Monitoring and Evaluation of Food Insecurity in Conflicts (MEFIC)

Analytical framework

Alba Linares Quero

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Introduction

The objective of this document is to present the rationale, main concepts and specific parameters that sustain the analysis of conflict and hunger under the MEFIC approach. The MEFIC framework provides an analytical model to understand how violent actions exhibited during armed conflict act as a causal factor contributing to food insecurity.

This document is part of a series of MEFIC action-oriented research publications, based on field monitoring, surveys, testimonies, lessons learnt and recommendations on how to best prevent and mitigate the effects of conflict on the food security of affected communities.

The theoretical considerations detailed below will be completed by another document focusing on the practical implementation of the MEFIC methodological approach and tools.

Why MEFIC?

After famine-likely scenarios in Nigeria, South Sudan, Somalia and Yemen during 2017, and the approval of UN Security Council Resolution 2417 in 2018, the interest in better understanding the impact of armed conflicts on food insecurity has increased.

Myriad studies have established that armed conflicts are one of the principal causes of food insecurity and famine. However, we still lack a detailed understanding of **how** and **to what extent** different situations of armed conflict have a differentiated impact on Food Security (FS) and generate different types of food insecurity (Holleman et al., 2017: 3). As the FAO states, "there is no existing study that convincingly disentangles or quantifies such impacts of conflict, in part owing to the complexity and limitations of data that would be required" (FAO, 2017: note 47).

With this purpose Monitoring and Evaluation of Food Insecurity in Conflicts (MEFIC) is being developed by Action Against Hunger – Spain and co-partners (GIS4tech, Hegoa Institute, Insecurity Insight) as an information system or Early Warning Systems (EWS) centred on the causal relationship between armed conflict and hunger, capable of contributing factual and detailed evidence at the local level in a regular and agile way.

An information mechanism such as MEFIC is needed for the effective application of the 2417 resolution, insofar as it can improve accountability. It can also contribute to implement political or humanitarian actions aimed at avoiding food crises in contexts of armed conflict. And finally, it can help catalyse public opinion by providing evidence and ethical arguments against the use of hunger as a weapon of war. Therefore, MEFIC can be considered an action-oriented research mechanism which ultimate purpose is to generate the necessary knowledge for interventions, and thus contribute to ending the cycle between war and famine.

What to study within MEFIC framework?

Existing reference frameworks for FS-EWS

MEFIC analytical framework has been developed to evaluate the risk of food insecurity in countries or populations affected by armed conflicts. Therefore, it is based on the analytical models commonly used in the field of disaster or humanitarian crisis risk evaluation and prevention, such as the "Pressure and Release model" (Wisner et al., 2004) or the "INFORM framework" (Marin-Ferrer et al., 2017).

Depending on the project, institution or authorship, we can observe different variations of the same model, but all of them share the same conceptualization of risk, that is: the idea of disaster or humanitarian crisis risk as a consequence of the advent of hazards and the vulnerability of the population affected by those hazards, which includes notions of exposure and coping capacity or resilience of the population (for details, see the glossary of terms in Annex 2).

Disaster Risk = Hazard x Vulnerability*

*(*including exposure and capacity)*

This is the risk assessment scheme also used in Food Security Early Warning Systems (FS-EWS), created following the famines of the mid-1970s. Since then they have been developed and are now able to provide an early response to food emergencies; except in countries affected by wars (Messer, Cohen and D'Costa, 1998: 1, 6). Daniel Maxwell (2019) analysed the shortcomings of existing FS-EWS and information systems in contexts where conflict has been one of the main causal factors of food insecurity. Given that they are not designed for analysing in-depth war and violence, they are unable to understand and/or predict food insecurity resulting from conflicts (Maxwell, 2019: 4–5, 8). In fact, the lack of conflict-analysis is the main weakness of existing systems (Maxwell and Hailey, 2020: 8).

One of the most widely used FS analytical framework is the Integrated Food Security Phase Classification (IPC). It analyses the risks that cause food insecurity and the degree of severity of the humanitarian crisis they generate (IPC, 2012: 18–20). It was built to analyse all types of contributing factors that can produce food insecurity in all kinds of contexts but lacks a specific focus on armed conflicts and violence; this dimension is diluted within the set of diverse hazards or shocks (IPC, 2021: 207).

For that reason, the IPC or other FS-EWS prove inadequate for registering and measuring the real and differentiated impact that armed conflicts have on FS: they can register them as one of the causal or contributing factors, but they are not prepared for collecting detailed information and sufficient evidence on their specific impact.

From IPC to MEFIC analytical framework

Traditional measurement of armed conflicts in the field

The most common definitions of armed conflict are those based on two criteria: the actors involved and the level of lethality of the violence measured as battle-deaths (for details, see the Glossary of terms in Annex 2).

On this basis, various research groups and institutes from different countries (e.g. Stockholm International Peace Research Institute, SIPRI; Uppsala Conflict Data Program, UCDP; and Peace Research Institute Oslo, PRIO) prepare annual statistics that reflect the evolution of armed conflict over time, particularly since the end of the Cold War.

Usually, FS systems follow these armed conflicts sources or databases. Consequently, their frameworks only consider the existence of an armed conflict and its intensity, measured in number of deaths and at an aggregated/national level of analysis. Thus, their correlation analysis is not very locally specific and only take into account violence between armed actors or against civilians which results in deaths, not including other forms of violence that impact FS such as robberies or destruction of infrastructure, basic services and food supply-chains (Messer and Cohen, 2015: 220; Holleman et al., 2017: 8).

In this sense, a group of researchers concluded that, when comparing the information provided by the UCDP database with that they obtained from national and local sources, most of the UCDP categories and definitions of the armed conflict did not fit all the cases and they were not able to understand the true nature of several armed conflicts (De Waal et al., 2014: 369).

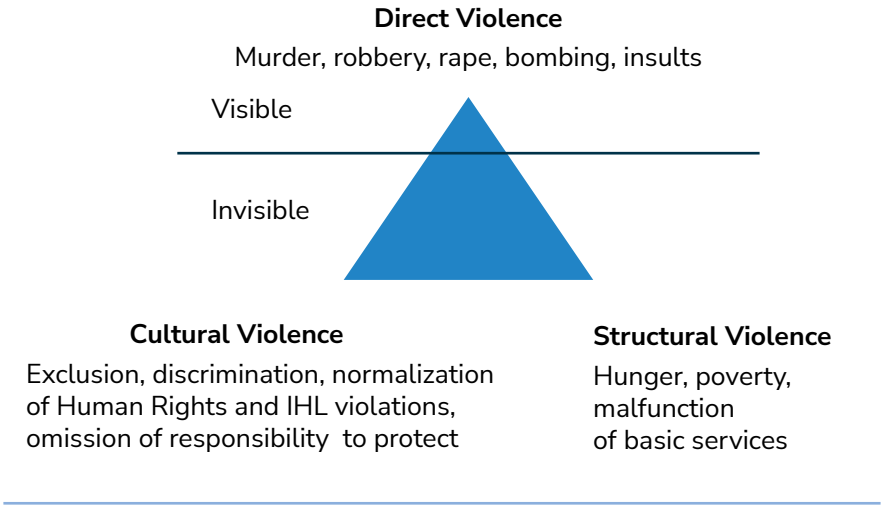
A broader conceptualization of armed conflicts

The traditional manner of measuring armed conflicts corresponds to a realistic and positivist way of conceiving war, peace and violence, which has been questioned for decades by peace and security critical studies. Particularly, the peace research field has made important contributions to the re-conceptualization of these terms.

