

Systems Thinking in Humanitarian Response: Visualization and Analysis of the Inter-Agency Standing Committee's Architectures for "The Cluster Approach"

by

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Abstract

The purpose of this work is to examine the "The Cluster Approach" – the humanitarian response coordination strategy adopted by the Inter-Agency Standing Committee (IASC) following the 2005 'Humanitarian Response Review' – through the lens of systems thinking and develop potential system architecture representations to explore how the coordination mechanism can enhance complementarity, partnerships, and collaboration among humanitarian actors.

The qualitative analysis of "The Cluster Approach" through system architecture principles strongly suggests, that indeed, the framework – as currently envisioned by the IASC and the humanitarian community – can be described and illustrated as a structured and architected system. In addition, the analysis demonstrates that the system architecture visualization can help (1) validate the existing framework and (2) design new variants to improve and strengthen the formal and functional relationships while leveraging the underlying organizational platform of the IASC's constituent membership.

The analysis also suggests that visualizing the elements of the system as well as the interrelationships among response organizations, actors, and the transactions between these through system architecture principles – reasoned and guided by holistic thinking – can be useful and consequential to manage complexity and reduce ambiguity of the IASC's humanitarian system. Finally, extensions of this research to (1) design critical coordination priorities, (2) incorporate more architectural flexibility to manage exceptions, and (3) improve situational awareness of actors to adjust behaviors can hopefully lead to more effective and socially meaningful humanitarian response efforts.

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List of Abbreviations

ALNAP	Active Learning Network for Accountability and Performance
DAC	Development Assistance Committee
DAT	Damage Assessment Teams
DSM	Dependency Structure Matrix (also known as Design Structure Matrix or Dependency System Model)
ERC	UN Emergency Relief Coordinator
ERT	Emergency Response Teams
FAO	Food and Agriculture Organization
HC	Humanitarian Coordinator
HCT	Humanitarian Country Team
HPN	Humanitarian Practice Network
HRA	Humanitarian Reform Agenda
IASC	Inter-Agency Standing Committee
ICRC	International Committee of the Red Cross
ICS	Incident Command System
ICVA	International Council of Voluntary Agencies
IDP Rapporteur	Office of the Special Representative (Rapporteur) of the Secretary General on the Human Rights of Internally Displaced Persons
IFRC	International Federation of Red Cross and Red Crescent Societies
InterAction	American Council for Voluntary International Action
IOM	International Organization for Migration
KPI	Key Performance Indicators
NGO	Non-Governmental Organization
NIMS	National Incident Management System
OBS	Organizations Breakdown Structure
OCHA	UN Office for the Coordination of Humanitarian Affairs
OECD	Organisation for Economic Co-operation and Development
OHCHR	Office of the High Commissioner for Human Rights
PBS	Product Breakdown Structure
RC	Resident Coordinator
SA	System Architecture
SCHR	Steering Committee for Humanitarian Response
SDM	System Design and Management
SOHS	'The State of the Humanitarian System'
SVN	Stakeholder Value Network
TA	Transformative Agenda

UN	United Nations
UN-HABITAT	UN Human Settlements Programme
UNDP	UN Development Programme
UNFPA	UN Population Fund
UNHCR	UN High Commissioner for Refugees
UNICEF	UN Children's Fund
UNOCHA	UN Office for the Coordination of Humanitarian Affairs
USAID	U.S. Agency for International Development
USCG	U.S. Coast Guard
USG	Under-Secretary-General
WBS	Work Breakdown Structure
WFP	World Food Programme
WHO	World Health Organization

Chapter 1: Introduction

In 1992, the United Nations established the Inter-Agency Standing Committee (IASC)¹ as the principal method for humanitarian coordination among agencies and humanitarian actors. Nearly fifteen years later, in 2005, the IASC Emergency Relief Coordinator (ERC)² commissioned a study to address the gaps in humanitarian response. The comprehensive study recommended a number of initiatives, one of which was the adoption of a clustered approach between governmental and inter-governmental entities, non-governmental organizations, humanitarian aid groups and actors, and affected populations. The recommendations were a major transformation for humanitarian response and coordination and resulted in adoption of a new humanitarian framework referred to as “The Cluster Approach”.

This thesis aims to understand the background and origins of the current framework and how systems thinking principles can help visualize structured system architecture representations (e.g., models, mapping, etc.) for humanitarian coordination. A system architecture representation could be useful in enhancing mutual understanding and mental models among humanitarian actors who may be driven by diverse, and at times incongruent, agendas and objectives. A better appreciation of architected systems for humanitarian coordination can show that integration of

¹ “The Inter-Agency Standing Committee (IASC) is a global humanitarian forum established in 1992 in response to the United Nations General Assembly Resolution 46/182 of 1991 to bring together the main operational relief agencies from the United Nations, international components of the Red Cross/Red Crescent Movement, the International Organization for Migration and international non-governmental organizations. The IASC Transformative Agenda is an agreed set of recommendations aimed at making the humanitarian response system more efficient and effective.”

Sources:

<https://interagencystandingcommittee.org/iasc-transformative-agenda/documents-public/power-point-transformative-agenda>

<https://interagencystandingcommittee.org>

² The Under-Secretary-General and Emergency Relief Coordinator (USG/ERC) is responsible for the oversight of all emergencies requiring United Nations humanitarian assistance. USG/ERC also acts as the central focal point for governmental, intergovernmental and non-governmental relief activities. The ERC also leads the Inter-Agency Standing Committee (IASC), a unique inter-agency forum for coordination, policy development and decision-making involving the key United Nations and non-United Nations humanitarian partners.

Source: <https://www.unocha.org/about-us/ocha-leadership>

stakeholders can be an effective and powerful influence to strengthen both formal and informal partnerships and networks and ultimately enhance collaboration and coordination between humanitarian response actors. Mapping the humanitarian system could assist decision-making processes and help minimize (and hopefully eliminate) disruptive and dysfunctional effects in order to improve accountability of the interdependent and interactive relationships. Furthermore, it could help advance the overarching objectives of the humanitarian response efforts by motivated, engaged, and integrated stakeholders.

Finally, the purpose of this work is to share knowledge about systems thinking applications in the humanitarian domain and a broad understanding of the system architecture perspectives explored herein.

1.1. Motivation and Objectives

Motivation statement:

To explore the humanitarian domain through the existing frameworks for crisis response, management, relief, and recovery – including engagement with affected populations – by researching the Inter-Agency Standing Committee (IASC) cluster approach within the context of systems thinking principles.

Background for motivation:

In 2005-2006, in the aftermath of Hurricanes Katrina and Rita, my Commanding Officer entrusted me with, what were at the time, the U.S. Coast Guard's (USCG) largest ever shore facilities recapitalization efforts for reconstruction after a natural disaster. Needless to say, this was a huge responsibility for a young, inexperienced officer. I was very nervous, but made it my mission to not let her, or those I was helping in the recovery, down. From 2006 to 2010, I was detached to the Gulf Coast states under an independent duty assignment to manage the \$135 million recapitalization program for Coast Guard facilities lost to these two hurricanes. While I'd like to

think that these very small contributions on my part, along with the tremendous efforts of many other response and recovery actors, helped support Coast Guard missions to resume with speed and efficiency, I'm humbled by the sheer enormity of the disaster and the minor role I played.

Within hours of hurricane Katrina's wake, it became clear that the first and most critical concerns were about the welfare and safety of the people in the Gulf Coast states. This natural disaster ranked among the worst in U.S. history; considered to be the costliest and most catastrophic storm with 1,836 lives lost, over a million people displaced, and a toll of damages estimated at \$125 billion. On September 9, 2005, the then Homeland Security Secretary, Michael Chertoff, said: "Hurricane Katrina will go down as the largest natural disaster in American history."³ Some would later refer to hurricane Katrina as the largest man-made disaster without the intent of criminality due to the catastrophic breaches of the levees and the subsequent tragic flooding [1] (from keynote remarks by Admiral T. W. Allen Commandant, USCG at The Brookings Institution on May 29, 2007).

I recall that despite the politics or attitudes of response that many other organizations struggled with, Coast Guard aircrews, flights, and rescues saved and evacuated over 33,000 people. This was a daunting task; the total destruction of entire communities was unthinkable. Yet, in the midst of all the dangers, overwhelming challenges, and the trail of devastation, the realization that there were vulnerable lives at stake is what drove rescuers to accomplish their missions without hesitation.

This experience was not my first (or last) exposure to hurricane response in a professional setting. Coast Guard Civil Engineers routinely train for and respond to natural and man-made disasters to aid recovery efforts and to restore continuity of operations (e.g., training and preparation includes

³ Source: <https://www.nytimes.com/2005/09/09/national/nationalspecial/michael-chertoffs-announcement.html>

but is not limited to: continuing education requirements, drills, and qualifications for the Incident Command System (ICS) [2] and the National Incident Management System (NIMS) [3]). In the midst of all the chaos and under very difficult and demanding conditions, Damage Assessment Teams (DAT) and Emergency Response Teams (ERT) composed of Coast Guard engineers, architects, inspectors, procurement agents, and a diverse range of skilled construction trades workers are also present at the scene performing disaster assessments of the impacted USCG facilities. The sole purpose of the DATs and the ERTs is to be the first on the ground after passing of a storm to mitigate hazards, assist with and perform critical repairs, document damages in order to identify the necessary resources to repair or rebuild the facilities, and help restore operational conditions as soon as possible.

And while I was already quite familiar with what was required as part of a DAT or an ERT, this experience, however, had a transformational effect on me. During the four years I lived in the Gulf Coast, fully immersed in the recovery efforts and amongst the very people that were affected by the hurricanes, I would become part of the local community. I would live with, albeit to a much lesser extent, the consequences of the hurricane that had so deeply affected that part of the country and learn things I would have otherwise been completely oblivious to had I lived elsewhere. Ultimately, the experience would completely transform my views and perspectives on humanitarian response and raise new questions.

As I reflect on these events, the vulnerability of the affected population, and the courageous acts by other service-members, first responders, local community organizers, volunteers, charities, benefactors, I can't help thinking of how structure, capability, and operational capacity for some organizations enabled swift actions on one hand while lack thereof burdened, confused, and slowed down others to the peril of those affected and who needed relief help the most.

Fast-forward to 2017 and the opportunity to attend MIT's System Design and Management (SDM) program under a sponsorship by the USCG to learn more about how systems thinking can be used to solve large, complex challenges. In this context, the questions then became: Is there a humanitarian system? If so, what is it? What does it look like? What are its central role and strategic objectives? Who are the humanitarian actors? What are their principles? And many more.

As I pondered these questions and researched more about humanitarian aid in the context of systems thinking, I came across a humanitarian coordination mechanism referred to as "The Cluster Approach". "The Cluster Approach" was introduced in 2005 during the Humanitarian Reform Agenda initiated by the United Nations Under-Secretary-General for Humanitarian Affairs and Emergency Relief Coordinator⁴ (UN Office for the Coordination of Humanitarian Affairs), together with the Inter-Agency Standing Committee⁵ (IASC) to improve the effectiveness of humanitarian response through greater predictability, accountability, responsibility, and partnership in the assistance delivered by UN and non-UN humanitarian organizations.⁶

The objective of "The Cluster Approach" is to enhance partnerships among UN agencies, the Red Cross/Red Crescent movements, international organizations, and NGOs at both local and international levels. Conceptually a "cluster" refers to a group of organizations coalescing around

⁴ UNOCHA, supra note 2.

