Part I).
- General discussion about why understanding technical concepts/principles can help improve the project's resilience learning and impact.

### 2. PRESENTING THE DReW

This step consists of presenting the tool and using it to build/strengthen resilience technical capacity. It involves three parts:

- Explaining what is the DReW.
- Describing each of the DReW's layers/components, including examples of the interactions between them (based on the dynamic nature of the wheel).
- Explaining how each of the layers can be used to address key questions for resilience initiatives (i.e. resilience where?, to what?, for whom?, for what? and how?).

This step could be facilitated by a project stakeholder that has experience and expertise in the resilience field. The facilitator should use the content of this document as a basis to address the points mentioned above.

### 3. APPLYING THE DReW

This step consists of using the DReW to respond to the key resilience questions for a specific project or initiative.

Applying these questions to a real case is an important step for participants to appropriate the technical concepts included in the wheel, to apply them to their specific project and to develop confidence in using those concepts in practice.

It can be implemented through participatory or working group activities (see examples in the Nepal pilot experience, available at [lwr.org/resilience](http://lwr.org/resilience)).

The DReW can be used as a visual and conceptual aid to identify the following:

#### (a) RESILIENCE WHERE?

- Geographic setting of the project.
- Key stakeholders that operate in the project area (stakeholders based at the local, regional and/or national levels)

#### (b) RESILIENCE OF WHOM?

- System of focus (individual, household, community and/or institution)
- The project's beneficiaries (men, women, boys and girls)
- Key impacts of shocks and stressors on the project's beneficiaries (men, women, boys and girls)

#### (c) RESILIENCE HOW?

- Key livelihood capitals and resilience attributes that are available and that are lacking in the project area.
- Key livelihood capitals and resilience attributes that the project plans to address/is addressing.
- Resilience capacities (absorptive, adaptive and/or transformative) that those livelihood capitals and resilience attributes aim to strengthen/are strengthening.

#### (d) RESILIENCE FOR WHAT?

- The project's goal.

#### (e) RESILIENCE TO WHAT?

- Key shocks/stressors that affect the context of implementation.
- Key impacts of those shocks/stressors in the context of implementation.

Practitioners can address each of those questions (from (a) to (e)) by referring to the project's needs assessment/vulnerability analysis, gender analysis, proposal/donor problem analysis, project baseline and/or the proposed workplan.

## 4. REFLECTING ABOUT THE DReW

This last step consists of creating an open space for discussion about the lessons learned, and identifying unexpected issues that may have emerged during the implementation of the DReW. Participants can also identify project assumptions that may not have emerged during the discussion but that are important to consider in the project's implementation.

This is also an important step for the project team/ stakeholders to request clarifications and identify issues to be followed-up on or used to adjust the project's implementation.

### What support resources are available to use the DReW?

- The DReW: Implementation Guide (Annex 2)
- The DReW's pilot: "Participatory Resilience Reflection and Learning: An Experience from Nepal" ([lwr.org/resilience](http://lwr.org/resilience))
- Online prototype (coming soon)

### Addressing resilience questions using the DReW: Example

Table 1 illustrates the type of multi-layered resilience snapshot that can be developed using the DReW.

The examples included in the table are not exclusive and are not meant to serve as a checklist for implementation. They were selected to illustrate the types of resilience questions and sub-questions that can be addressed by practitioners under each layer of the wheel (from the inner to the outer layers).

The table also provides examples of the type of information that can be identified through secondary data (desk review) and/or primary data collection (focus groups, interviews, surveys).<sup>5</sup>

Further questions and examples can be found in the DReW's Implementation Guide (Annex 2).



*A woman in LWR's cash for work project, part of LWR's comprehensive Resilience Plus response to drought in the Sahel.*

	Key Resilience Questions and Sub-questions	Examples of information gathered through primary/secondary sources
1. SYSTEM OF FOCUS	<b>RESILIENCE WHERE?</b> <ul style="list-style-type: none"> <li>• What is the geographic setting of the initiative?</li> <li>• What are the characteristics of that setting?</li> </ul>	<ul style="list-style-type: none"> <li>• Central coffee region in Country X, covering departments Y and Z. Region characterized by mountainous terrain and agricultural production at multiple altitudes. Widespread conditions of poverty and marginalization. Difficult transportation/access. Communities located close to the main water sources.</li> </ul>
	<b>RESILIENCE FOR WHOM?</b> <ul style="list-style-type: none"> <li>• Which stakeholders are most vulnerable to shocks and stressors in the context of implementation? How do shocks/stressors affect men, women, boys and girls?</li> <li>• Whose resilience is the initiative seeking to build? (i.e. What is the target population of the initiative?)</li> <li>• Which stakeholders influence their response to shocks/stressors at the local, regional and national and/or international levels?</li> </ul>	<ul style="list-style-type: none"> <li>• Agriculture-dependent communities, particularly coffee producers.</li> <li>• Women are particularly affected by climate-related shocks.</li> <li>• Project target: Women-headed households</li> <li>• System of focus (unit of measure): Household</li> <li>• Relevant stakeholders at various levels: National Ministry of Agriculture, municipal authorities, community-based organizations.</li> </ul>
2. LIVELIHOOD CAPITALS	<b>RESILIENCE HOW?</b> <ul style="list-style-type: none"> <li>• What livelihood capitals are available in the project area? Which ones are lacking?</li> <li>• How do those livelihood capitals interact with resilience attributes?</li> <li>• Is the access to/use of livelihood capitals different for men, women, boys and girls?</li> <li>• What capitals are needed for the target population to be able to absorb/adapt/transform in the face of the shocks/stressors identified? How will the project address these livelihood capitals?</li> <li>• Which livelihood capitals will be prioritized by the project? (e.g. based on the timeline for implementation, the human and the financial resources available to the project)</li> </ul>	<ul style="list-style-type: none"> <li>• Livelihood capitals available: Strong social capital (networks of collaboration between producers). Lacking: Economic capital (scarce financial resources due to poor production), human capital (low training opportunities), natural capital (water sources depleted).</li> <li>• Interaction between livelihood capitals and resilience attributes: the social capital that exists in the community is key for the producers' self-organization. The lack of human capital undermines local learning and rapidity in the response to shocks.</li> <li>• Social capital is particularly strong among women producers. Women groups lack access to economic capital.</li> <li>• Livelihood capitals needed to adapt to climate change impacts to be prioritized by the project: Economic capital (improved access to credit), human capital (training on new production techniques), social capital (strengthened producer networks).</li> </ul>