In the beginning of the peace research field, the American stream led by Elise and Kenneth Boulding, offered very limited research focused on studying wars based on a series of quantitative data (positivist approach) in order to predict the outbreak of wars (early warnings) (Ramsbotham, Woodhouse, and Miall, 2011: 92-93).

On the contrary, the line of research initiated by Johan Galtung in Europe, in the second half of the 1960s, began to explore other conditions and situations of a structural nature as causes of wars. Galtung's work on the concepts of peace and violence contributed to these advances. Galtung (1969, 1990) proposed a conceptual turn for peace from being the absence of war to the absence of violence. This implied stopping considering the armed conflict as the only threat to peace and beginning to speak in terms of violence. In a complementary way, the author broadened the understanding of violence by proposing a "triangular model of violence", according to which, in society there is not only "direct violence" but also "structural violence" and "cultural violence".

Figure 1. Triangular model of violence
(own elaboration modified from Galtung, 1990)



Traditionally, the only violence that had been considered was direct violence, which is the type of violence manifested physically or verbally. Structural violence refers to the political, social or economic conditions of inequality and exclusion that govern relationships between individuals, groups, and societies and prevent them from fulfilling themselves both physically and mentally. Cultural violence is that which uses the symbolic aspects present in religion, ideology, language, culture, art, science, etc., to justify and legitimize direct and structural violence. They are, therefore, the narratives and discourses that make us normalize direct violent behaviours and bad structural conditions. In practice, these three types of violence are interrelated. Manifestations of direct violence are the result of situations of structural violence and the symbolic aspects of cultural violence. In addition, direct violence often aggravates structural violence by affecting access to food, healthcare and education.

Structural and cultural violence were not contemplated by traditional studies, since they refer to subtle or invisible situations that are difficult to identify, register, quantify and even individualize (that is, it is difficult to establish the chain of causality subject-action-object). Moreover, conflict is rarely measured through its impact on structures such as food supply, healthcare or education systems.

Based on this notion of violence(s), Galtung developed the famous distinction between "negative peace" and "positive peace". Negative peace refers to the peace that occurs when there is an absence of direct violence. Then, this type of peace would be obtained when hostilities cease, either after the military defeat of one side or by signing a peace agreement. This peace corresponds to the traditional conception of conflict, peace and violence. Galtung's fundamental contribution, therefore, resides in the conceptualization of positive peace, as that which results from the absence of direct, structural and cultural violence. In other words, positive peace requires that, in addition to direct violence, the structures that produce exclusion, poverty, hunger and inequalities and the cultural and symbolic aspects that justify these structures also disappear. Positive peace cannot arise from military victory or from negotiations between state and/or non-stated armed actors, but it requires a process of post-war reconstruction that addresses the roots of the conflicts, as well as the new structural inequalities that are usually a consequence of the conflict itself. The implication of this approach is very relevant, because it assumes that peace is only sustainable and lasting as soon as there are deep changes in the political, social, economic and cultural dimensions.

In addition, positive peace is inextricably linked to human development. Galtung demonstrated that the theory of peace and conflict was intimately connected with the theory of development: the theories of economic and social development, the notion of "basic needs", the system of international cooperation and so on (Galtung, 1969: 185; Galtung 1980). Peace and development are inseparable phenomena that pursue the same thing: to satisfy the needs for survival, well-being, identity and freedom (Galtung, 1985: 107). Table 1 summarizes the different visions of peace, violence and development and how the objectives converge when conceived in a broad sense.

Table 1. Convergence between positive peace, triad of violence and human development (modified from Linares, 2019: 118)

Conceptions	Peace & War	Violence	Development
Restricted sense	Absence of war between states (negative peace)	Visible -physical or verbal- aggression (direct violence)	Absence of poverty, underdevelopment or lack of economic growth
Broad Sense	Fulfilment of physical and mental human potential (positive peace)	Visible and invisible aggression (direct, structural and cultural violence)	Satisfaction of basic human needs (human development)

Since the 1970s, Galtung's conceptual framework "continues being an obligatory reference for any foray into the subject of peace" (Fisas and Grasa, 1985: 15) and has given higher priority on the agenda to the study of basic human needs and structural violence (Buzan and Hansen, 2009: 12).

However, from a methodological perspective, the multiplicity of dimensions and concepts that have appeared to build a positive definition of peace aggravates the problems of analysis, measurement and evaluation of armed conflicts and peace (ICIP, 2010). The positive notion of peace is more confusing than the negative notion, firstly, because there are intermediate situations where there is no armed conflict –as defined internationally– but there is violence. And, secondly,

because the dimensions of armed conflicts, under the positive peace approach, are more difficult to determine quantitatively (Ruiz, 2004: 247). It is easier to define and measure when there is an armed conflict in terms of negative peace.

Contemporary armed conflicts & their impacts on FS

Several trends have been highlighted in the last part of the 20th century: the gradual decrease in the total number of armed conflicts worldwide (with some exceptions in the 1990s); the decrease in the number of interstate wars in favour of an increase in wars within states, that is, civil wars; and finally, the geographical concentration of conflicts in some regions, particularly in the "impoverished countries". Moreover, the conflicts that emerged after the end of the Cold War seem to present distinctive characteristics with respect to the previous ones, which favoured the idea that a new conflict typology emerged. Literature began to talk about these contemporary conflicts as Complex Political Emergencies (CPE) and Mary Kaldor (2001) proposed the concept of "new wars" to refer to the changes that have taken place at this time in the nature of armed conflicts: now they are mostly civil or internal wars, of lower intensity (minor conflicts) but with a greater number of civilian victims[1], an increase in the use of terror methods and violations of human rights and international humanitarian law, as well as a more complex context and multidimensional causes.

The focus on these "new wars" also generated that the study of their impacts gained attention. In addition to the impact on civilian casualties, several researches focused on the effects on social, economic, environmental and political dimensions (e.g. Cranna et al., 1995; Stewart et al., 1997; Chwastiak, 2008; Gardeazabal and Vega-Bayo, 2016; Thai-Ha et al., 2022). In most cases, armed conflict is not the only cause of basic services malfunctions or infrastructure's deficiencies; rather these problems usually have root causes prior to the conflict (Mazurana et al., 2005). This implies the importance of analysing the pre-existing conditions (vulnerability), as well as the actions and omissions of unarmed actors, be they internal or external actors, which may have contributed to the precarious economic, political and social situation of many countries in conflict.

The way that armed conflicts impact FS depends on each case, according to multiple factors: conditions of vulnerability, conflict characteristics, war tactics, public policies, food prices, access to international markets, etc. The impact on FS may be indirect or direct. Conflict often causes food insecurity indirectly as a collateral impact of the context of violence and destruction. Such a context may provoke the disruption or collapse of economic activity, agricultural production and transport systems, which decreases household livelihoods and increase poverty. Moreover, armed conflict may generate food insecurity directly when contenders use political or war actions to provoke hunger as a weapon of war. In those cases, hunger can be used to subjugate communities and make them dependent and politically subservient, as well as to prevent them from providing economic and political support to their enemies (Lander and Richards, 2020: 5). For example, actions that destroy, deny access to food or hinder activities and services (Conley and De Waal, 2019: 700); as well as the forced requisition of crops and food aid to feed combatants at the cost of the civil population (De Waal, 1993: 33–34).

Several analytical frameworks have been proposed that help in studying the effect of armed conflict on FS. Table 2 summarizes the results of some of these frameworks; specifically, two about the impacts on FS and three about the use of hunger as a weapon of war.

1 For example, in World War I, 90% of victims were combatants compared to 10% civilians, while in contemporary wars 90% are civilian casualties compared to 10% combatants.