⁵ The IASC was established in June 1992 in response to United Nations General Assembly Resolution 46/182 on the strengthening of humanitarian assistance. General Assembly Resolution 48/57 affirmed the IASC's role as the primary mechanism for the inter-agency coordination of humanitarian assistance.

Sources:

United Nations General Assembly Resolution 46/182: <http://www.un.org/documents/ga/res/46/a46r182.htm>

United Nations General Assembly Resolution 48/57: <http://www.un.org/documents/ga/res/48/a48r057.htm>

Inter-Agency Standing Committee: <https://interagencystandingcommittee.org>

Related:

United Nations General Assembly Resolution 47/168: <http://www.un.org/documents/ga/res/47/a47r168.htm>

⁶ Sources:

<https://www.humanitarianresponse.info/en/about-clusters/what-is-the-cluster-approach>

<https://interagencystandingcommittee.org/iasc-transformative-agenda>

a common sector of humanitarian relief, such as health, protection, and education.⁷ “The Cluster Approach” is used for coordinating in non-refugee humanitarian emergencies (Note: Clusters are not activated for responses to refugee crises. Protection and assistance to refugees are coordinated and delivered through the Refugee Coordination Model.).⁸

Objectives:

The focus of this work is to suggest a visualization of “The Cluster Approach” – as established by the IASC following the recommendations of the 2005 ‘Humanitarian Response Review’ [4] – through systems thinking by:

1. exploring the relationships and interactions between humanitarian actors and actions and
2. architecting reasonable representations (i.e., models) of these elements through system architecture principles for prospective application in the humanitarian domain for response and relief efforts.

Lastly, through this research I’m determined to better understand how the use of systems thinking, in terms of structure, capability, and capacity, can potentially support humanitarian response actors, processes, decisions, and the interfaces between them.

1.2. Primary research objectives

Given the motivation and purpose, three primary research objectives are defined as follows:

1. Examine the value of systems thinking framework(s) and application in the humanitarian domain, specifically related to crisis (emergency) response and disaster relief. In other

⁷ Source: <http://humanitariancoalition.ca/the-humanitarian-system>

⁸ Source: <https://emergency.unhcr.org/entry/61190/cluster-approach-iasc>

words, is there an ideal intersection of systems thinking and humanitarian aid? Can systems-oriented approach and application assist efforts for disaster response and recovery?

2. Identify, through research and examination of traditional practices, what are the overarching disaster relief issues; e.g., consequences and importance of: (1) management of objectives; (2) functional and formal relationships; (3) organizational environments (including resources, economic conditions, and organic capabilities at the local affected zones); (4) policies (e.g., influence of political interests, donors, etc.); and (5) challenges (e.g., technical, social, implementation, etc.).
3. Understand and contrast the factors and characteristics that dominate humanitarian assistance efforts and outcomes (e.g., accountability, coordination and interaction between organizations, behaviors of participants, system management, constraints, dependencies, political interests, objectives of contributors and actors, etc.).

1.3. Other related research factors, thoughts, and questions

Other wide-ranging background factors, thoughts, and questions to research the value of systems thinking in the humanitarian domain, specifically related to crisis response and relief efforts, include but are not limited to the following:

1. What are the overarching humanitarian response and relief issues – e.g., the significance and influence of harmonizing the following factors?
 - a. management of objectives,
 - b. functional and formal relationships,
 - c. organizational environments
 - d. competencies (including the organic capabilities of both the global and in-country stakeholders and other relevant local systems in the affected zone),

- e. assistance policies, and
 - f. challenges (e.g., technical, social, temporal, perceptual, practical, etc.)
2. Is there an ideal intersection of systems thinking and humanitarian response?
 3. Can a systems-oriented approach assist efforts for response and recovery? How?
 4. What are the dominant factors for effective and socially meaningful crisis response?
 5. What are the coherent elements and interrelationships among response organizations that facilitate (or burden) response efforts?
 6. Are massive investments in infrastructure, resources, people, monies, etc. the right answer?
 7. Is the intention to create social change? If so, how do we implement this change?
 8. What's the importance of awareness without implementation and achievement of actually meaningful and impactful change?
 9. Gathering, assembling, and presenting information is not the answer.
 10. Is there another point of view?

1.4. Hypothesis

A flexible framework for humanitarian assistance, that can adapt and adjust to changing or diverse circumstances (e.g., situational) and is principled on systems thinking concepts and methods, is more likely to be successful and more effective for crisis response and relief efforts – as opposed to no model(s) or an inflexible, “one-size fits all” [ad hoc] approach to humanitarian response.

Furthermore, bureaucratic oversight and process-driven response guidance (e.g., “means and methods”) can be excessive, overly prescriptive, and restrictive. Guidance without holistic systems thinking consideration of social, structural, spatial, temporal, and other contextual effects and influences – both at the global and country levels – is less likely to contribute to a predictable and more effective emergence of adequate response and relief efforts.

1.5. Research and Methodology

The process undertaken to explore and research the topics of this thesis includes several sources. It's worth mentioning that separately, there are countless excellent sources, published literature, and materials focusing on matters of humanitarian aid and systems thinking. Yet, it was challenging to find much, in terms of scholarly materials, that focused on both topics simultaneously – that is, works concentrated on the joint study of humanitarian domain issues and systems thinking applications in the same source.

Each source cited throughout this thesis was carefully selected among numerous other available alternatives in an effort to narrow the focus on the subject and limit possible deviations from the primary objective of the research and thus avoid irrelevant or unrelated matters.

Following are the main types of sources for this research. The section titled “Works Cited” lists the sources utilized in the development of this work. These include:

- Comprehensive Reports and Evaluations such as the ones completed and distributed by the “Active Learning Network for Accountability and Performance” (ALNAP).
- Organizational Publications and Documents such as official “Inter-Agency Standing Committee” (IASC) guides, tools, policies, and documents as approved by the IASC (Working Group or IASC Principals) and used or adopted by the humanitarian community.
- Books, Published Journals and Research, Opinion Articles (and Public Speaking Remarks), and other related scholarly work.
- Works and instruments by other professional and humanitarian organizations (e.g., works by the humanitarian community of practice, such as International Red Cross and Red

Crescent Movement, non-governmental organizations, donors, etc.).

- Material published by the United Nations (e.g., documents and information about the agencies or secretariats, General Assembly Resolutions, organizational documents, etc.).

Of all the sources examined, the ones by the UN (and its secretariats), the IASC, and the ALNAP offered the most comprehensive, illuminating, and informative content in terms of the envisioned structure and objectives of “The Cluster Approach”. The assessments by journals and research works provided insightful perspectives in terms of critical analysis and opinions.

The overall methodology outline for this work consists of the following main areas:

- Ch. 1: Introduction and overview of motivation, objectives, hypothesis, other related research questions, and research methodology.
- Ch. 2: Understanding the history and the background of humanitarian response as an organized effort (i.e., “The Cluster Approach” by the IASC).
- Ch. 3: Consideration of assessments and opinions about the conventional humanitarian response community and the “The Cluster Approach”.
- Ch. 4: Visualization of “The Cluster Approach” through systems thinking principles, including modeling and analysis.
- Ch. 5: Insights and recommendations for additional future research.

Chapter 2: History, purpose, and focus of the Inter-Agency Standing Committee (IASC)

2.1. Background

The Inter-Agency Standing Committee (IASC) is recognized as the primary mechanism for inter-agency coordination of humanitarian assistance and its overall objective is to improve humanitarian assistance to affected populations. [5] The IASC is a forum formed from several different agencies and organizations of key United Nations (UN) and non-UN humanitarian partners to strengthen humanitarian assistance efforts in response to complex (man-made) and major emergencies (natural disasters).⁹ The Under-Secretary-General (USG) of the UN Office for the Coordination of Humanitarian Affairs (UNOCHA) also serves as the UN Emergency Relief Coordinator (ERC) and is responsible for oversight of all the UN humanitarian assistance efforts. In this capacity, the ERC is responsible for reaching out to the IASC international community forum to coordinate humanitarian assistance. The ERC relies on the members of IASC to provide response and relief support to emergencies. Under the leadership of the ERC, the IASC:

- develops humanitarian policies,
- agrees on a clear division of responsibility for the various aspects of humanitarian assistance,
- identifies and addresses gaps in response, and
- advocates for effective application of humanitarian principles¹⁰

The IASC was established in June of 1992 in response to UN General Assembly Resolution 46/182 [6] of 19 December 1991 titled, “Strengthening of the coordination of humanitarian emergency

⁹ IASC, *supra* notes 6 and 7.

¹⁰ IASC, *supra* note 7.

assistance of the United Nations”.¹¹ On 14 December 1993, following reaffirmation of UN General Assembly Resolutions 46/182 of 19 December 1991 and 47/168 [7] of 22 December 1992, the UN General Assembly Resolution 48/57 [8] confirmed that the IASC should be the primary method for inter-agency coordination. [5] Figure 1, is the present organizational chart for the IASC.¹²