Table 1. Example: Using the DReW to address key resilience questions

	Key Resilience Questions and Sub-questions	Examples of information gathered through primary/secondary sources
3. RESILIENCE ATTRIBUTES	<p><b>RESILIENCE HOW?</b></p> <ul style="list-style-type: none"> <li>• What resilience attributes are available in the project area? Which ones are lacking?</li> <li>• How do those resilience attributes interact with livelihood capitals?</li> <li>• Is the access to/use of resilience attributes different among men, women, boys and girls?</li> <li>• Which attributes are needed for the target population to be able to absorb/adapt/transform in the face of the shocks/stressors that affect the project area? How will the project address these resilience attributes?</li> <li>• Which resilience attributes will be prioritized by the project? (Based on the time, the human and the financial resources available in the project)</li> </ul>	<ul style="list-style-type: none"> <li>• Resilience Attributes Available: Self-organization (coffee producers organized in cooperatives) and scale (collaboration between community and regional authorities).</li> <li>• Lacking: Rapidity (lack of Early Warning Systems), redundancy (lack of savings, lack of livelihood diversification), learning (lack of mechanisms for knowledge exchange)</li> <li>• Interaction between resilience attributes and livelihood capitals: redundancy (e.g. savings) is important to strengthening economic capital and diversity. Learning is key to ensure the strengthening of human capital.</li> <li>• Self-organization is strong among women producers, but redundancy is weak due to lack of access to credit.</li> <li>• Resilience attributes needed to absorb and adapt to climate change to be prioritized by the project:</li> <li>• Redundancy (increased availability and access to saving groups to absorb the impacts of weather-related emergencies), diversity (diversify livelihoods to adapt to changing temperature), scale (collaboration with officials) and learning (increased access to technical training and knowledge exchange among producers).</li> </ul>
4. RESILIENCE CAPACITIES	<p><b>RESILIENCE HOW?</b></p> <ul style="list-style-type: none"> <li>• What strategies are already in place (if any) in the project area to absorb/adapt/transform in response to shocks/stressors?</li> <li>• Have gender-differentiated responses been used to absorb/adapt/transform to shocks and stressors?</li> <li>• What needs to be done in order to improve the capacity of the target population to absorb/adapt/transform?</li> </ul>	<ul style="list-style-type: none"> <li>• Producers are adopting more resistant seed varieties.</li> <li>• Need to reinforce absorptive capacity to climate-related disasters.</li> <li>• Need to build adaptive capacity to temperature changes and transformative capacity for sustainable community-based institutions.</li> <li>• Need to implement strategies to address gender-differentials in the community's response to climate-related shocks.</li> </ul>
5. DEVELOPMENT OUTCOME	<p><b>RESILIENCE FOR WHAT?</b></p> <ul style="list-style-type: none"> <li>• What is the development goal that the project seeks to achieve by building resilience?</li> </ul>	<ul style="list-style-type: none"> <li>• Achievement of sustainable livelihoods for coffee farming communities via coffee value chain enhancements and diversified production.</li> </ul>
6. SHOCKS & STRESSORS	<p><b>RESILIENCE TO WHAT?</b></p> <ul style="list-style-type: none"> <li>• What are the short and long term stressors that affect the project context?</li> <li>• What are the impacts of those shocks/stressors?</li> </ul>	<ul style="list-style-type: none"> <li>• Climate change</li> <li>• Temperature increase</li> <li>• Changes in seasonality</li> <li>• Landslides, infrastructure damages</li> </ul>

Table 1 (Continued). Example: Using the DReW to address key resilience questions



## REFLECTING ON STRENGTHS AND LIMITATIONS: NEPAL PILOT EXPERIENCE

The Dynamic Resilience Wheel (DReW) was piloted as part of a mid-term reflection meeting of the **Nepal-India Trans-boundary Flood Resilience Project**, an initiative that was started in 2015 by LWR and Dan Church Aid, in collaboration with four local partner organizations.<sup>6</sup>

The pilot integrated the use of the DReW to strengthen the resilience technical capacity of project partners and support the process of reflection and learning that took place during the mid-term project meeting.