Table 2. Analytical frameworks on armed conflicts and food security nexus (elaborated from Linares et al., 2022)	
Authors	**Analytical framework**
Impacts of Armed Conflicts on Food Security	
Delgado et al. (2021: 6–12)	Impacts on food production and food supply chain: 1. Food production may be affected by: a) destruction of assets and resources; b) destruction of human capital; and c) increased risks and diversion of resources in the wider operating environment. 2. Distribution and marketing may be affected by actions that: a) disrupt distribution and market links, b) reduce the availability of goods, c) shift market dynamics, and d) change the market institutional environment.
Messer and Cohen (2011: 484)	Impact on food shortage, poverty and food deprivation: 1. Food shortage may be caused by direct attacks on food systems (crops, markets, roads, etc.). 2. Food poverty may be caused when the conflict reduces livelihoods, resources and coping capacities over time. 3. Individual food deprivation may be caused when certain population groups (normally women, children, the elderly and marginalised groups) are deprived of access to a nutritionally adequate diet, even when food is available.
Use of hunger as a weapon of war	
Macrae and Zwi (1992: 303–308)	Three types; by omission, commission or provision: 1. Omission, when governments do not adequately fulfil their functions of monitoring and planning FS or facilitating it with emergency measures. 2. Commission, when attacks take place on the means of producing or obtaining food, affecting agricultural production, coping strategies, humanitarian aid or the functioning of markets. 3. Provision, when food is selectively provided to sectors favourable to the government or whose support is sought, or to attract them to areas controlled by the armed forces.
Marcus (2003: 246–247)	Faminogenic actions by political authorities: 1. First degree, famine crime due to intentionality, when the authorities deliberately use famine as a tool of extermination or subjection. 2. Second degree, famine crime due to recklessness, when they apply policies that cause famines and maintain them even when they are aware of their consequences; 3. Third degree, unintentional famine due to indifference, when despite the fact that their policies are not the main cause of the famine, they do little or nothing to alleviate it; 4. Fourth degree, non-culpable famine due to inefficiency, when they are incapable of responding facing food crises caused by external factors.
Conley and De Waal (2019)	Political-military objectives behind the mass hunger: 1. Extermination or genocide. 2. Control through weakening a population. 3. Gaining territorial control. 4. Flushing out a population. 5. Punishment. 6. Material extraction or theft. 7. Extreme exploitation. 8. War provisioning. 9. Comprehensive societal transformation.

In addition, there are also quantitative studies on the economic costs of wars that measure macroeconomic indicators at national level, with indirect effect on FS (Renner, 1994; Harris, 1997; Messer, Cohen, and D'Costa, 1998: 13–21; Messer and Cohen, 2006: 12–13; Hamid, 2012). And in the last decade, quantitative studies have appeared on armed conflict impact at the subnational level, for example on: the nutritional status of children; nutrition and health in the long-term; and changes generated in patterns of agricultural production, consumption and coping strategies (Martin-Shields and Stojetz, 2019: 155–156).

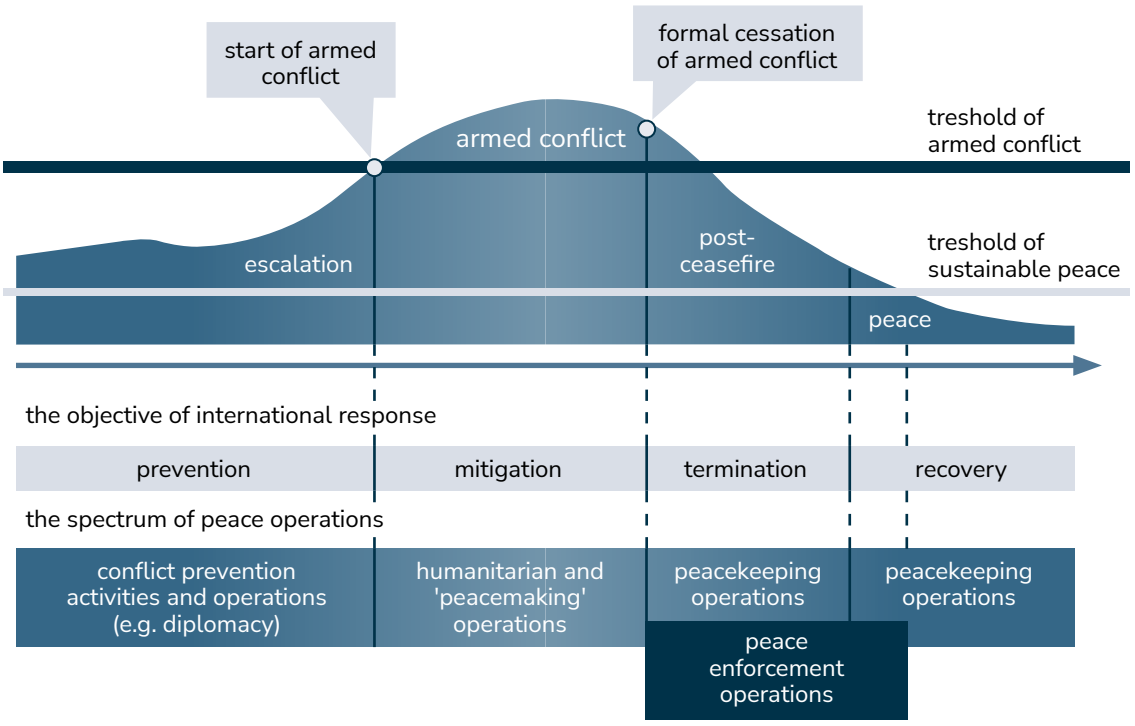
Humanitarian interventions in armed conflicts

Humanitarian response may be adapted to armed conflicts scenarios. For that, it is necessary to consider the nature of the conflict and the stage in which the conflict is set.

Regarding the nature or causes of conflicts, they may be economic (when armed actors are moved by greed or grievance), political (when there are, for example, problems of governance or state fragility) or identity (such as ethnic or nationalist motivations). Other classifications differentiate between conflicts of interest (territory, economic or political disputes) and conflicts of value (ethnic, religious, ideological or disputes).

However, in the case of humanitarian aid, the most important is the adequacy to the time frame. Any international intervention may adapt to the phase where conflict is located (latent conflict, escalation, start of armed conflict, hostilities, de-escalation, ceasefire, peace accords and post-conflict). Figure 2 shows the curve of conflict and the peace operations adequate to each conflict stage.

Figure 2. The curve of armed conflicts and peace strategies (Gleichmann, Odenwald, Steenken y Wilkinson, 2004: 18).



Before armed cownflict starts, diplomacy and other conflict prevention operations are launched. During conflict, peace strategies seek to deal with violence (crisis management), deal with the impacts of war (humanitarian aid, peacekeeping operations and "peacemaking" operations), promote negotiations and peace agreements and meet the first needs after the ceasefire. In the post-conflict, peacebuilding programs seek rehabilitation, reconstruction, demilitarization, resolution of incompatibilities and reconciliation of the parties.

In terms of MEFIC, the key intervention phase is during the armed conflict when armed actors may use hunger as a weapon of war. This is precisely the moment when humanitarian access and humanitarian interventions are most difficult.

The contemporary armed conflicts described above present new and more acute challenges to humanitarian access, among others: the proliferation of armed actors of all kinds makes the range of beliefs, motivations and ways of operating vary widely, creating challenges for negotiating humanitarian access; negotiating access with States has also become more challenging because of obstructive bureaucratic procedures and/or movement restrictions on humanitarian organizations; conditions imposed by States, whether donors or affected States, (e.g. counter-terrorism laws) can challenge the efforts of humanitarian organizations to protect and assist people in need in an impartial manner; the growth in the number and type of organizations presenting themselves as humanitarian in recent years, as well as the overlapping of political, military and humanitarian mandates in some operations, may compromise the actual or perceived neutrality and impartiality of humanitarian operations (FDFA et al., 2014: 12-13).