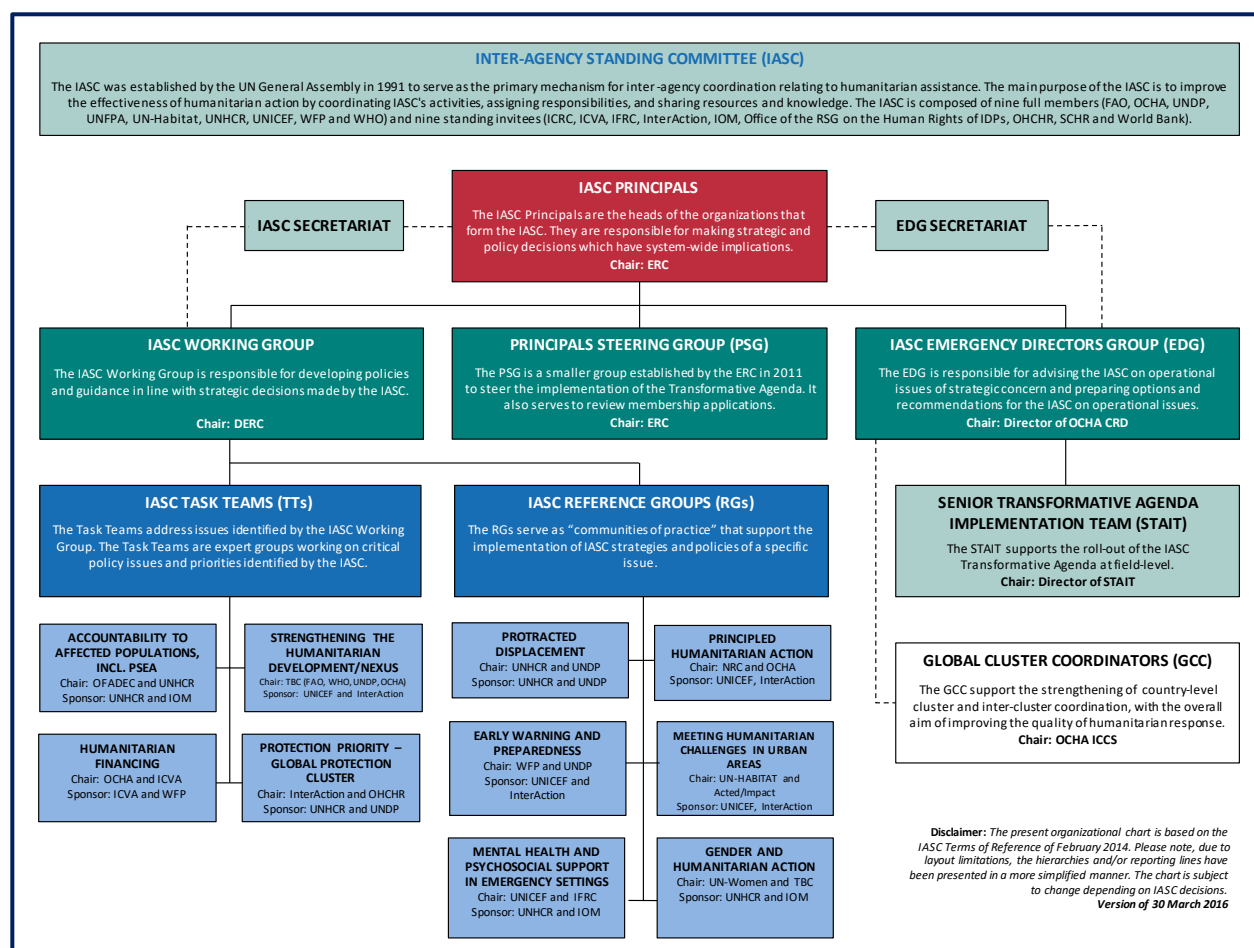


Figure 1: IASC Organizational Chart

Per General Assembly Resolution 46/182, “An Inter-Agency Standing Committee serviced by a

¹¹ IASC, supra note 7.

¹² Id.

strengthened Office of the United Nations Disaster Relief Coordinator should be established under the chairmanship of the high-level official with the participation of all operational¹³ organizations and with a standing invitation to the International Committee of the Red Cross, the League of Red Cross and Red Crescent Societies, and the International Organization for Migration. Other relevant non-governmental organizations can also be invited to participate on an ad hoc basis.” [6]

The IASC is chaired by the ERC. The full members¹⁴ of the IASC are¹⁵:

- UN Development Programme (UNDP)¹⁶
- UN Children’s Fund (UNICEF)¹⁷
- UN High Commissioner for Refugees (UNHCR)¹⁸
- World Food Programme (WFP)¹⁹
- Food and Agriculture Organization (FAO)²⁰
- World Health Organization (WHO)²¹
- UN Human Settlements Programme (UN-HABITAT)²²
- UN Office for the Coordination of Humanitarian Affairs (OCHA)²³
- International Organization for Migration (IOM)²⁴

¹³ It is important to note that, in terms of IASC membership, "operational" is defined as having the following characteristics:

- a. Provision of humanitarian assistance: protection or material aid
- b. Deployment of staff to assist affected populations with immediate needs

This can be in contrast with what others may define as operational capabilities.

¹⁴ The members of the IASC are the heads (or designated representatives) of the UN operational agencies.

¹⁵ IASC, supra note 7.

¹⁶ Link to member site – Source: <http://www.undp.org/content/undp/en/home.html>

¹⁷ Link to member site – Source: <https://www.unicef.org>

¹⁸ Link to member site – Source: <http://www.unhcr.org>

¹⁹ Link to member site – Source: <http://www1.wfp.org>

²⁰ Link to member site – Source: <http://www.fao.org/home/en/>

²¹ Link to member site – Source: <http://www.who.int>

²² Link to member site – Source: <https://unhabitat.org>

²³ Link to member site – Source: <https://www.unocha.org>

²⁴ Link to member site – Source: <https://www.iom.int>

There is also a standing invitation²⁵ to the following organizations and agencies²⁶:

- International Committee of the Red Cross (ICRC)²⁷
- International Federation of Red Cross and Red Crescent Societies (IFRC)²⁸
- Office of the High Commissioner for Human Rights (OHCHR)²⁹
- UN Population Fund (UNFPA)³⁰
- Office of the Special Representative (Rapporteur) of the Secretary General on the Human Rights of Internally Displaced Persons³¹
- NGO Consortia, International Council of Voluntary Agencies (ICVA)³²
- American Council for Voluntary International Action (InterAction)³³
- Steering Committee for Humanitarian Response (SCHR)³⁴
- World Bank³⁵

The objective of the IASC is coordination among wide-ranging partners but it limits the number of members to ensure functionality and focus.³⁶ However, in practice, there's no difference between "full members" and "standing invitees". According to the IASC, its strength is precisely in its broad and inclusive membership of key humanitarian actors.³⁷ Although membership is continuously

²⁵ Invited on a permanent basis.

²⁶ IASC, supra note 7.

²⁷ Link to standing invitee site – Source: <https://www.icrc.org/en>

²⁸ Link to standing invitee site – Source: <https://media.ifrc.org/ifrc/>

²⁹ Link to standing invitee site – Source: <https://www.ohchr.org/EN/pages/home.aspx>

³⁰ Link to standing invitee site – Source: <https://www.unfpa.org>

³¹ Link to standing invitee site – Source: <https://www.ohchr.org/en/issues/idpersons/pages/idpersonsindex.aspx>

³² Link to standing invitee site – Source: <https://www.icvanetwork.org>

³³ Link to standing invitee site – Source: <https://www.interaction.org>

³⁴ Link to standing invitee site – Source: <http://www.schr.info>

³⁵ Link to standing invitee site – Source: <https://www.worldbank.org>

³⁶ IASC, supra note 7.

³⁷ Id.

reviewed, new members are only accepted on a case-by-case basis.³⁸ Instead, non-member organizations desiring to become members are encouraged to support the work of other subsidiary organizations in their area of specialization where they can demonstrate real commitment and potential contribution(s) to the IASC.³⁹

2.2. The Humanitarian Reform

In 2005, almost 15 years after UN General Assembly Resolution 46/182 of 19 December 1991, the IASC adopted “The Cluster Approach” in response to recommendations by an independent review to strengthen effectiveness of humanitarian response through coalitions and partnerships. [5], [9]

The review, a major transformation of humanitarian coordination known as the Humanitarian Reform Agenda (HRA), introduced a number of new elements to enhance predictability, accountability, and partnerships between NGOs, international organizations, the International Red Cross and Red Crescent Movement⁴⁰, and UN agencies. The review, conducted by a team of experienced consultants in the humanitarian domain, was commissioned by the ERC to assess the humanitarian response capacities of the UN, NGOs, the International Red Cross and Red Crescent Movement, and other actors due to the general perception that humanitarian response wasn't meeting the requirements of affected populations and that the response provided varied considerably from crisis to crisis.⁴¹ The consultants' report, the ‘Humanitarian Response Review’ [4], found that humanitarian organizations remained vertical to each other which often caused

³⁸ IASC, *supra* note 7.

³⁹ *Id.*

⁴⁰ While the IASC principals generally welcomed the “cluster approach”, the International Committee of the Red Cross (ICRC) has stated that its position on “The Cluster Approach” is the following: “Among the components of the Movement, the ICRC is not taking part in “The Cluster Approach”. Nevertheless, coordination between the ICRC and the UN will continue to the extent necessary to achieve efficient operational complementarity and a strengthened response for people affected by armed conflict and other situations of violence.” Source: ‘IASC Guidance Note on Using “The Cluster Approach” to Strengthen Humanitarian Response, November 2006’, (source[10]).

⁴¹ Adapted from ‘Global Shelter Cluster’, Source:

<https://www.sheltercluster.org/homepage/documents/humanitarian-response-review>

poor coordination, lack of accountability, low level of preparedness, gaps in many sectors, and that the while the IASC is the primary body for humanitarian response it did not represent all humanitarian actors.⁴² In addition, the report's proposed recommendations contributed to the humanitarian system⁴³ transformation, the "Humanitarian Reform", which is based on the following four pillars:

1. Strengthened coordination and predictable leadership: "The Cluster Approach"
2. Strengthening the Humanitarian Coordinators System: Preparing the Emergency Managers of the Future
3. Adequate, Flexible and Predictable Humanitarian Financing
4. Building Partnerships: No single humanitarian agency can cover all humanitarian needs, collaboration is not an option, it is a necessity. [12]

Following the recommendations by the HRA, the IASC established "The Cluster Approach" – i.e., the nine clusters for humanitarian coordination mechanisms (originally there were nine clusters – currently there are 11 clusters). Clusters are groups of organizations working together, in each of the main sectors of humanitarian action, to identify and address needs and improve effectiveness of humanitarian response through partnerships.⁴⁴ These clusters are groups of both UN and non-UN humanitarian organizations, designated by the IASC, in each of the main humanitarian action sectors or areas of activities (e.g., Health, Logistics, Nutrition, Protection, Shelter, etc.) and have well-defined responsibilities for coordination. [9] "The Cluster Approach" was first applied in 2005

⁴² 'Global Shelter Cluster', supra note 41.

⁴³ In April 2017, the Active Learning Network for Accountability and Performance (ALNAP) defined the humanitarian system in an "organic rather than mechanistic sense" as follows: "The network of inter-connected institutional and operational entities that receive funds – directly or indirectly from public donors and private sources, to enhance, support or substitute for within-country responses in the provision of humanitarian assistance and protection to a population in crisis." (refer to source: [11])

⁴⁴ Adapted from 'Logistics Cluster Mandate' Infographic, Source:
https://logcluster.org/sites/default/files/lc_mandate_infographic_170425.pdf

after the earthquake in Pakistan and the original nine clusters were established within 24 hours of the natural disaster. [9]

Today, there are 11 clusters; see Figure 2⁴⁵.



Figure 2: IASC Clusters and Lead Agencies

2.3. “The Cluster Approach”

“The Cluster Approach” was a significant change after the 2005 UN Humanitarian Reform for more effective coordination and timeliness of humanitarian response, relief, and recovery efforts.

The clusters are designated by the IASC to enhance partnerships among humanitarian actors and organizations at both local and international levels. The “cluster leads” are the agencies or organizations that assume the leadership roles in specific sectors or areas of humanitarian aid and are responsible for response, predictability, accountability, and partnership. The clusters (i.e., sectors) and respective lead agencies and roles are⁴⁶:

- Camp Coordination and Camp Management

Cluster Lead Agency: IOM/UNHCR

Coordinates humanitarian actors with regards to all services provided to displaced

⁴⁵ ‘Logistics Cluster Mandate’ Infographic, supra note 44.