A detailed description of the process and methodology used in the reflection meeting can be accessed at [lwr.org/resilience](http://lwr.org/resilience).

The following are the key strengths and limitations that were identified from the pilot experience in Nepal:

### STRENGTHS

- The DReW is an effective tool to visualize, from a holistic and integrated perspective, the key concepts and components that need to be considered by practitioners as part of resilience building initiatives.
- By providing a visual aid, definitions and examples to help grasp technical concepts, the DReW can help to strengthen the technical capacity of project stakeholders as well as their ability to apply technical terms more rigorously in the analysis of progress data.
- The DReW provides a new lens for practitioners to explore, experiment and reflect on different combinations of resilience components across multiple layers. This allows them to consider new pathways to resilience building in their context of implementation (e.g. the interactions between livelihood capitals, attributes and capacities) and to raise awareness of important issues such as gender and scale.

## LIMITATIONS

- The wheel may be perceived as not being user-friendly by those community-based organizations and NGOs that have limited technical capacity in the resilience field and may not be familiar with the use of frameworks for resilience analysis. Due to the number of technical terms included and the added complexity of rotating layers, it can be seen as too complex of a tool for practitioners with little prior knowledge and limited understanding of these concepts.
- The DReW is most useful when implemented as part of a broader process of reflection and learning about resilience, along with the support of a facilitator who can lead participatory activities, individual reflection and working group discussions. As suggested by the experience in Nepal, this requires the team to have a person(s) with a solid technical capacity/experience in resilience.
- When used as part of the process of project design, the DReW could add additional layers of analysis that may not necessarily lead to appreciable change in the project design than other simpler/traditional approaches would.

*“I see a role for DReW helping inform the project’s Theory of Change (TOC) around resilience: what is the impact we are pursuing, what are the behaviors that must change to get there, and what are the interventions likely to drive those behaviors?”*

*Evariste Karangwa,  
LWR’s Senior Regional  
Director for Africa*

## FINAL REMARKS

The DReW serves as a novel tool for dynamic visualization of the key components of resilience thinking. It fosters practitioners’ learning, empowerment and reflection around resilience in development practice. It is built on the understanding of resilience as a process instead of an end goal, and recognizes that strengthening the technical capacity of project stakeholders plays a crucial role in sustainable development.

The DReW can be a valuable tool for awareness raising and education. It can be used to inform the process of project design and planning, strengthen mid-term reflection processes, foster course adjustments and support the learning that takes place throughout the project cycle.

As demonstrated by the pilot conducted in Nepal, understanding the key components of resilience thinking can help project stakeholders to engage more deeply in the processes of reflection and learning while integrating local knowledge in the analysis of project data. It involves ensuring a robust understanding of the concept of resilience, of the components and interactions that play a role in resilience building and of the way in which they translate into development practice.

The empowerment that takes place through strengthened technical capacity, particularly that of local project stakeholders, can help to mediate the tensions between top-down expert-led resilience assessment and measurement and participatory approaches.<sup>7</sup>

The DReW is a tool that can contribute to bridging the gap between resilience theory and development practice. It sheds light on the linkages that exist between resilience building, local capacity and empowerment, and demonstrates the value of understanding how technical concepts fit together, even outside of a project’s management cycle- for staff, local partners, community leaders and even donors and executive stakeholders who are trying to better understand resilience and its complexity.

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# ANNEX 1: LIVELIHOOD CAPITALS & RESILIENCE ATTRIBUTES

LIVELIHOOD CAPITALS	DEFINITION
<b>Social Capital</b>	Networks, together with shared norms, values and understandings, that enable individuals and groups to trust each other, collaborate and work together in pursuit of their livelihood objectives. <sup>8</sup>
<b>Economic Capital</b>	“Financial or economic capital denotes the financial resources that people use to achieve their livelihood objectives.” <sup>9</sup>
<b>Human Capital</b>	“The skills, knowledge, ability to labor and good health that together enable people to pursue different livelihood strategies and achieve their livelihood objectives.” <sup>10</sup>
<b>Natural Capital</b>	“Natural capital is the term used for the natural resource stocks from which resource flows and services (e.g. nutrient cycling, erosion protection) useful for livelihoods are derived.” <sup>11</sup>
<b>Physical Capital</b>	“Physical capital comprises the basic infrastructure and producer goods needed to support livelihoods.” <sup>12</sup>

Source: Keeley, B. (2007). OECD Insights: “Human Capital--How what you know shapes your life.” Paris: OECD Publishing, 2007. pg. 102-105 <http://www.oecd.org/insights/37966934.pdf>.

DFID (1999) ‘Framework: Social Capital,’ *Sustainable Livelihoods Guidance Sheets*, 2.3.1.-2.3.5, DFID, London.