In addition, humanitarian organizations also face important internal challenges related to inadequate security systems. As a consequence, practitioners often approach humanitarian access in an unstructured way, with no clear method, and they lack clarity regarding the international normative framework on humanitarian access (FDFA et al., 2014: 13).

Recommendations to better incorporate conflict in the IPC framework

Therefore, we understand that a requisite for being able to cope with the hunger provoked by armed conflicts involves, firstly, having a comprehensive analytical framework adapted to armed conflicts scenarios. That means promoting armed conflict to the category of a main causal factor, giving it a central value in the equation.

Construction of such analytical framework could be achieved by adapting the IPC framework to the need of analysing and measuring armed conflict dynamics. This adaptation would require several adjustments:

(1) Qualitative conflict-analysis.

Analysing the country history and nature of the armed conflict (map of actors, relations of power and alliances, motivations, interests, demands and types of violence). Temporal and geographical variations may be considered (FAO, 2017: 34, 39).

(2) Introducing new categories of armed conflict-related food insecurity.

The existing categories of armed conflicts in most databases (e.g. intensity, duration, state/non-state conflicts) are insufficient to explain the impact of armed conflicts on FS. Considering the war events and hostilities between armed actors is not enough either. What we recommend is to develop a typology of violent actions that are linked to hunger.

(3) Monitoring the impact of violent actions on FS.

Having categorised the violent actions that may affect FS, the next challenge lies in measuring them. The measurements in armed conflict information systems are often based on counting the frequency of war events or incidents. However, knowing whether or not actions are occurring, and their frequency is not sufficient for measuring their impact on FS. Hence, it is necessary to measure the severity or destructive potential of the actions on FS. One formula for doing this is to evaluate the extent to which the goods targeted in attacks (crops, infrastructure, property, livelihoods, storehouses, supply chains, cattle, roads, people and so on) have effectively been damaged. For that purpose, the indicator of severity of the actions could be the percentage (or number) of goods of the community (or the households) that have been damaged or affected since the baseline. This indicator makes it possible to measure the impact of violent actions at the local or community level, which is one of the main shortcomings of existing systems.

To better understand how violent actions impact on FS, we propose to specify the way in which the damage suffered by the targeted goods impacts the four pillars of FS (food availability, food access, food utilization and food stability). For example, violent actions that interrupt food production affect food availability, actions that impede its distribution and commercialisation affect food access, the dynamics that deteriorate non-alimentary inputs –such as water services and sanitation– affect food use, and the actions that cause disruptions in all the foregoing

dimensions –such as forced displacement– affect food stability. In any case, this final pillar is seriously disrupted by the uncertainty generated by the mere existence of the armed conflict.

To estimate the impact of armed conflict on FS, EWS may collect additional information about the incidents of violence or war tactics, such as: authorship, specific localisation, duration (of continuous actions) or frequency (if they are discontinuous), and the size and composition of the affected population (e.g. ethnic communities, political sectors, and vulnerable groups like women and children). This information could, for example, reveal the existence of systematic plans or policies directed against the population or a social group. Similarly, such information can serve as a basis for collaboration between humanitarian organisations and others dedicated to human rights, political advocacy, and the persecution of war crimes.

It is particularly relevant to register the length of time for which the violent actions are prolonged as this determines their impact. For example, mass starvation is a process of deprivation that gradually increases vulnerability and requires a long time (months, years) to cause a famine. In this respect, the levels of food insecurity established by the IPC should be taken as guiding indicators, since, although in a population it might not have reached level 5 (the highest, famine), it could have registered levels 3 or 4 for years, producing devastating effects. Thus, according to Conley and De Waal (2019: 702–709), even when there is no clear evidence of the damage produced by acts of famine, when several of these acts are employed over several years, they should be considered starvation crimes.

(4) Monitoring changes in the political, economic, social and environmental factors relevant to FS in armed conflicts contexts.

The main difference of the proposed analytical model is that it specifies the dimension of armed conflict as a study variable by introducing the violent actions indicators. However, the other trigger factors ("hazards or acute events") may continue to be analysed, as the conflict is not the only causal factor to take into consideration. Indeed, different events, natural or human, can trigger a food crisis, sometimes in combination with the armed conflict.

These conjunctural contingencies should be analysed in the light of the structural conditions (economic, political, social and environmental) (Webb and Rogers, 2003: 5–7). Their analysis would make it possible to identify early signals of food crisis related to the outbreak of violence (Messer, Cohen and D'Costa, 1998: 23). In addition, it is pertinent to include the study of "conditions of vulnerability", since these determine the level of impact that the conflict can have on the population's FS. In fact, people, homes and communities have different degrees of vulnerability when coping with hazards and crises, which largely depend on their capacities and livelihoods (including assets, knowledge, rights and social capital). Therefore, a conflict-sensitive EWS must take into account the fact that war actions in themselves can have a different impact on FS in different contexts and different population groups, according to their capacities to cope with the crisis.

In particular, we recommend taking into consideration a set of factors summarised in Table 3. They are elements usually found in scenarios of armed conflict that frequently aggravate its impact on FS.

Table 3. Proposal of factors affecting armed conflict contexts (modified from Linares et al., 2022)	
Analytical categories	**Contents and relevance for a conflict-sensitive FS- EWS**
Armed conflict	In addition to measuring intensity, duration of armed conflicts is also an important criterion (FAO, 2017; ii; Holleman et al., 2017: 5).
State fragmentation	The weakness and disintegration of institutions, as well as possibly fostering conflict, reduces capacity to cope with political and humanitarian crisis.
Detrimental public policies	E.g. increase in military expenditure at the expense of social services and sale of fertile lands to other countries or multinationals.
Flow of internally displaced people or refugees	Can spread diseases, generate socio-economic instability, weaken existing structures and increase the vulnerability of recipient communities.
Inflation	Increases the prices of food and agricultural inputs.
Economic blockades and embargoes	Reduce foreign investment, exports and access to international markets of food and agricultural inputs.
Natural hazards and environmental degradation	Droughts, floods, water shortage, etc. increase food scarcity.

In short, this analytical framework focuses on studying armed conflicts as a causal factor of food insecurity, whose impact can increase or reduce according to the possible concurrence of other hazards and the structural context or the vulnerability of the affected population. Knowing all the factors also makes it possible to identify action points to alleviate or reduce the impact of the armed conflict on hunger.

(5) Constructing a precise information mechanism.