⁴⁶ Information and excerpts about clusters have been adapted from source [9].

populations within any communal settings (i.e. camps, informal settlements, collective centers) and works with affected populations to ensure representation, on-site governance, and access to information about services provided.

- Early Recovery

Cluster Lead Agency: UNDP

Leads global and interagency efforts to establish and maintain standards and policy, build response capacity and operational support and ensure integration of early recovery in IASC guidance, including on the Humanitarian Programme Cycle and Cluster Coordination.

- Education

Cluster Lead Agency: UNICEF and Save the Children

Brings together NGOs, UN agencies, academics, and other partners under the shared goal of ensuring predictable, well-coordinated, and equitable provision of education for populations affected by humanitarian crises.

- Emergency Telecommunications

Cluster Lead Agency: WFP

Global network of organizations working together to provide shared communications services in humanitarian emergencies for vital security communications services and voice and internet connectivity to assist the response community in their life-saving operations.

- Food Security

Cluster Lead Agency: WFP and FAO

Works directly with its partners and stakeholders that include international NGOs, the Red Cross and Red Crescent Movement, UN organizations, Governments and Donors to coordinate food security response during a humanitarian crisis, addressing issues of food

availability and security, access, and utilization in major emergencies.

- Health

Cluster Lead Agency: WHO

Aims to relieve suffering and save lives in humanitarian emergencies while advancing the well-being and dignity of affected populations.

- Logistics

Cluster Lead Agency: WFP

Provides coordination and information management to support operational decision-making and improve the predictability, timeliness, and efficiency of the humanitarian emergency response. Liaison between humanitarian actors, where logistics operations are concerned; facilitates access to logistics services and acts as a ‘provider of last resort’ offering common logistics services when critical gaps hamper the humanitarian response. Serves as communications link between field operations and the humanitarian community in support of continuity of operations. Focal point providing expertise, deploying to on-going activities, or in response to sudden emergencies and supporting field staff.

- Nutrition

Cluster Lead Agency: UNICEF

Safeguard and improve the nutritional status of emergency-affected populations by ensuring an appropriate response that is predictable, timely, effective, and at scale.

- Protection

Cluster Lead Agency: UNHCR

Coordinates and provides global level inter-agency policy advice and guidance on the implementation of “The Cluster Approach” to Protection Clusters in the field. Supports

protection responses in non-refugee situation humanitarian action as well as leads standard and policy setting relating to protection in complex and natural disaster humanitarian emergencies, in particular with regard to the protection of internally displaced persons in accordance with international law and their protection through relevant and timely actions at every phase of the crisis and beyond.

- Shelter

Cluster Lead Agency: IFRC/UNHCR

Supports people affected by natural disasters and internally displaced people affected by conflict with the means to live in safe, dignified and appropriate shelter. Enables coordination among all shelter actors, including local and national governments, so that people who need shelter assistance get help faster and receive the right kind of support.

- Water, Sanitation, and Hygiene

Cluster Lead Agency: UNICEF

Supports agencies providing WASH services to those affected by emergencies, ensures the quality and coherence of the assistance in a manner that is equitable, culturally acceptable, and protects the dignity of the populations affected by crises.

Figure 3 [9] is a conceptual illustration of “The Cluster Approach” with the current 11 clusters (i.e., sectors) of humanitarian aid.

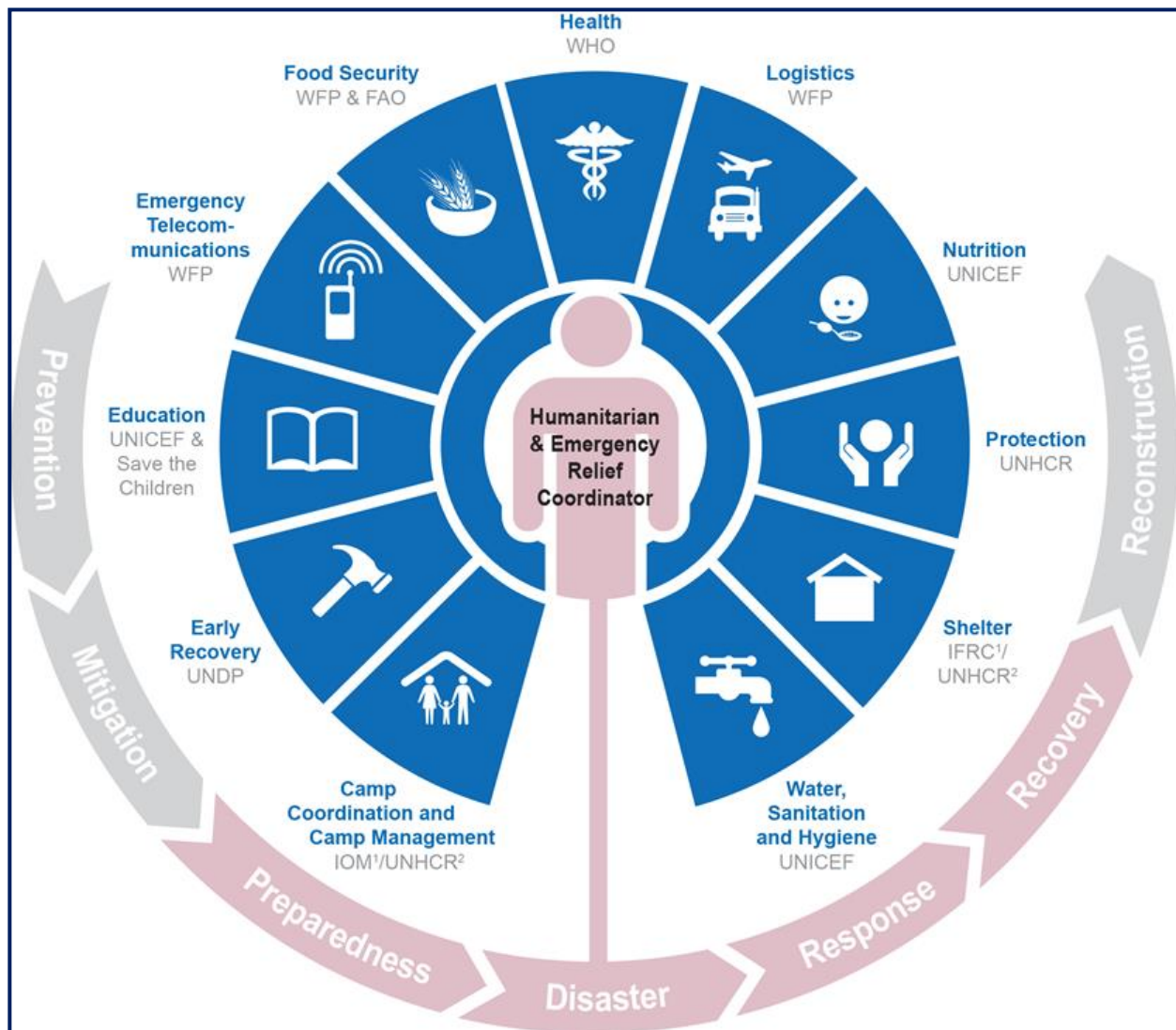


Figure 3: IASC illustration of “The Cluster Approach” concept

2.4. Vision, Missions, and Focus Areas

The IASC aims to improve humanitarian assistance, including the protection of rights of affected people.

In 2005, after adopting “The Cluster Approach”, the IASC designated “global cluster leads” for humanitarian emergencies for each of the cluster sectors or areas of activity for both conflict-

related humanitarian emergencies and disaster situations. [12] At the time, the IASC decided that “The Cluster Approach” should also be applied at the country level, albeit with some flexibility. [12] Therefore, “The Cluster Approach” functions at two levels: (1) at the global level and (2) at the country level to significantly improve accountability and the impact of international humanitarian responses to major emergencies or disasters.

According to the IASC’s ‘Guidance Note on using “The Cluster Approach” to Strengthen Humanitarian Response’ (24 November 2006), the objective of “The Cluster Approach”, at the global level, is to “strengthen system-wide preparedness and technical capacity to respond to humanitarian emergencies by ensuring that there is predictable leadership and accountability in all the main sectors or areas of humanitarian response”. [12]

Likewise, at the country level, the objective is to strengthen humanitarian response by through high standards of predictability, accountability, and partnerships in all clusters sectors or areas of activity. [12] The idea is to focus on achieving strategically driven responses and better prioritization of available resources by (1) “clarifying the division of effort s among organizations”, (2) “better defining the roles and responsibilities of humanitarian organizations within the sectors”, and (3) “providing the Humanitarian Coordinator with both a first point of call and a provider of last resort in all the key sectors or areas of activity”. [12] Global and in-country level objectives and responsibilities are explained in more detail in Section 2.7 of this chapter.

Lastly, the expectation is to measure and judge the success of “The Cluster Approach” in terms of the impact(s) it has on improving humanitarian response to those affected by disasters and emergencies. [12]

2.5. Strategic Objectives and Key Principles

The primary strategic objectives of the IASC in complex and major emergencies are:

- to develop and agree on system-wide humanitarian policies;
- to allocate responsibilities amongst agencies in humanitarian programmes;
- to develop and agree on a common ethical framework for all humanitarian activities;
- to advocate common humanitarian principles to parties outside the IASC;
- to advocate for the full respect for the rights of the individual in accordance with the letter and spirit of the relevant bodies of law (i.e. international human rights law, international humanitarian law, and refugee law);
- to identify and address areas where gaps in mandates or lack of operational capacity exist;
- and to resolve disputes or disagreements about and amongst humanitarian agencies on system-wide humanitarian issues.⁴⁷

In addition, the IASC highlights emphasis and adhering to the following key principles in pursuing its principal objectives:

- Respect for Mandates: that decisions of the IASC will not compromise organizations with respect to their own mandates
- Ownership: that all organizations have an equal ownership of the Committee and its subsidiary bodies
- Overall Objective: that the ultimate objective is to support effective humanitarian action
- Relevance to field operations: that members recognize the criticality of ensuring relevance to field operations and of input by field operations
- Subsidiarity: that decisions will be taken at the most appropriate level as agreed by IASC Principals
- Impartiality of the Secretariat: that the IASC will be serviced by a Secretariat that does not

⁴⁷ IASC, *supra* note 7.

represent the interests of any one organization.⁴⁸

Figure 4⁴⁹ summarizes the IASC's strategic priorities for 2018-2019.