RESILIENCE ATTRIBUTE	DEFINITION
<b>Robustness</b>	Ability of the community to maintain its characteristics, and continue to function despite the impact of shocks and stressors.
<b>Self-Organization</b>	Ability of the community to independently re-arrange its functions and processes.
<b>Learning</b>	Capacity of the community to gain or create knowledge, and strengthen the skills and capacities of its members.
<b>Redundancy</b>	Availability of additional resources that can be accessed to respond to shocks and stressors and that are substitutable.
<b>Rapidity</b>	Speed at which assets can be accessed or mobilized by the community to achieve goals in an efficient manner.
<b>Scale</b>	Breadth of resources (e.g. at the regional, national or international levels) that a community can access to effectively overcome or adapt to the effects of shocks and stressors.
<b>Diversity and Flexibility</b>	Ability of the community to undertake different courses of actions with available resources, enabling them to explore different options, innovate, and benefit from emerging opportunities.
<b>Equity</b>	Extent to which the community provides equal access to rights, resources and opportunities to its members.

Source: Ospina, A.V. (2013) *Climate Change Adaptation and Developing Country Livelihoods: The Role of Information and Communication Technologies*, PhD thesis, IDPM, University of Manchester, UK

# ANNEX 2: THE DYNAMIC RESILIENCE WHEEL (DReW): IMPLEMENTATION GUIDE

This table provides the content required for the use of the Dynamic Resilience Wheel (DReW) as a visual aid, training and learning tool for development practitioners. It includes descriptions and examples of the technical terms included in each of the six layers of the wheel, as well as a set of key resilience questions and sample sub-questions to facilitate resilience reflection and learning throughout the project cycle.

The content of this table is an integral component of the DReW and should be used in conjunction with the wheel.

The examples of technical terms and resilience sub-questions included in the table are not exhaustive and should not be viewed as a preset checklist for implementation.

Practitioners can choose to address only a sub-set of the resilience sub-questions included under each layer of the DReW, prioritize them and adapt them to the specific context of implementation and stage of the project cycle.

## LAYER 1: SYSTEM OF FOCUS

This layer of the Dynamic Resilience Wheel corresponds to the system of focus of the resilience initiative. It involves the identification of the three main aspects that are transversal to the other layers of the wheel:

- The system(s) of focus of the resilience initiative: individual, household, community, institution, other.
- The interactions that take place between the system of focus and other systems, at multiple-levels: local, regional, national and/or international levels.
- The gender considerations needed to achieve resilience: differences in the sensitivity to shocks/stressors, perceptions of shocks/stressors, coping strategies of men, women, boys and girls.<sup>13</sup>

### Resilience Guiding Questions: WHERE and FOR WHOM?

#### RESILIENCE WHERE?

- What is the geographic setting of the initiative?
- What are the characteristics of that setting?

#### RESILIENCE FOR WHOM?

- Which stakeholders are the most vulnerable to the impacts of shocks and stressors in the context of implementation? (i.e. specific individuals, households, communities, institutions/other groups?)
- How do shocks/stressors affect men, women, boys and girls?
- Whose resilience is the initiative seeking to build? (i.e. What is the target population of the initiative?)
- What unit of measure are your beneficiary selection criteria and subsequent measurement framework based upon?
- Which stakeholders play a role/influence their response to shocks/stressors at the local, regional and national and/or international levels?

COMPONENT	DEFINITION	EXAMPLES
<b>Individual</b>	Individual human beings.	Resilience initiatives focused on specific individuals or on individuals with certain characteristics within a larger group. For example, individuals with certain skills, physical disabilities or within a specific age group. It can also refer to individuals that are members of certain groups (e.g. individuals that are members of certain churches).  It involves the identification of gender considerations in order to, for example, understand the differentiated access to assets (e.g. land), opportunities (e.g. education, formal employment) and coping mechanisms between men, women, boys and girls.

**LAYER 1: SYSTEM OF FOCUS** (Continued)

COMPONENT	DEFINITION	EXAMPLES
<b>Household</b>	A household consists of all the people who occupy a housing unit. <sup>14</sup>	Resilience initiatives focused on specific households within a community. For example, households located in a specific geographic location that is particularly vulnerable to certain shocks or stressors (e.g. along a river basin or a coastal area prone to flooding), women-headed households, etc.  It involves the identification of gender considerations, such as intra household power relations and the participation of women and girls in household decision-making.
<b>Community</b>	A social group of any size whose members reside in a specific locality, share government and often have a common cultural and historical heritage. <sup>15</sup>	Resilience initiatives focused on a specific community or group of communities. The focus is on groups that share common characteristics (geographical, socio-economic, political) or interests. For example, communities whose livelihoods depend on agricultural production; communities located in a particularly vulnerable geographical location; or communities that are affected by a given (socio-political) conflict.  It involves the identification of gender considerations, for example, gender representation in community-based organizations and in decision-making processes.
<b>Institution</b>	Formal organizations governed by clearly stated and enforced norms. A social system organized around specific goals. <sup>16</sup>	Resilience initiatives focused on a specific institution(s), including formal and informal organizations from the public, private or civil society sectors. For example, institutions that make or enforce legislation, credit organizations or community-based organizations.  It involves the identification of gender considerations, for example, policies that may differ by gender or ethnicity in regards to membership or access to services of farming cooperatives.
<b>Level of Analysis</b>	<p><b>Local:</b> Restricted to a specific area, a given group, community or place.</p> <p><b>Regional:</b> Broader geographic area of coverage within a country.</p> <p><b>National:</b> Country-wide.</p> <p><b>International:</b> Multi-country</p>	<p>This category is transversal to all of the above. Regardless of the system of focus, practitioners need to identify the interactions that take place between that system (e.g. a particular community) and other systems (e.g. neighboring communities). These interactions can place at the local, regional, national and/or international levels (depending on the context of implementation) that influence (either positively or negatively) the vulnerability of the system of focus, its coping strategies and its response options to shocks/stressors.</p> <p>For example, collaboration between community stakeholders and the municipal government, mechanisms for information exchange between neighboring communities, institutional arrangements that impact the community (e.g. national land use policies, trade agreements that affect labor mobility, changes in district housing legislation, transportation restrictions that affect local access to supplies, mechanisms for credit provision).</p>