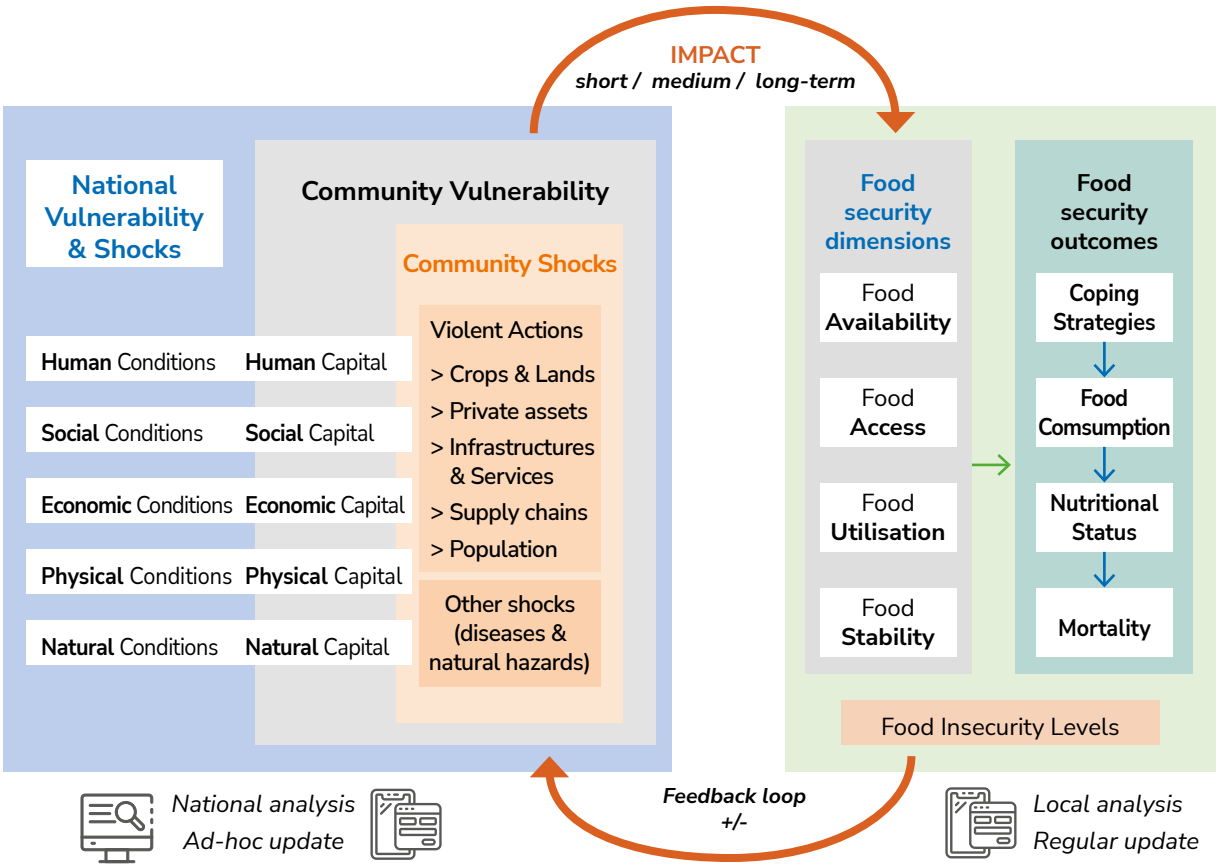
Finally, we recommend constructing an information mechanism capable of monitoring violent actions in real time and at a sub-national scale, providing up-to-date and detailed information and including not only physical violence against people but other violent incidents. An information mechanism that provides clear evidence on the dynamic of violence and its impact on food security; regular over time to enable continuous traceability that reveals the reiteration of events and temporal tendencies, as well as advances and setbacks in implementing the 2417 resolution; and also agile to enable timely and appropriate political and humanitarian actions.

As said before, most of the existing sources or databases for analysing armed conflicts are inadequate for assessing their impact on FS. The information they collect is too generic and at an aggregated level, which prevents such analyses. Then, based on these databases, studies can only address the national or cross-national level and use country-year data. To overcome these challenges, the collection of adequate primary and secondary information is essential.

What is MEFIC analytical framework?

Below we present the MEFIC analytical framework, which has been built from the well-known IPC framework for its adaptation to armed conflict contexts. As you can see in Figure 3, the similarity with the IPC model is clear. We have incorporated the improvements that we referred to in the previous section.

Figure 3. MEFIC Analytical Framework (Jacob and Linares, 2022).



As IPC framework does, MEFIC study Vulnerability and Shocks (or hazards) as causal or contributing factors and their impact on Food Security Dimensions (or pillars) and Food Security Outcomes.

However, MEFIC focuses on the study of Vulnerability, Shocks and Food Security at local or community level. Thus, the question guiding this framework is: how and to what extent those natural or man-made shocks that may affect a community, impact on the community food security taking into account the vulnerability conditions at the moment?

MEFIC also considers necessary to measure a set of key national factors that may affect the local context. Factors at national level are important because they could explain why similar shocks in different locations have different impact on food security because they belong to countries with different pre-existing vulnerability conditions. These factors are classified as human, social, economic, physical or natural conditions within National Vulnerability and Shocks dimension.

Regarding shocks that may occur at community level, MEFIC is particularly interested in collecting information of violent actions –frequently occurring in armed conflict contexts– and other two possible shocks: epidemic diseases and natural hazards. The comparative analysis between different shocks will allow to know which ones are more or less severe for the FS and if they have a catalytic effect on each other.

Inclusion of Violent Actions categories represents the novel contribution of MEFIC compared to other analytical frameworks. The categorization of violent actions was prepared on the basis of the war tactics and violent events that cause hunger described in the bibliography (e.g. Marcus, 2003; Conley and De Waal, 2019) and from the expertise of the MEFIC team members.

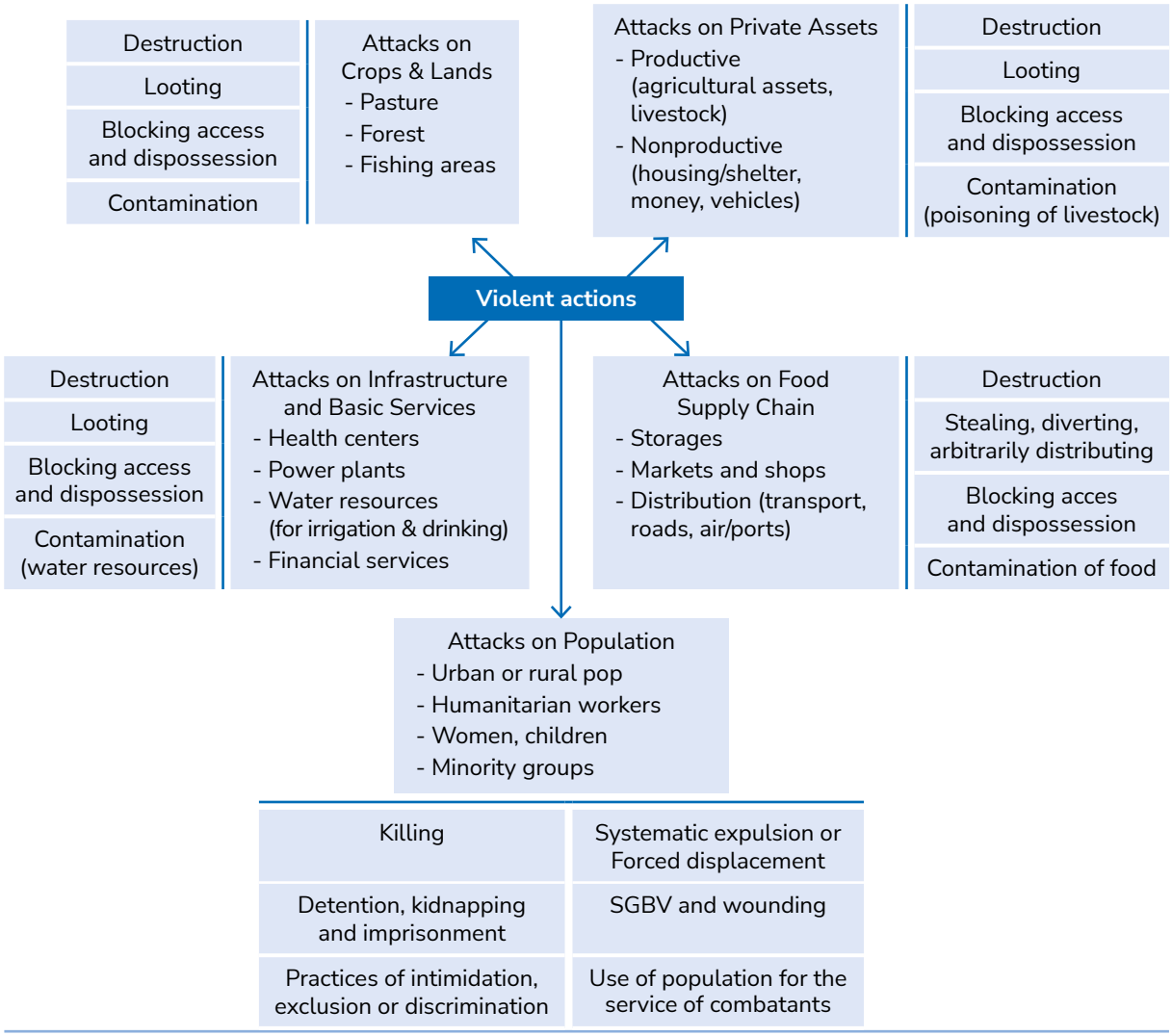
The categorization took also into account the 2417 Resolution. Many of the actions presumably constitute famine crimes and are prohibited by International Humanitarian Law. In particular, the 2417 resolution gives some examples of war actions that may affect food security:

> "Recognising that armed conflict impacts on food security can be direct, such as displacement from land, livestock grazing areas, and fishing grounds or destruction of food stocks and agricultural assets, or indirect, such as disruptions to food systems and markets, leading to increased food prices or decreased household purchasing power, or decreased access to supplies that are necessary for food preparation, including water and fuel.
>
> Noting with deep concern the serious humanitarian threat, posed to civilians by landmines, explosive remnants of war and improvised explosive devices in affected countries, which has serious and lasting social and economic consequences for the populations of such countries and their agricultural activities, as well as of personnel participating in law enforcement, humanitarian, peacekeeping, rehabilitation and clearance programmes and operations".

Thus, four types of war actions are mentioned: displacement, destruction of food stocks and agricultural assets, disruptions to food systems and markets and landmines. All these war actions were included in the set of violent actions categories of MEFIC framework.

In total, MEFIC framework considers more than 40 variables of violent actions that may affect negatively on Food Security. They do not occur all the time in all armed conflict scenarios, but they are ready to be used –and their impacts measured– as soon as there is any evidence of their occurrence. On next page, Figure 4 shows an illustration of all Violent Actions categories included in MEFIC analytical framework.

Figure 4. Violent Actions Categories (own elaboration).



Violent Actions are classified following two criteria: (a) the target or object attacked by the action and (b) the pattern of action or violent behaviour.

We consider five types of targets or attacked objects:

(1) **Crops & lands**, which also includes pasture, forest and fishing areas. In other words, it refers to natural productive areas.

(2) **Infrastructure and basic services**, where it is important to differentiate among health centres, power infrastructures, water resources and financial services.

(3) **Private assets** (property or livelihoods), where it is important to differentiate between productive assets (including agricultural assets and livestock) and non-productive assets (in particular, housing/shelter, cooking fuel, vehicles and money).

(4) **Food supply chains**, where it is important to differentiate among storage (including food processing facilities), markets, shops and food distribution (in particular, transportation, roads,

ports and airports). Disruptions on food assistance distributed by humanitarian organizations are included in this category.

(5) **Population,** which may be urban or rural population, humanitarian workers responsible for food assistance, women, children or minority groups.

Amongst the type of actions, we can identify five different patterns of action or violent behaviour, irrespective of the target attacked:

(i) **Destruction** such as burning crops, bombing infrastructures and roads or attacks on markets and warehouses.

(ii) **Looting or robbery** such as looting crops, productive inputs, or stealing money.

(iii) **Blocking access and dispossession** such as placing mines in agricultural land, preventing transhumance by shepherds, besieging towns, occupying or closing infrastructures, dispossession of lands or blocking access to humanitarian aid.

(iv) **Contamination** such as fumigating crops with toxic products or polluting waterholes.

(v) **Violating the integrity or freedom of the population** such as indiscriminate attacks, executions, selective kidnappings, illegal detention, intimidation, torture and sexual assault. This category includes violence against women because they are usually responsible for tasks of caring and food preparation at home. This type of attacks may damage FS of individuals but also that of the whole community, as they physically and psychologically affect people responsible for production, distribution and utilization of food.

In addition, another behaviour to take into account across all types of actions: the act of preventing coping strategies and rehabilitation activities (e.g. obstructing work, search for wild edibles, return to home, removal of mines or rehabilitation of houses).

The differentiation of types of violent actions according to the object attacked is significant insofar as it allows to analyse their impact on the different FS dimensions or pillars (availability, access, utilization and stability). For example, within attacks on infrastructures and basic services, the attack on a hospital may affect health conditions (food utilization) while the attack on a power plant may affect food production (food availability). In the same way, the differentiation according to the type of violent behaviour is significant to the extent that it allows to assess the weight of the impact. For example, within the attacks on hospitals, the destruction of a hospital may affect health conditions more (and during more time) than the looting of materials inside the hospital.

Within MEFIC framework, Violent Actions Categories are set inside Community Shocks, together with other shocks, which are Epidemic Diseases and/or Natural Hazards.

As said before, to understand the different ways these shocks may impact the community Food Security Dimensions and Outcomes, MEFIC also contemplates the community and national vulnerability. Figures 5, 6 and 7 below show categories studied under the other three MEFIC dimensions: National Shocks and Vulnerability, Community Vulnerability and Food Security Dimensions & Outcomes.

Figure 5. National Shocks and Vulnerability Categories (own elaboration)