STRATEGIC PRIORITIES	THEMATIC ISSUES
Humanitarian Financing	<ul style="list-style-type: none">• Closing the funding gap (deepening and widening the resource base)• Links with the World Bank in fragile contexts• Dialogue with donor countries, including GHD
Accountability and inclusion	<ul style="list-style-type: none">• Prevention of sexual exploitation and abuse (PSEA) and sexual harassment• Accountability to affected populations• Partnerships beyond the IASC
Collective Advocacy	<ul style="list-style-type: none">• International Humanitarian Law / Protection of Civilians• Humanitarian access• Protection of aid workers• Preventing and ending conflicts
Humanitarian-Development Collaboration	<ul style="list-style-type: none">• Operationalizing the humanitarian-development nexus in the field to reduce risks and vulnerabilities• Safeguarding humanitarian principles and diverse partnerships• Addressing humanitarian crises in urban settings
Operational Response	<ul style="list-style-type: none">• Humanitarian system-wide emergency activation• Coordination arrangements• Humanitarian leadership• Multi-year planning• Early warning and preparedness

Figure 4: IASC Strategic Priorities (2018-2019)

2.6. The IASC Transformative Agenda (TA)

By 2010, “The Cluster Approach” had been evaluated a few times and the lessons learned on implementation and outcomes to improve humanitarian assistance led to the IASC Transformative Agenda⁵⁰ (TA). In December 2011, drawing on lessons learned about the weaknesses of

⁴⁸ IASC, supra note 7.

⁴⁹ Id.

⁵⁰ IASC, Source: <https://interagencystandingcommittee.org/iasc-transformative-agenda>

multilateral humanitarian response, leadership challenges, and coordination, the IASC agreed to a set of actions that collectively represent substantive improvements to the humanitarian response model used at the time.⁵¹ The agreements reached at the December 2011 TA resulted in new parameters (i.e., TA Protocols) for improved collective measures and actions in humanitarian emergencies.⁵²

The TA Protocols outline a series of recommendations and actions with the purpose of streamlining overly process-driven processes and outcomes. [9] The simplified coordination methods are meant to be adapted in an operational context to support humanitarian coordination efforts. Below are the protocols developed to support implementation of the TA (as agreed by the IASC Principals)⁵³:

1. Concept Paper on 'Empowered Leadership'⁵⁴
2. Humanitarian System-Wide Emergency Activation: definition and procedures⁵⁵
3. Responding to Level 3 Emergencies: What 'Empowered Leadership' looks like in practice⁵⁶
4. Reference Module for Cluster Coordination at the Country Level⁵⁷
5. Humanitarian Programme Cycle Reference Module Version 2.0⁵⁸
6. Accountability to Affected Populations Operational Framework⁵⁹

⁵¹ IASC, supra note 7.

⁵² Id.

⁵³ IASC, supra note 50.

⁵⁴ Link to Document - Source: <https://interagencystandingcommittee.org/node/2263>

⁵⁵ Link to Document - Source: <https://interagencystandingcommittee.org/node/2564>

⁵⁶ Link to Document - Source: <https://interagencystandingcommittee.org/node/2563>

⁵⁷ Link to Document - Source: <https://interagencystandingcommittee.org/node/10176>

⁵⁸ Link to Document - Source: <https://interagencystandingcommittee.org/node/10181>

⁵⁹ Link to Document - Source: https://interagencystandingcommittee.org/system/files/legacy_files/AAP%20Operational%20Framework%20Final%20Revision.pdf

7. Inter-Agency Rapid Response Mechanism (IARRM) Concept Note⁶⁰
8. Common Framework for Preparedness⁶¹
9. Emergency Response Preparedness⁶²
10. Multi-Sector Initial Rapid Assessment Guidance⁶³

2.7. The 2015 IASC Reference Module for Cluster Coordination at the Country Level and the 2010 Handbook for RCs and HCs on Emergency Preparedness and Response

The 2015 Cluster Coordination Reference Module⁶⁴, [13] is one of the 2011 IASC TA Protocols implemented with inputs from the field and the global level actors. It outlines the basic elements for coordination of clusters and serves as a reference guide for field practitioners and humanitarian response actors to help facilitate their work and improve outcomes.

The IASC recognizes that using a cluster approach for every emergency may potentially undermine rather than enable humanitarian assistance efforts. To that effect the IASC objective is to avoid waste of resources and instead facilitate action by Governments, which are primarily responsible for providing humanitarian assistance to people under their jurisdiction.

The reference module includes eight sections⁶⁵:

1. Cluster and Sector Coordination
2. Cluster Activation

⁶⁰ Link to Document - Source:

https://interagencystandingcommittee.org/system/files/legacy_files/IARRM%20concept%20note%2010Oct2013.pdf

⁶¹ Link to Document - Source:

https://interagencystandingcommittee.org/system/files/common_framework_for_preparedness.pdf

⁶² Link to Document - Source: <https://interagencystandingcommittee.org/node/10186>

⁶³ Link to Document - Source: <https://interagencystandingcommittee.org/node/10191>

⁶⁴ IASC, supra note 7.

⁶⁵ Id.

3. Cluster Functions
4. The Role of Clusters in Preparedness
5. Cluster Management Arrangements
6. Sharing Leadership
7. Minimum Commitments for Participation in Clusters
8. Inter-Cluster Coordination, Sub-National Coordination, Monitoring Cluster Coordination

The module was developed to reflect the recommendations of the 2005 HRA and the 2011 TA by focusing on delivery of results, rather than processes while also recognizing the need to become streamlined, effective, and efficient coordination instruments. Note that the most important objective here is the emphasis on results and effect.

In addition, the 2010 'Handbook for RCs and HCs on Emergency Preparedness and Response' [14] summarizes the roles for Resident Coordinators (RCs) and Humanitarian Coordinators (HCs) to prepare for and respond to emergencies. The handbook was developed by the IASC HC Group as complementary performance, tasking, accountability, and service mechanisms guidance to RCs and HCs but it does not replace or supersede other more in-depth guidance documents and policies. The handbook also provides a brief overview and explanation of the roles and responsibilities of the various humanitarian actors in the context of RCs and HCs.

Figure 5 [14] is a representation adapted from the handbook illustrating the "IASC Humanitarian Coordination Architecture" for the humanitarian actors involved at the global level and at country level. It appears to depict functional, hierarchy, and reporting relationships in an organizational chart.

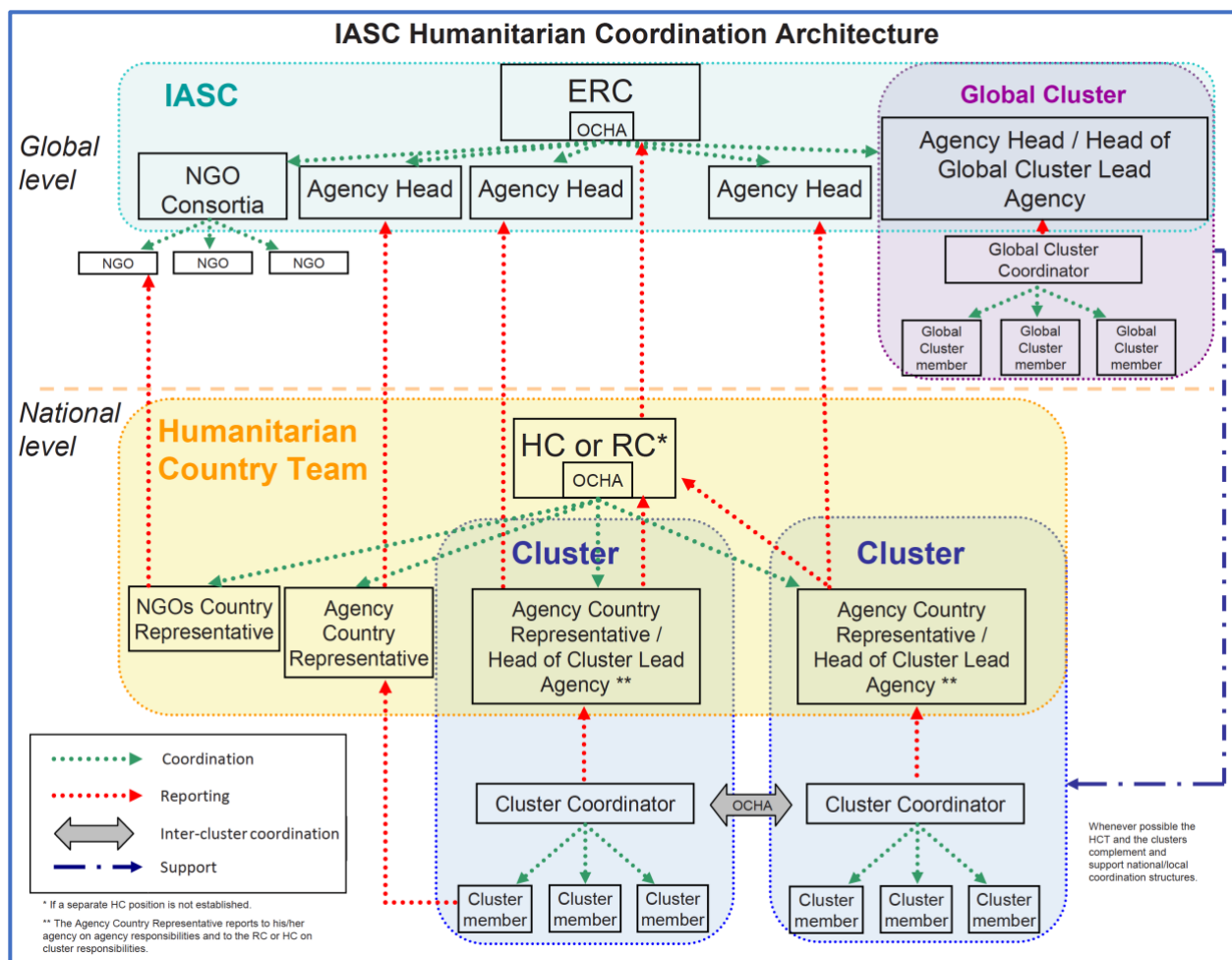


Figure 5: IASC Humanitarian Coordination Architecture

UNOCHA (aka OCHA) principal role supports the ERC at the global level and the HCs and RCs at the field (country) level by coordinating humanitarian action, advocating for the rights of people in need, developing humanitarian policy and analysis, managing humanitarian information systems, and managing humanitarian pooled funds [14]; see Figure 6⁶⁶. The illustration in Figure 7⁶⁷ is OCHA's conceptual depiction for assessment and coordination of crisis situations – i.e., what

⁶⁶ Adapted from the International Council of Voluntary Agencies, Source: <https://www.icvanetwork.org/topic-four-ocha-and-ngos-humanitarian-coordination>

⁶⁷ UNOCHA, Source: https://www.unocha.org/sites/unocha/files/Graphic4_P%26B.png

determines the configuration of OCHA's operations in the field?