## LAYER 2. LIVELIHOOD CAPITALS

This layer of the Dynamic Resilience Wheel corresponds to the different assets or capital endowments that can be converted into positive livelihood outcomes<sup>17</sup> and contribute to the achievement of development goals. The livelihood capitals interact with a series of resilience attributes (Layer 3), enabling the achievement of resilience capacities (absorptive, adaptive and transformative capacities).

### Resilience Guiding Questions: RESILIENCE HOW?

- Which livelihood capitals are already available in the context of implementation? Which are stronger/weaker?
- How do those livelihood capitals help the target population to absorb the impact and adapt to shocks and stressors?
- Is the access to/use of livelihood capitals different between men, women, boys and girls?
- In view of the shocks and stressors affecting the context of implementation, which livelihood capitals need to be/are being prioritized?
- Are/could those livelihood capitals contribute to resilience attributes? If yes, to which attributes (e.g. to robustness, self-organization, learning, etc.)?
- Are/could those livelihood capitals contribute to resilience capacities? If yes, to which capacities (absorptive, adaptive and/or transformative)?
- How is/could each of the livelihood capitals contribute to the resilience capacities (absorptive, adaptive, transformative capacity)?
- Which stakeholders are being/could be affected by changes in the livelihood capitals? What are the impacts of those changes on men, women, boys and girls?

COMPONENT	DEFINITION	EXAMPLES
<b>Social Capital</b>	The networks, together with shared norms, values and understandings that enable individuals and groups to trust each other, collaborate and work together in pursuit of their livelihood objectives. <sup>18</sup>	Examples of social capital include formal institutions such as civil society groups, associations and political parties; vertical and horizontal networks and connectedness; relationships of trust. <sup>19</sup>
<b>Human Capital</b>	“The skills, knowledge, ability to labor and good health that together enable people to pursue different livelihood strategies and achieve their livelihood objectives.” <sup>20</sup>	Examples of human capital include trainings and education; specific knowledge; human health; anything related to knowledge and labor or the ability to command labor. It varies depending on the size of the system of focus (e.g. a household), skill levels, leadership potential and health status, among others. <sup>21</sup>
<b>Physical Capital</b>	“Physical capital comprises the basic infrastructure and producer goods needed to support livelihoods.” <sup>22</sup>	Examples of physical capital include infrastructure or changes to the physical environment that help people to meet basic needs and be more productive. Examples include affordable transport, secure shelter and buildings, adequate water supply and sanitation, clean, affordable energy and communication infrastructure, among others. <sup>23</sup> It also involves the tools and equipment needed for systems to function more productively (e.g. tractors, better seed varieties). <sup>24</sup>
<b>Natural Capital</b>	Natural capital refers to “natural resource stocks from which resource flows and services that are useful for livelihoods can be derived” (e.g. nutrient cycling, erosion protection). <sup>25</sup>	Examples of natural capital include intangible public goods (atmosphere and biodiversity) and natural assets used directly for production (trees, land, rivers, etc.). <sup>26</sup>
<b>Economic Capital</b>	“Economic or financial capital denotes the financial resources that people use to achieve their livelihood objectives.” <sup>27</sup>	Examples of economic capital include available stocks (cash, bank deposits or credit) as well as regular and reliable inflows of money (e.g. earned income, pensions, transfers from the state, remittances). <sup>28</sup>

### LAYER 3. RESILIENCE ATTRIBUTES

This layer of the Dynamic Resilience Wheel corresponds to the key characteristics or attributes of resilient systems<sup>29</sup>. These attributes complement the livelihood capitals and contribute to the achievement of resilience capacities (absorptive, adaptive and transformative capacities). The attributes are closely inter-related and are not exclusive or exhaustive (they can be complemented with other characteristics identified in the context of implementation).

#### Resilience Guiding Questions: RESILIENCE HOW?

- Which resilience attributes are already available in the context of implementation? Which of them are stronger/weaker?
- How do those resilience attributes help the target population to absorb/adapt to shocks and stressors?
- Is the access to/use of resilience attributes different between men, women, boys and girls?
- In view of the shocks and stressors affecting the context of implementation, which resilience attributes need to be/are being prioritized?
- Are/could those resilience attributes contribute to resilience capacities? To which capacities (absorptive, adaptive and/or transformative)?
- How is/could each of the resilience attributes contribute to the resilience capacities?
- Which stakeholders are being/could be affected by changes in the attributes? What are the impacts of those changes on men, women, boys and girls?