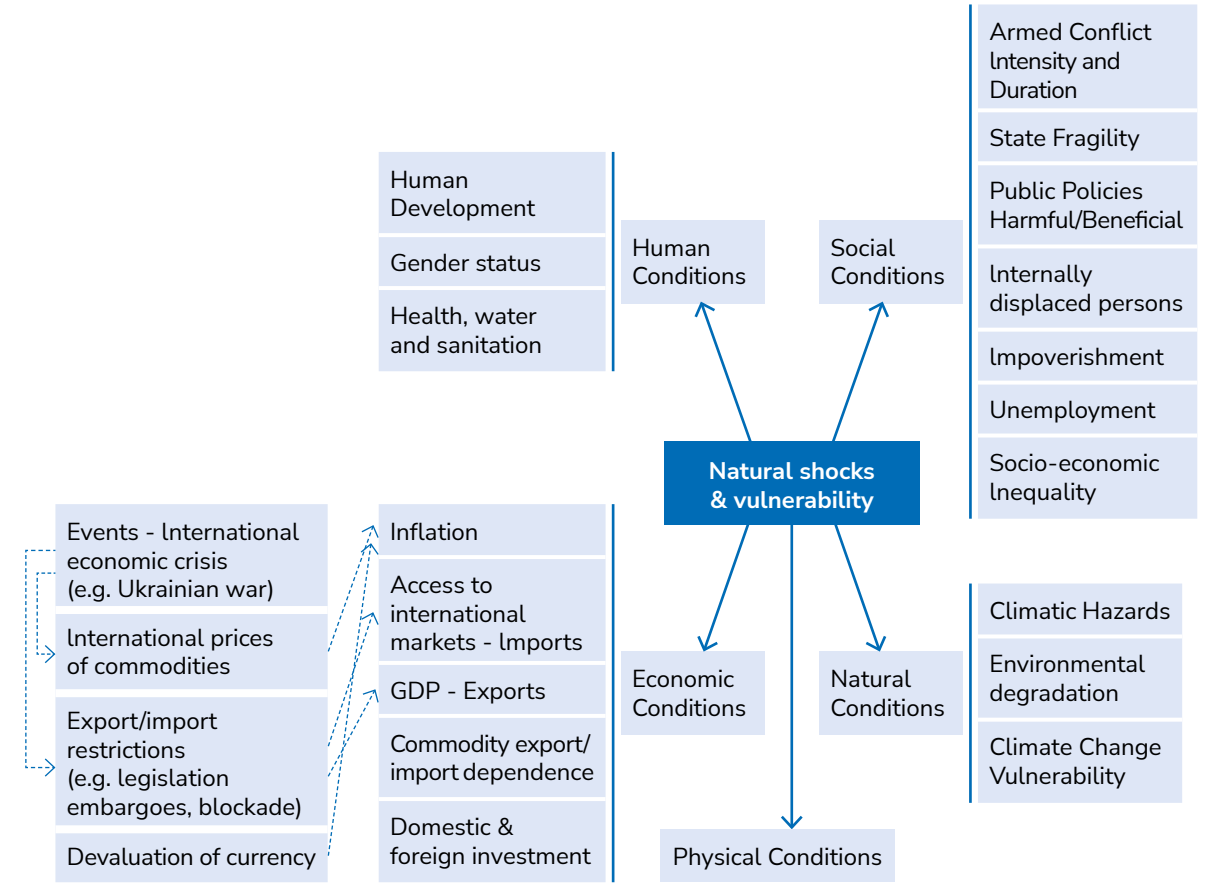


Figure 6. Community Vulnerability Categories (own elaboration)

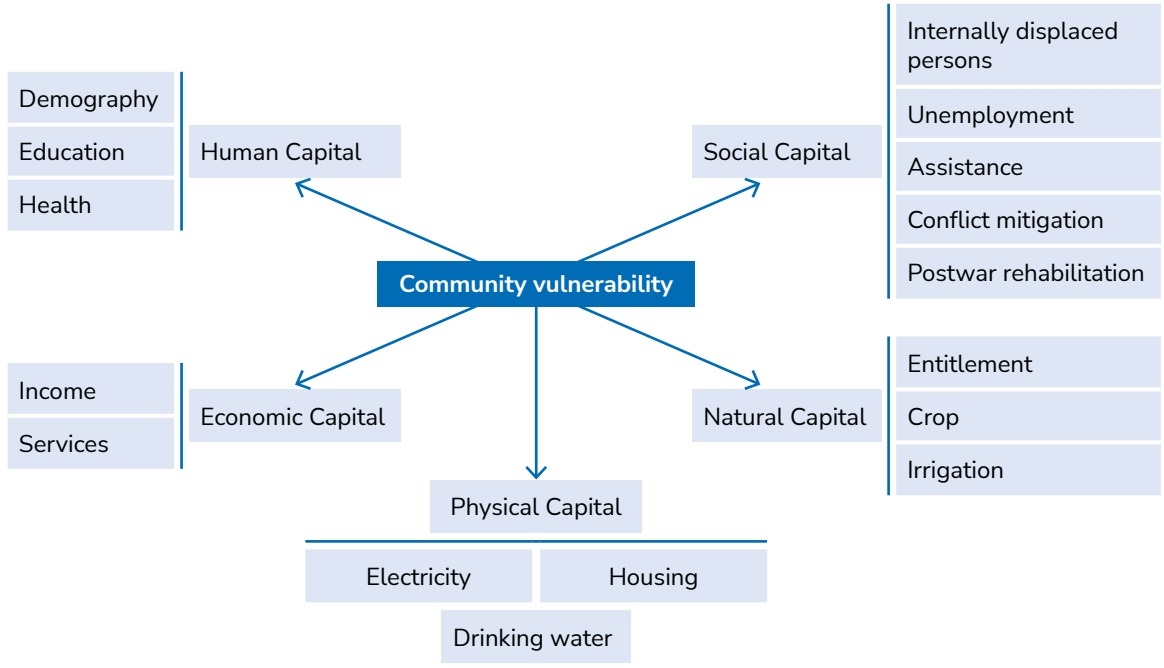
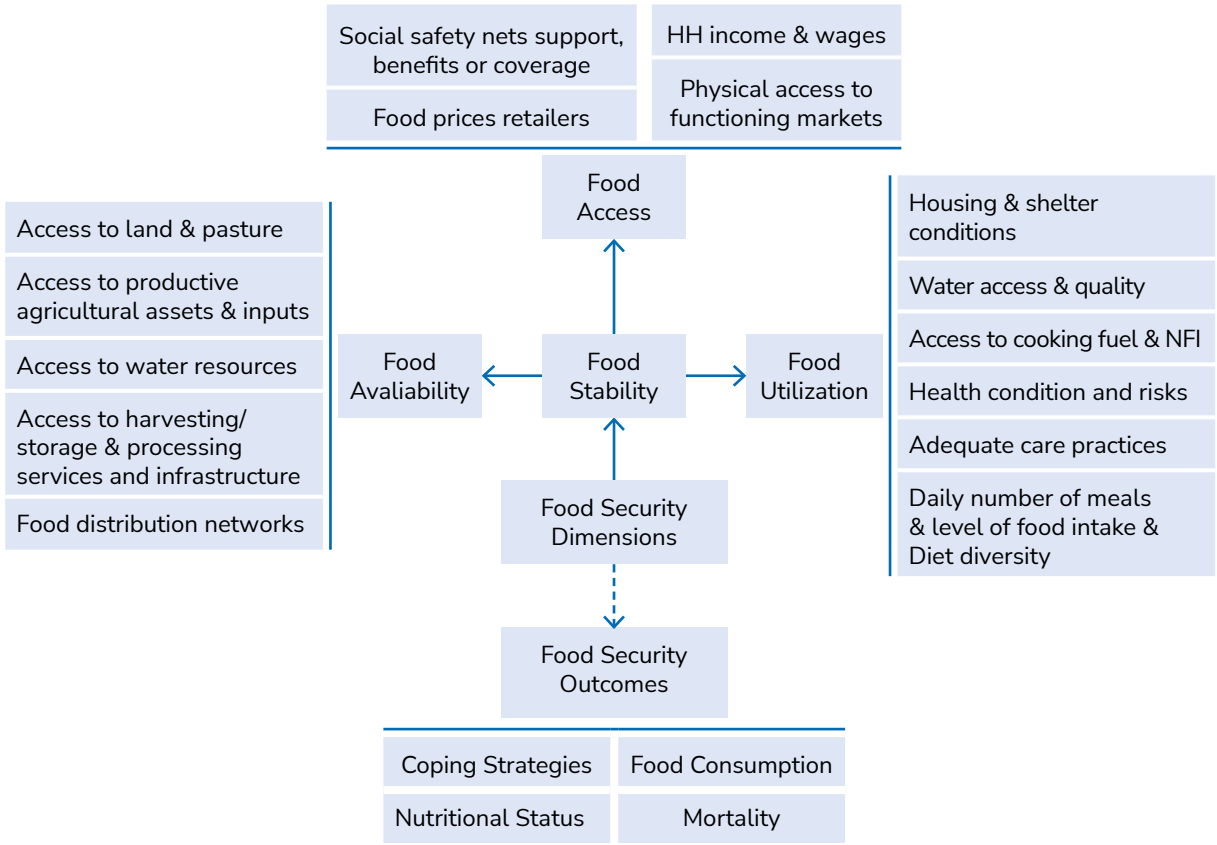


Figure 7. Food Security Dimensions and Outcomes Categories (own elaboration)



Annexes

Glossary of terms

The main terms or concepts involved in a Food Security Risk assessment in Armed Conflict contexts, such as MEFIC, are: Food Security Disaster Risk, Hazard, Exposure, Vulnerability, Armed Conflicts and Violent Actions. Below we briefly explain the meaning of each term and their interrelations.