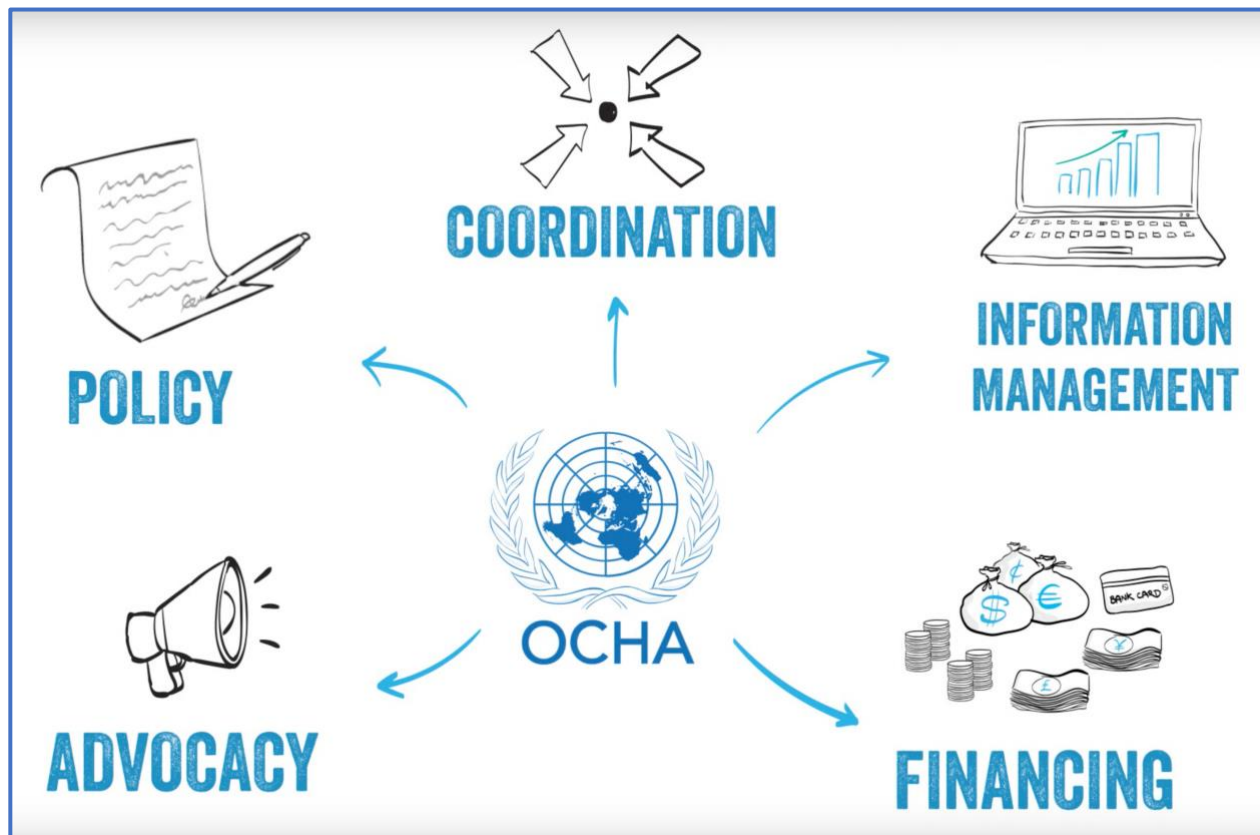


Figure 6: UNOCHA Central Role in Coordination

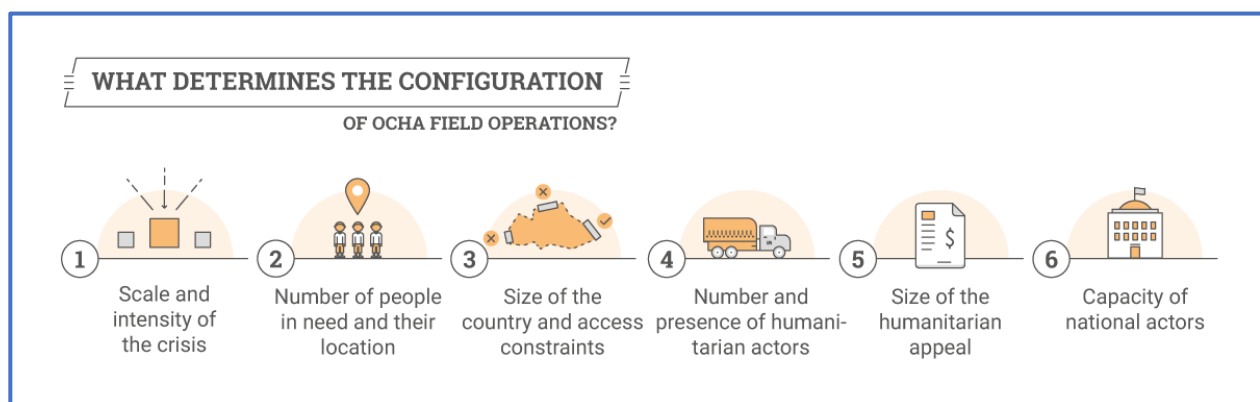


Figure 7: UNOCHA Assessment, Coordination, and Configuration of Field Level Operations

The primary responsibility for coordinating humanitarian assistance at country level is the responsibility of national authorities. At country level, the designated cluster leads report to the HC for effective and timely assessment and response within their respective clusters (sectors) and also act as providers of last resort. Furthermore, cluster leads are expected and obligated to interact and coordinate with each other to address cross-cutting issues. Cluster leads ensure that humanitarian actors leverage and build on the local organic capabilities and maintain appropriate links with governmental and local authorities, organizations, the public and other stakeholders (these relationships are also contingent on the specific circumstances in each country as well as their disposition and available capacity). However, if international humanitarian assistance is needed the HC – or, if a separate HC position is not appointed, then the RC – is responsible for leading and coordinating the preparedness and response efforts of both UN and non-UN humanitarian organizations whenever possible in support of and in coordination with national and local authorities. [14] Depending on the situation, the ERC (after consultation with the IASC) may also choose to designate the RC as HC. [14] The HC, supported by UNOCHA and the ERC, is overall responsible and accountable for the effectiveness of humanitarian response.

Additionally, the Humanitarian Country Team (HCT), chaired by the RC or HC, is an operational decision-making group of “operationally” relevant humanitarian organizations (both UN and non-UN) to focus on common strategic and policy issues related to humanitarian actions in country. [14]

This chapter provided a very brief overview of the history and background of the IASC humanitarian response system as an organized and formally adopted framework referred to as “The Cluster Approach”, including understanding of stakeholders and their respective roles and responsibilities. The next chapter will examine past assessments, analysis, research, and criticism of the framework based on its deployment, feedback, and lessons since its implementation.

Chapter 3: Assessments, research, and views about the humanitarian sector

This chapter discusses assessments, analysis, and opinions about the conventional humanitarian response community and the “The Cluster Approach” as adopted in 2005 following the ‘Humanitarian Response Review’ (source [4]).

The sources used to throughout this chapter include comprehensive reports and evaluations by independent organizations and researchers, organizational publications, published scholarly works, and opinion pieces.

3.1. Active Learning Network for Accountability and Performance (ALNAP)

Established in 1997, following the multi-agency evaluation of the humanitarian response to the Rwandan Genocide in 1994, the Active Learning Network for Accountability and Performance (ALNAP) is a global humanitarian sector-wide network of NGOs, UN agencies, the Red Cross and Red Crescent Movement, donors, academics, research institutions, and independent consultants dedicated to learning how to improve response to humanitarian emergencies. [15], [16] ALNAP activities seek to improve the quality, availability, knowledge, and evidence from previous humanitarian responses to support the humanitarian system’s performance and accountability. [16] The network of key international humanitarian organizations and experts provides the humanitarian sector with a forum to address issues of accountability and learning, as well as producing research and analysis about common challenges in the humanitarian sector. [15] According to ALNAP, its library is the largest repository of resources, publications, and evaluations in the humanitarian sector; see Figure 8 [16] (next page).



Figure 8: ALNAP breakdown of humanitarian sector library documents

3.2. The State of the Humanitarian System Report

One of the principal publications by ALNAP is the 'The State of the Humanitarian System' (SOHS) report. ALNAP launched the initial SOHS pilot study in 2010 and in 2012 it published the first report⁶⁸. The SOHS is an independent study completed very few years that reports statistics and findings from assessments, surveys, interviews of stakeholders (humanitarian actors) and beneficiaries (aid recipients), and other relevant information. The report's intent is to oversee progress and performance of the international humanitarian community.

In addition, the SOHS report bolsters its evaluations by examining case studies. Fundamentally, the report is a critical analysis of "lessons learned" as a result of the work done by humanitarian sector actors to help identify both deficiencies and resourceful solutions for the gaps. The premise is that the report, as a means for investing in feedback, ultimately helps with the objectives to improve transparency, predictability, accountability, participation (partnerships), timeliness, coordination, and effectiveness of the humanitarian community system in order to strengthen and improve future response efforts on behalf of populations affected by emergencies.

The SOHS assessment is generally based around the following OECD (Organisation for Economic

⁶⁸ The SOHS was also published in 2015. The next SOHS report is currently expected by December 2018.

Co-operation and Development) evaluative criteria. In 2006 ALNAP adapted the criteria for evaluation of complex emergencies from the principles and criteria for evaluation of development initiatives process developed in 1991 by the Development Assistance Committee (DAC) of the OECD [17]:

- Sufficiency/Coverage:
“The need to reach major population groups facing life-threatening suffering wherever they are.”
- Relevance/Appropriateness
“Relevance is concerned with assessing whether the project is in line with local needs and priorities (as well as donor policy). Appropriateness is the tailoring of humanitarian activities to local needs, increasing ownership, accountability and cost-effectiveness accordingly.”
- Effectiveness
“Effectiveness measures the extent to which an activity achieves its purpose, or whether this can be expected to happen on the basis of the outputs. Implicit within the criterion of effectiveness is timeliness.”
- Connectedness
“Connectedness refers to the need to ensure that activities of a short-term emergency nature are carried out in a context that takes longer-term and interconnected problems into account.”
- Efficiency
“Efficiency measures the outputs – qualitative and quantitative – achieved as a result of

inputs. This generally requires comparing alternative approaches to achieving an output, to see whether the most efficient approach has been used.”

- Coherence

“The need to assess security, developmental, trade and military policies as well as humanitarian policies, to ensure that there is consistency and, in particular, that all policies take into account humanitarian and human-rights considerations.”

The most recent ALNAP SOHS report in 2015 concluded that while the overall performance assessment of the humanitarian system was negative (with respect to the evaluative criteria), some parts of the system were indeed working better. [18] The report credited the TA (Transformative Agenda) to help raise the standards for response and leadership. [18] However, it also noted that although there were some improvements, such as innovation in communications and information management, pooled funding, and strengthened coordinated planning, these advances were predominantly fixated on the process of aid delivery as opposed to focusing (instead) on substance and outcomes. [18] Quoting from the report’s conclusions:

“As the demand for humanitarian assistance swells and the political climate in which it navigates becomes less favourable, recognition is growing of the system’s inherent structural insufficiency. Even as its machinery becomes more elaborate and fine-tuned, it is still akin to a pocket calculator attempting the job of a computer. It is not fair to hold the system to account for a role far larger than it was designed for or could realistically be expected to play, but it does raise the question: Should we perhaps design something else?” [18, p. 14]

3.3. Definition of the Humanitarian System (per ALNAP)

From a systems thinking perspective, which is the purpose of this work, it is worthwhile observing the definition attributed by ALNAP to the humanitarian system and used for the 2015 SOHS report:

“This study uses the term ‘system’ in an organic rather than mechanistic sense, as a complex whole formed of interacting and interrelated elements. The humanitarian system is thus defined as the network of interconnected institutional and operational entities through which humanitarian assistance is provided when local and national resources are insufficient to meet the needs of the affected population. The most salient characteristic may be the interdependence of its component actors, for in a humanitarian emergency no single entity can serve the needs of an entire affected population; rather, the task requires the concomitant actions of other donors, implementers and host institutions. Furthermore, although leaderless and fragmented, the system exhibits evidence of shared principles, norms and values and a convergence of interests that, despite protests to the contrary, suggests something systemic at work.” [18, p. 18]

See Figure 9 [18, p. 20] (next page) for depiction of the humanitarian system according to ALNAP 2015 SOHS report.