COMPONENT	DEFINITION	EXAMPLES
<b>Robustness</b>	Robustness relates to the ability of a system to withstand; that is, to maintain its characteristics and its performance in the face of shocks or stressors. <sup>30</sup>	Examples of robustness include the presence of strong institutions that don't collapse despite the impact of natural disasters <sup>31</sup> along with measures that help avoid the collapse of local livelihoods and institutions in the face of shocks. It could be in the form of physical preparations to shocks, such as flood barriers, terracing on hills and resistant infrastructure, flood storage basins or tree planting to protect crops.
<b>Self-organization</b>	Self-organization refers to the ability of a system (e.g. a community) to independently re-arrange in the face of shocks or stressors. <sup>32</sup>	Examples of self-organization include the capacity of communities for cooperative decision-making and action, the existence of social networks, leadership and trust that allow groups to mobilize efforts and resources in response to shocks and stressors.
<b>Learning</b>	Learning refers to the capacity to gain or create knowledge and build the skills, attitudes and other competences needed to innovate and adapt to change. <sup>33</sup>	Examples of learning include the skills available in communities, training opportunities, the dissemination of traditional knowledge, as well as formal or informal mechanisms that enable experimentation and innovation.
<b>Redundancy</b>	Redundancy refers to the availability of additional or surplus resources that can be accessed in case of shocks or stressors and that are interchangeable among themselves. Redundancy may also involve the overlap of processes and capacities among institutions. <sup>34</sup>	Examples of redundancy include access to multiple livelihood sources (e.g. cash crops, paid labor and/or remittances) or the availability of multiple institutions that provide the same services (e.g. multiple credit providers/financial institutions).
<b>Rapidity</b>	Rapidity refers to how quickly resources can be accessed or mobilized to achieve goals in an efficient manner. <sup>35</sup>	Examples of rapidity include functional Early Warning Systems that allow communities to prepare and react quickly in the case of shocks (e.g. flooding) and also the availability of insurance and finance mechanisms that provide resources to cope with the effects of shocks (e.g. shelter and food needs).

### LAYER 3. RESILIENCE ATTRIBUTES *(Continued)*

COMPONENT	DEFINITION	EXAMPLES
<b>Scale</b>	Scale refers to the breadth of resources (e.g. human or economic) that can be accessed in order to respond to or overcome the effects of shocks and stressors. <sup>36</sup>	Examples of scale include access to informal social networks to extended markets or state organizations, <sup>37</sup> or to groups that are beyond the immediate context (e.g. support provided to a community by neighboring communities, regional institutions or a national group of volunteers), which enable access to resources that may not otherwise be available locally.
<b>Flexibility and Diversity</b>	Flexibility refers to the ability to undertake different actions with the resources that are available, addressing challenges and benefiting from opportunities that arise from change. <sup>38</sup> Closely linked to the above, diversity refers to the availability of different assets, sources of knowledge, institutions and institutional functions that enable a range of response options. <sup>39</sup>	Examples of flexibility include the ability to inform decisions with new information that becomes available, adopt new tools or agricultural inputs that can improve productivity and make crops more resistant to climatic impacts.  Examples of diversity include the availability of multiple/diverse livelihood options, land use, and infrastructure choices, <sup>40</sup> access to different sources of scientific research and/or information, as well as to traditional/indigenous knowledge to inform responses to shocks.
<b>Equality</b>	Equality refers to “the ability of both men and women to have equal opportunities and life chances.” <sup>41</sup>	Examples of equality include a fair and transparent access to resources and institutions, participative decision-making processes at the community level, transparency and representation of all groups (women, elders, youth, persons with disabilities) within local decisions and processes. <sup>42</sup>

#### LAYER 4. RESILIENCE CAPACITIES

This layer of the Dynamic Resilience Wheel corresponds to the three key capacities that make systems resilient to the impact of shocks and stressors: the absorptive, adaptive and transformative capacities. These capacities allow systems (e.g. a community) to absorb the impacts of shocks and stressors, adapt to changing circumstances and potentially transform amidst uncertainty, facilitating the achievement of development goals. Absorptive and adaptive capacities can often be built or strengthened in the short or medium-term (e.g. disaster response and recovery, adaptation measures). Transformability involves system adjustments and renewal that require extended periods of time and take place over long-term periods (e.g. institutional and behavioral change). It is important to remember that the availability of a livelihood capital or a resilience attribute does not necessarily nor automatically translate into a resilience capacity. For a capacity to be in place, there needs to be evidence that those livelihood capitals/attributes have allowed the system (e.g. a community) to absorb, adapt or transform in the face of actual shocks/stressors, or that they are part of functional strategies to do so in the event that a shock/stressor occurs.