Food Security Disaster Risk:

Disaster is defined as a serious disruption to the functioning of a community or a society at any scale, causing widespread human, material, economic or environmental losses, which exceed the ability of affected society to cope using only its own resources (UNDHA, 1993: 21; UNDRR glossary). Thus, disaster risk is expressed as the likelihood of loss of life, injury or destruction and damage from a disaster in a given period of time.

Disasters are caused by hazards, as well as various factors that influence the exposure and vulnerability of the population affected by those hazards.

In a system focused on the monitoring and assessment of Food Security, the disaster risk could be expressed as the likelihood of decrease in Food Security, which is defined as “when all people, at all times, have physical and economic access to sufficient safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life” (World Food Summit 1996). This definition points to the four dimensions of Food Security:

Food availability: The availability of sufficient quantities of food of appropriate quality, supplied through domestic production or imports (including food aid).

Food access: Access by individuals to adequate resources (entitlements) for acquiring appropriate foods for a nutritious diet. Entitlements are defined as the set of all commodity bundles over which a person can establish command given the legal, political, economic and social arrangements of the community in which they live (including traditional rights such as access to common resources).

Food Use or Utilization: Utilization of food through adequate diet, clean water, sanitation and health care to reach a state of nutritional well-being where all physiological needs are met. This brings out the importance of non-food inputs in food security.

Food Stability: To be food secure, a population, household or individual must have access to adequate food at all times. They should not risk losing access to food as a consequence of sudden shocks (e.g. an economic or climatic crisis) or cyclical events (e.g. seasonal food insecurity). The concept of stability can therefore refer to the availability, access and utilization dimensions of food security.

Hazard:

Catastrophe; threat; dangerous or acute event that could occur; a process, phenomenon or human activity that may cause loss of life, injury or other health impacts, property damage, social and economic disruption or environmental degradation.

Hazards may be natural (flood, earthquake, drought, hurricane, volcanic eruption, cyclone, tsunami, epidemic disease, etc.) or anthropogenic / human-induced / man-made (armed conflict, nuclear accident, fire, etc.) in origin. Hazards may be single, sequential or combined in their origin and effects. Each hazard is characterized by its location, intensity or magnitude, frequency, and probability (UNDRR glossary).

Hazard increases the risk of disaster. The more damaging the event, the greater the risk of disaster. However, only if the event affects people under conditions of vulnerability, it could trigger a disaster or humanitarian crisis. Then, it is necessary to know the vulnerability baseline of the population affected.

Exposure:

Exposure to a disaster depends on the extent to which people, infrastructure, housing, production capacities and other tangible assets located in hazard-prone areas can be affected (UNDRR glossary).

Measures of exposure can include the number of people or types of assets in an area, but generally is quantified as the population that could be adversely affected in the region of interest (Kasai et al., 2017: 3). These can be combined with the specific vulnerability and capacity of the exposed elements to any particular hazard to estimate the quantitative risks associated with that hazard in the area of interest (UNDRR glossary).

Exposure increases the risk of disaster. The greater exposure is, the greater the risk of disaster.

Vulnerability:

The conditions determined by physical, social, economic and environmental factors or processes which increase the susceptibility of communities, families or individuals to lose their life, assets and property, as well as their livelihood system, in the event of a possible catastrophe.

Vulnerability is multi-dimensional; next to the four dimensions abovementioned, some authors also include cultural and institutional factors (e.g., poor design and construction of buildings, inadequate protection of assets, lack of public information and awareness, high levels of poverty and education, limited official recognition of risks and preparedness measures, disregard for wise environmental management or weak institutions, and governance, including corruption etc.) (UNDRR glossary).

Vulnerability can also be defined as the degree of difficulty to recover after a catastrophe (Pérez de Armiño, 1999:11). In this sense, Chambers (1989:1) defines it as “exposure to contingencies and stress, and the difficulty in coping with them. Vulnerability therefore has two parts: an external part, from the risks, convulsions and pressure to which an individual or family is subject; and an internal part, which is helplessness, that is, a lack of means to face the situation without damaging losses”.

In the internal part, vulnerability can be defined as potential weaknesses. Those weaknesses could be physical/technological (urban structures, foundations, infrastructure) or social (high average age, lack of experience or preparedness, collapse in community cohesion) (Kasai et al., 2017: 3). Thus, vulnerability depends on the coping capacity, namely, the combination of strategies, attributes and resources available to manage and reduce risks or disasters and strengthen resilience. The capacity

to cope requires continuing awareness, resources and good management, both in normal times as well as during disasters or adverse conditions (UNDRR glossary).

In summary, vulnerability is related to three concepts: (1) **exposure** (Does the event affect the population and to what extent?), (2) **susceptibility** (How does the event affect the livelihood of a population and to what extent?) and (3) **resilience** (What is the coping capacity of the population?) (IPC, 2012: 22). In other words, vulnerability contemplates three types of risks: the risk of exposure to crises or convulsions; the risk of a lack of capacity to deal with them; and the risk of serious consequences from them, as well as slow or limited recovery (Bohle et al., 1994:38).

Vulnerability increases the disaster risk. The greater vulnerability is, the greater the disaster risk. Coping capacities contribute to reduction of vulnerability and reduction of disaster risks.

Armed Conflicts:

Armed Conflicts are disputes for power between armed actors, which cause a certain number of deaths per year. There are divergences about the number of deaths that armed conflicts must produce to be considered as such. Each institution applies different criteria, giving rise to disparate lists.

For the Stockholm International Peace Research Institute (SIPRI), an armed conflict is "the use of armed force between two or more organized armed groups that results in the death in combat of at least 1000 people each year and in which (the conflict) is about control of government, territory or community identity" (SIPRI, 2001).

For the Uppsala Conflict Data Program (UCDP) and the Peace Research Institute of Oslo (PRIO), armed conflicts are disputes over government, territory or both, committed between two parties –one of which must be the state government– whose fighting cause at least 25 deaths. This definition is that of "state-based armed conflict". In addition, UCDP database also differentiates when it is a "non-state conflict" or a "one-sided violence". Non-state conflict refers to the conflict between two organised armed groups, neither of which is the government of a state. One-sided violence refers to the deliberate use of armed force by the government of a state or other type of formally organised group against civilians. For state-based armed conflict and non-state conflict, "fatalities" are defined as battle-related deaths (i.e. the use of armed force between warring parties in a conflict dyad, be it state-based or non-state, resulting in deaths). For one-sided violence, "fatalities" are deaths stemming from attacks carried out by organized actors, targeting unarmed civilians (UCDP, Conflict Encyclopedia).

Depending on the number of fatalities, armed conflicts have different levels of intensity. "High intensity armed conflicts" –or "Wars" for UCDP– are violent conflicts that cause more than 1,000 fatalities per year, in addition to normally affecting significant portions of the territory and the population and involving a significant number of actors (who establish alliance, confrontational or coexistence interactions). "Low and medium intensity" are violent conflicts that cause more than 100 –or 25 for the UCDP– deaths a year. Finally, violent conflicts with fewer than 100 deaths –or 25 for the UCDP– are not considered armed conflicts but situations of tension that can become armed conflicts, they are called "tension scenarios" or "low activity" for UCDP.

Violent Actions:

The use of force by a state or non-state armed actor that has a political-military objective. Based on MEFIC specific focus, the notion of violent actions includes not only casualties, but also a wide range of violent events against structures, people and livelihoods, such as: destruction of infrastructures, services and supplies, robbery, dispossession, sexual violence and kidnapping. These actions may be part of the fighting between armed actors or attacks on the affected communities.

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