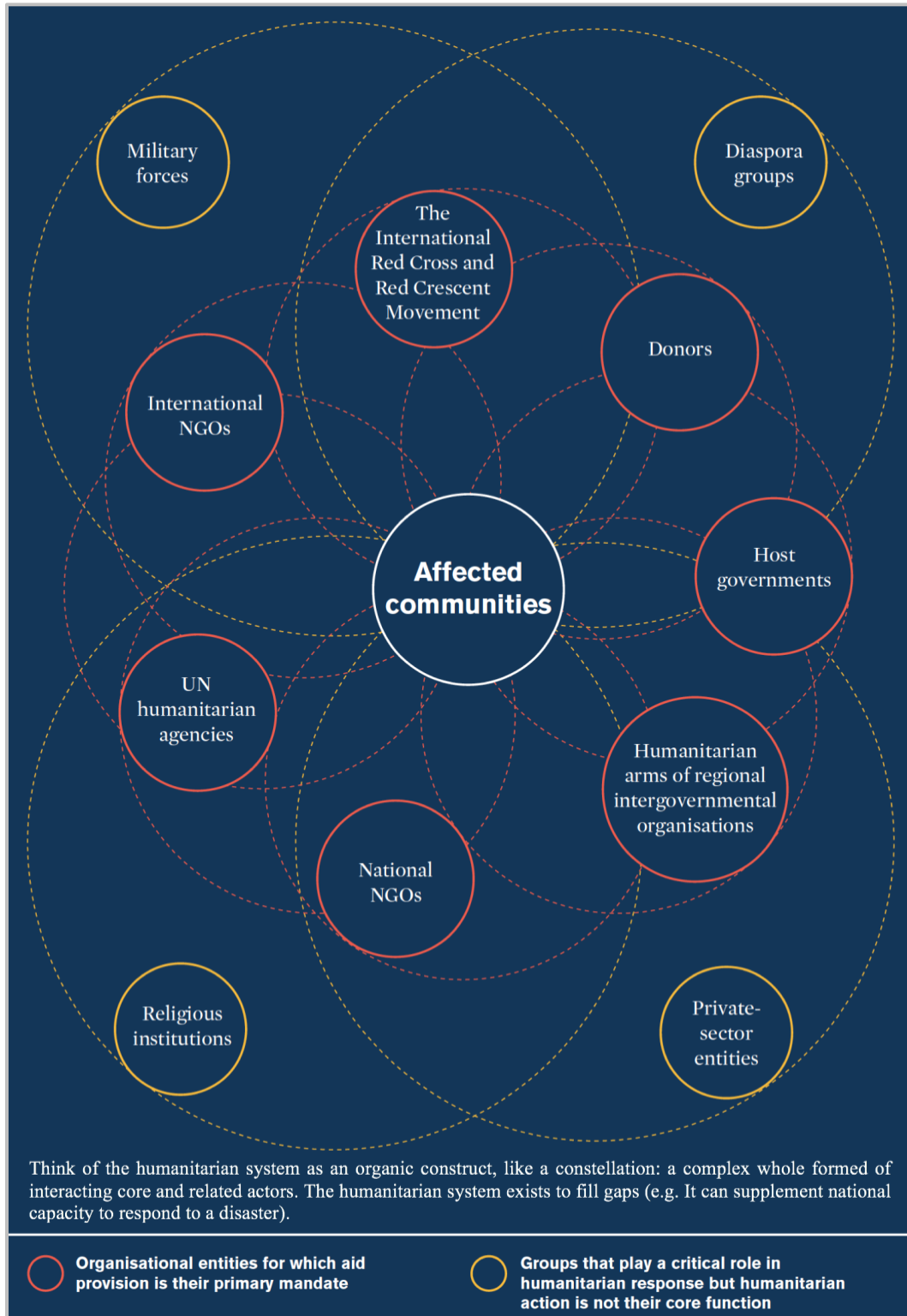


Figure 9: ALNAP 2015 SOHS depiction of “the humanitarian system”

It is also thought-provoking to see other insights and opinions by the report's contributors about the humanitarian system as evaluated and defined by ALNAP:

“The global humanitarian system as we know it was not deliberately engineered; it evolved largely organically from disparate altruistic endeavours at the local and international levels. We may have reached the limits of what jury-rigging new mechanisms for planning and coordination onto (what) that structure can accomplish.” [18, p. 10] (Note: Sentence fragments have been underlined for emphasis.)

Furthermore, it is extremely significant that the very last part of the 2015 SOHS report closes as follows:

“While no formal proposition has been put forward recently, another significant structural change to consider would be to rationalise the UN’s humanitarian capacity, now dispersed among 10 or so separate agencies, into a more unified emergency system with unified lines of accountability. Short of a single UN humanitarian agency, this could involve integrating and streamlining the separate systems of human resources, finances and contracting. Streamlining could strengthen country-level humanitarian leadership, lighten the coordination burden and allow quicker and more directive action when needed, including through improved consolidation of supplies and logistical hubs at regional levels.

The common thread running through these options is the notion that the current system requires more significant change than the past two decades of reform have accomplished. While some might appear quixotic when viewed through the lens of an entrenched interagency structure, at some point it arguably becomes necessary to take a step back from the system that has evolved, and consider how it might look and function differently if it were designed to achieve the best

possible humanitarian outcomes. If the past three years are any indication, the global demand for such re-invention is only likely to rise." [18, p. 114] (Note: Sentence fragments have been underlined for emphasis.)

Finally, the summary edition for the ALNAP 2015 SOHS report concludes with the following statement and six potential recommendations for improvement:

"Evidence from the SOHS 2015 shows that the solution is not only more money, but rather for the system to reinvent itself." [19, p. 28] (Note: Sentence fragments have been underlined for emphasis.)

1. "Identify and fix humanitarian capacity gaps via mapping of collective capacities and resources.
2. Enable greater coverage in conflict environments by increasing support to actors with best and most rapid access.
3. Make humanitarian action more relevant and accountable to affected people by monitoring of humanitarian responses from their perspective.
4. Rationalise UN humanitarian capacity from the existing 10 or so separate agencies dealing with it to a more unified emergency system with unified lines of accountability.
5. Donors to make funding more predictable, appropriate and flexible (e.g. multi-year) to respond to chronic crises, which are on the rise.
6. Humanitarians should work more closely together with political and development actors

to build resilience and local capacity. Reducing risk is not just a humanitarian challenge.”
[19]

These statements, insights, and conclusions suggest constraints, shortfalls, and challenges in the current humanitarian domain and a need to research further what is unquestionably a much more complex and multifaceted humanitarian assistance and response enterprise. This effort should obviously (1) recognize that the humanitarian community is a collection of organizations in complex societal infrastructures and subject to human behaviors and (2) consider the opportunity to reframe existing structural paradigms – conceivably, as a socio-technical-economic system, through a systems thinking approach. A systems perspective could potentially help visualize and thus enhance interoperability and integration among the many distributed organizations for both the agents (i.e., beneficiaries and stakeholders) and instruments of form of the humanitarian system(s) to aid affected populations.

3.4. Criticism and research of the current humanitarian framework(s)

In the book ‘The Crisis Caravan: What's Wrong with Humanitarian Aid?’, the Dutch author and freelance journalist, Linda Polman, presents the idea that the current humanitarian relief practices are flawed and dysfunctional. [20] Moreover, her belief is that in its current form, unintended consequences, such as susceptibility to scams, corruption, and uncooperative or adverse political influence can actually undermine relief efforts, cause harm, and extend the suffering of the very people it intends to help. [20] She draws these reflections and opinions from her experiences covering conflict hotspots and humanitarian relief efforts dating back to the 1990’s.

At a TED Talks (©TED Conferences, LLC.) speaking event in 2011, Polman describes her views and experiences in a presentation entitled her "What’s wrong with humanitarian aid? A journalist’s journey". [21] In her remarks she explains what she observed as lack of centrality, cooperation, coordination, preparation, and planning among aid organizations which ultimately played right

into the hands of corrupt factions and the political elite. [21] She also highlights deficiencies in precautionary measures by aid organizations to prevent the abuses of monies or aids ending up in the wrong hands. She refers to these problems in competition and separate planning among organizations as “being trapped inside the humanitarian dilemma” – that is, “aid organizations want to do good for others, but they need to do good for themselves” in order to survive and appeal to donors. [21] Polman’s detailed accounts and criticism of ineffective, uncoordinated actions and unintended consequences are troubling and raise serious questions about the real effectiveness of the current humanitarian relief activities.

In September 2010, during an interview with TV host Jon Stewart (©2018 Comedy Partners, Comedy Central) to discuss her book, Polman points out that humanitarian organizations are very much dependent on who’s in charge in the areas where aid is needed and as a result the relief has to be negotiated with whomever is in charge. [22] Unfortunately, much of the corruption and profiteering is rooted in these predicaments. Ultimately, while she admits not having all solutions, she strongly believes that donors and relief organizations must cooperate with each other, agree on collective goals, pool funding, and work together (under a central authority – e.g., the UN) to fight abuse, theft, and corruption to ensure affected populations benefit from humanitarian relief efforts. [22]

In the 2011 Journal of Public Health article ‘The UN OCHA cluster approach: gaps between theory and practice’, the authors examine the role of “The Cluster Approach” in the context of sudden humanitarian emergencies. [23] The focus of the study is to reveal the gaps between theory and practice – particularly with respect to size and structure of organizations – and explore the different levels of cooperation between UNOCHA and NGOs. [23] The study is based on the humanitarian response to the 2010 earthquake in Haiti, with emphasis on analysis of “The Cluster Approach” and feedback from NGO stakeholders.