#### Resilience Guiding Questions: RESILIENCE HOW?

- What resilience capacities are available in the project area? Which ones are lacking?
- What are the specific capacities of different gender groups, especially women and girls, to absorb and adapt to shocks and stressors?
- What gender-differentiated responses been used to absorb/adapt to shocks and stressors?
- Based on the shocks/stressors affecting the context of implementation, which capacities are being/need to be prioritized?
- Which livelihood capitals and resilience attributes can/are contributing to absorptive capacity in the context of implementation? How?
- Which livelihood capitals and resilience attributes can/are contributing to adaptive capacity in the context of implementation? How?
- Which livelihood capitals and resilience attributes can/are contributing to transformative capacity in the context of implementation? How?
- Which stakeholders are being/could be affected by changes in the resilience capacities? What are the impacts of those changes on men, women, boys and girls?

COMPONENT	DEFINITION	EXAMPLES
<b>Absorptive</b>	Absorptive capacity refers to the ability of a system to mitigate the impacts of shocks on their livelihoods and basic needs. It involves disaster preparedness and short-term responses to mitigate the impact of events such as natural disasters.	Examples of absorptive capacity include coping strategies that have been effectively implemented by a community (e.g. cash savings, reserve food stocks and access to safety nets) and have allowed it to withstand and recover from the effects of a shock.
<b>Adaptive</b>	Adaptive capacity refers to the ability of a system to adjust to the impacts of shocks and stressors, to moderate potential damages and to take advantage of opportunities that may emerge with change.	Examples of adaptive capacity include the adoption of more resistant seed varieties and new farming techniques that have allowed a community to adapt, in the medium to long-term, to the effect of climate change stressors such as temperature changes or seasonality.
<b>Transformative</b>	Transformative capacity refers to the ability of a system to achieve a new state through a combination of technological innovations, institutional reforms, behavioral shifts and cultural changes, among others.	Examples of transformative capacity include new governance mechanisms in place, the widespread adoption of low-carbon technologies, robust and inclusive community-based institutions, or new forms of social engagement that have been adopted by a community over the long-term.

## LAYER 5. DEVELOPMENT OUTCOMES

This layer of the Dynamic Resilience Wheel corresponds to the development objectives or high level goals that resilience projects seek to achieve in order to lift vulnerable populations out of insecurity and poverty. The development outcomes reflected in the DReW are not exclusive. They illustrate the types of goals pursued by development initiatives and can be adapted to a specific project/context of implementation.

### Resilience Guiding Questions: RESILIENCE FOR WHAT?

- What is the development goal that the project seeks to achieve by building resilience?
- Why is resilience important in the achievement of that goal? (i.e. Why is strengthening resilience capacities important to achieve the development outcome?)
- What are the advantages of adopting a resilience approach to achieve the project's goal? Are there any potential drawbacks of adopting the approach?

COMPONENT	DEFINITION	EXAMPLES
<b>Quality of Life</b>	"Quality of life is the notion of human welfare (well-being) measured by social indicators rather than by 'quantitative' measures of income and production." <sup>43</sup>	A positive state or progress in people's lives, including health status, work-life balance, education and skills, social connections, civic engagement and governance, environmental quality and personal security and subjective well-being. <sup>44</sup>
<b>Well being</b>	Well-being is the quality of the human experience, both physiological and psychological, as influenced by material conditions, quality of life and relationships, in order to meet basic needs and live well and with dignity. <sup>45</sup>	Situation of good material conditions – income and wealth, jobs and housing – as well quality of life. It includes subjective aspects, such as a person's feelings and perceptions about life circumstances. <sup>46</sup>
<b>Sustainable Livelihoods</b>	"A livelihood comprises the capabilities, assets (including both material and social resources) and activities required for a means of living. A livelihood is sustainable when it can cope with and recover from stress and shocks and maintain or enhance its capabilities and assets, both now and in the future, while not undermining the natural resource base." <sup>47</sup>	An agricultural livelihood that can absorb the effects of seasonal flooding and adapt to its impacts without negatively affecting the natural resource base.
<b>Inclusive Growth</b>	Economic growth that is broad-based across sectors and inclusive of the large part of the country's labor force. It focuses on sustained economic growth and emphasizes both the pace and pattern of growth through productive employment. <sup>48</sup>	An approach to economic growth characterized by equality of opportunity in terms of access to markets, resources and unbiased regulatory environment for businesses and individuals, as well as productive employment to increase incomes for excluded groups. <sup>49</sup>
<b>Food Security</b>	"A situation that exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life." <sup>50</sup>	A situation in which community members have sufficient availability, access, stability and utilization of the food required for an active and healthy life. <sup>51</sup>

## LAYER 6. SHOCKS AND STRESSORS

This layer of the Dynamic Resilience Wheel [the ‘visor’] corresponds to the multiple and often concurrent shocks and stressors that impact vulnerable settings.

- *Shocks* refer to “sudden events that impact the vulnerability of the system and its components. Examples include disease outbreaks, weather-related and geophysical events like floods, high winds, landslides, droughts or earthquakes. There can also be conflict-related shocks such as outbreaks of fighting or violence, or shocks related to economic volatility.”<sup>52</sup>
- *Stressors* refer to “long-term trends that undermine the potential of a given system or process, and increase the vulnerability of actors within it. Examples include natural resource degradation, loss of agricultural production, urbanization, demographic changes, climate change, political instability and economic decline.”<sup>53</sup>

The shocks and stressors reflected in the DReW are not exhaustive. They can be adapted to a specific project/context of implementation.

### Resilience Guiding Questions: RESILIENCE TO WHAT?

- What are the short-term shocks and long-term stressors that take place in the context of implementation? What are their impacts?
- What is the frequency and magnitude of those shocks and stressors in the context of implementation?
- Are there any positive impacts or opportunities related to the occurrence of those shocks/stressors? For which stakeholders?

COMPONENT	DEFINITION	EXAMPLES
<b>Market Downturn</b>	A period during which the rate of economic growth declines or ceases, often accompanied by rising unemployment and falling asset values. <sup>54</sup>	A period of economic recession associated with a high unemployment rate, business losses and a decline in consumer spending.
<b>Climate Change</b>	“A change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods.” <sup>55</sup>	Climate change manifestations identified by the United Nations Intergovernmental Panel on Climate Change (IPCC) include rising sea levels, rising temperature, depletion of ozone layer, desertification and changes in seasonal patterns, among others. <sup>56</sup>
<b>Food Insecurity</b>	“A situation that exists when people lack secure access to sufficient amounts of safe and nutritious food for normal growth and development and an active and healthy life. It may be caused by the unavailability of food, insufficient purchasing power, inappropriate distribution or inadequate use of food at the household level.” <sup>57</sup>	A situation of prevalent hunger and undernourishment among vulnerable populations that lack the food they need for an active and healthy life. Examples also include situations of “hidden hunger”, i.e. “the lack of, or inadequate, intake of micronutrients, resulting in different types of malnutrition, such as iron-deficiency anemia and vitamin A deficiency.” <sup>58</sup>
<b>Natural Disasters</b>	“A sudden, calamitous event that seriously disrupts the functioning of a community or society and causes human, material and economic or environmental losses that exceed the community’s or society’s ability to cope using its own resources.” <sup>59</sup>	<b>Geophysical:</b> Earthquakes, landslides, tsunamis, volcanic activity. <b>Climatological:</b> Extreme temperatures, drought, wildfire. <b>Hydrological:</b> Avalanches, floods. <b>Meteorological:</b> Cyclones, storms/wave surges. <b>Biological:</b> Disease epidemics, insect/animal plagues. <sup>60</sup>
<b>Conflict</b>	Organized interstate, intrastate or communal violence perpetrated by government and/or non-governmental actors. <sup>61</sup>	Interstate war; intrastate rebellion or civil war; ethnic, religious or geographically organized communal violence.

# ENDNOTES

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<sup>2</sup> The resilience capitals reflected in the Dynamic Resilience Wheel are drawn from the Sustainable Livelihoods Approach (DFID, 1999). The attributes correspond to the conceptual framework of the Resilience Assessment Benchmarking and Impact Toolkit (RABIT) developed by the University of Manchester (Ospina and Heeks, 2015). These attributes are not exclusive and can be adapted/ complemented based on the context of implementation.

<sup>3</sup> As part of its approach to resilience, LWR has identified five key principles that are at the core of resilience practice: (a) understand complex environments, (b) adopt a process-oriented approach, (c) consider multiple levels, (d) ensure flexibility and learning and (e) encourage comprehensive measurement. These principles are closely interconnected and complement each other. Together, they strengthen the project cycle and contribute to building up the resilience of vulnerable communities. Further information is available in LWR’s Resilience Approach Part II or at [lwr.org/resilience](http://lwr.org/resilience).

<sup>4</sup> The selection of methods should be informed by the time available for this exercise, the type of participants and the skills and experience of the facilitator, among others. The methods included in this section are suggestions based on the pilot experience conducted in Nepal and can be modified and adjusted.

<sup>5</sup> The project team should decide what is the most convenient and viable method of data collection to address the key resilience questions, taking into account the stage of the project, the team’s technical capacity, the financial resources available and the project’s timeline.

<sup>6</sup> For more information, please go to [lwr.org](http://lwr.org).

<sup>7</sup> Quinlan, A., Berbes-Blazquez, M., Haider, J., Peterson, G. (2015) “Measuring and assessing resilience: broadening understanding through multiple disciplinary perspectives.” *Journal of Applied Ecology* 2015, p. 1-11.

<sup>8</sup> Keeley, B. (2007). *OECD Insights: “Human Capital-How what you know shapes your life.”* Paris: OECD Publishing, 2007. pg. 102-105 <http://www.oecd.org/insights/37966934.pdf> DFID (1999) ‘Framework: Social Capital,’ Sustainable Livelihoods Guidance Sheets, 2.3.2. DFID, London.

<sup>9</sup> DFID (1999) ‘Framework: Financial Capital,’ Sustainable Livelihoods Guidance Sheets, 2.3.5. DFID, London.

<sup>10</sup> DFID (1999) ‘Framework: Human Capital,’ Sustainable Livelihoods Guidance Sheets, 2.3.1. DFID, London.

<sup>11</sup> DFID (1999) ‘Framework: Natural Capital,’ Sustainable Livelihoods Guidance Sheets, 2.3.3. DFID, London.

<sup>12</sup> DFID (1999) ‘Framework: Physical Capital,’ Sustainable Livelihoods Guidance Sheets, 2.3.4. DFID, London.

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<sup>14</sup> U.S. Census Bureau (2013) <http://www.census.gov/cps/about/cpsdef.html>

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