Like Polman, the study underlines that humanitarian relief efforts are contingent on external donor funding which further complicates matters because NGOs are bound to meet the expectations and priorities of their donors. [23] This upward accountability to donors can be a source of conflict because it may outweigh downward accountability to the needs of the affected population and the objectives of relief efforts by the humanitarian community. [23] This accountability struggle risks and debilitates the overall efforts because the consequences are wasted resources and unnecessary duplication of efforts (among other humanitarian actors) due to the lack of commitment by unreliable NGOs to coordinate and plan their actions according to the joint (i.e., cooperative) relief objectives and long term planning. [23]

The study points out that the purpose of “The Cluster Approach” at the site of the crisis is to provide dependable communications between NGOs, collect and analyze data, assess needs, and make the information available to all NGO actors. [23] This is to help NGOs focus their relief activities based on the priorities and needs at the site of the crisis instead of merely seeking to accomplish as self-serving opportunities arise or to solely act to meet the expectations of donors. [23]

Their analysis revealed tensions between OCHA’s intention to coordinate activities locally and the perceived importance by NGO counterparts about OCHA. [23] In addition, the report noted a lack of cooperation between NGOs and offered suggestions for improvements in communications. [23] However, the report also underscored that irrespective of the suggested best practices and measures to enhance communications, OCHA has limited authority and can only act as an information conduit – in other words, OCHA lacks authority to direct and thus is unable to mandate coordination among NGOs in order influence objectives or outcomes. [23] Ultimately, effective coordination is entirely dependent on the willingness and cooperation of NGOs. [23]

Finally, among other observations on the adverse consequences of NGO competition, the need to

consider long-term concerns, and misguided accountability, the report concludes that in principle, “The Cluster Approach” provides a structure for improved coordination of humanitarian efforts but that “there was broad agreement that the coordination mechanisms reached their limits in the complex crisis in Haiti.” [23, p. 590]

In a research paper published by The Journal of Humanitarian Assistance in 2013, titled ‘Improving Humanitarian Coordination: Common Challenges and Lessons Learned from the Cluster Approach’, the author discusses common challenges of “The Cluster Approach” since its implementation in 2005 and lessons learned, based on analysis of case studies, evaluations, and literature. [24] The investigation is an assessment of “The Cluster Approach” based on its envisioned objectives by exploring viewpoints of stakeholders and gathering findings from the various clusters and country perspectives. [24]

The author, Vanessa Humphries, relied on the ‘IASC Guidance Note on Using “The Cluster Approach” to Strengthen Humanitarian Response’ [12] for the meta-analysis of 18 evaluations – these included major evaluations, case studies, cluster assessment reports, surveys, stakeholder perspectives, global and regional interviews, and existing literature. [24]

Humphries measured the relative strengths and weaknesses of “The Cluster Approach” according to the four main intended outcomes of “The Cluster Approach”, according to the IASC guidance:

1. Overall effectiveness at improving humanitarian response,
2. Creating predictable leadership,
3. Enhancing partnership between humanitarian actors, and
4. Increasing the accountability of relief efforts. [24]

The results of the meta-analysis showed that only the first dimension, “overall effectiveness”, of

“The Cluster Approach” intended outcomes was perceived comparatively strong (based on the answers - ratings in the range of three to five). [24] However, the ratings of the other dimensions, “predictable leadership”, “partnership”, and “accountability” scored at or below three, which would indicate that “The Cluster Approach” may not be achieving its intended purpose and that many challenges still linger. [24]

Notwithstanding the difficulties, “various stakeholders find “The Cluster Approach”, in terms of its overall effectiveness, to be a useful coordination mechanism to improve relief efforts”. [24]

The graphs in Figures 10 through 13 (adapted from source [24]) summarize the findings from the meta-analysis of the 18 evaluations in the categories assessed (note: vertical axes indicate the one to five rating scale and the horizontal axes indicate the number of evaluations assessed). [24]

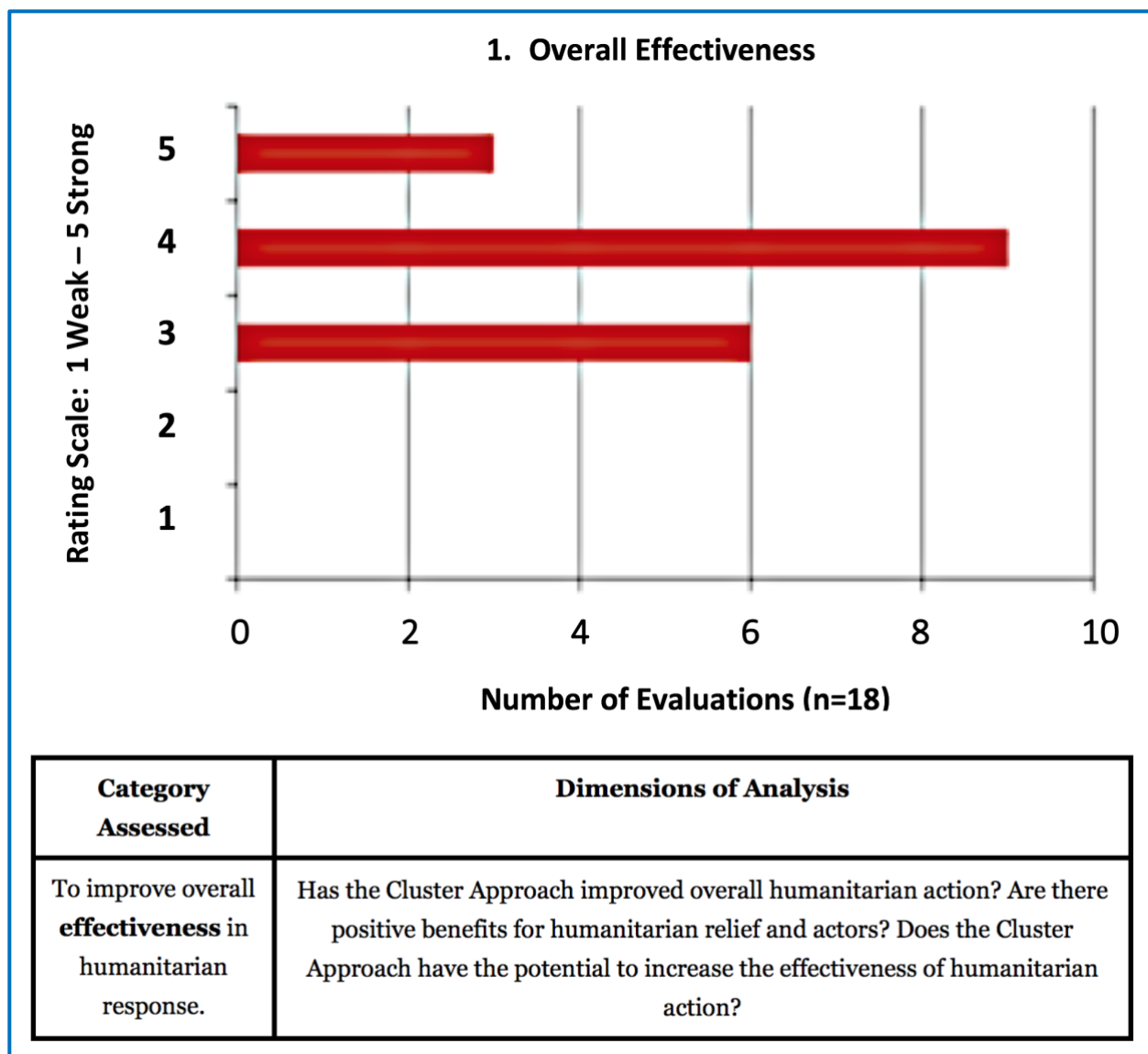


Figure 10: “Has the Cluster Approach improved overall effectiveness of humanitarian response?”

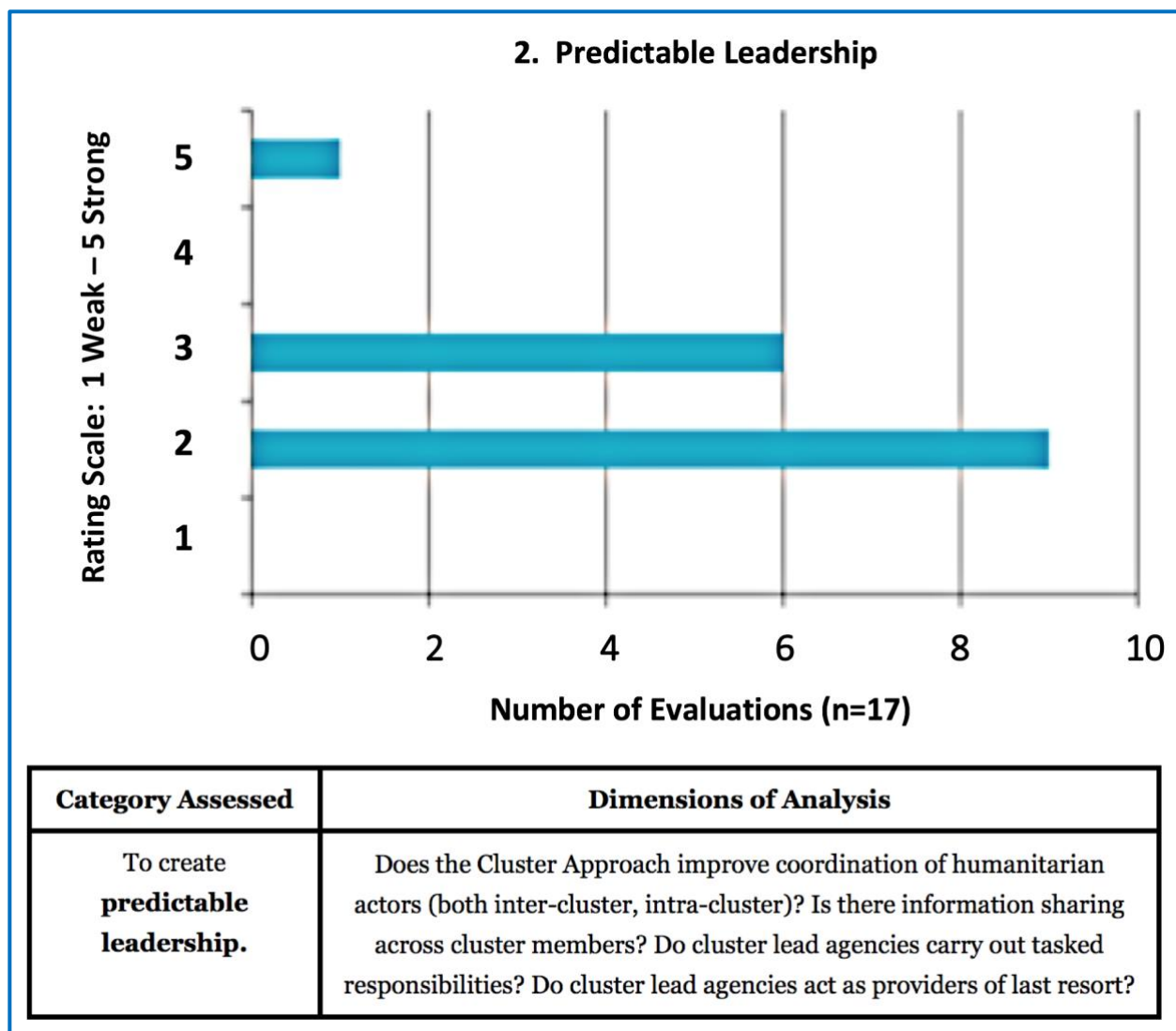


Figure 11: “Has the Cluster Approach created predictable leadership in relief efforts?”

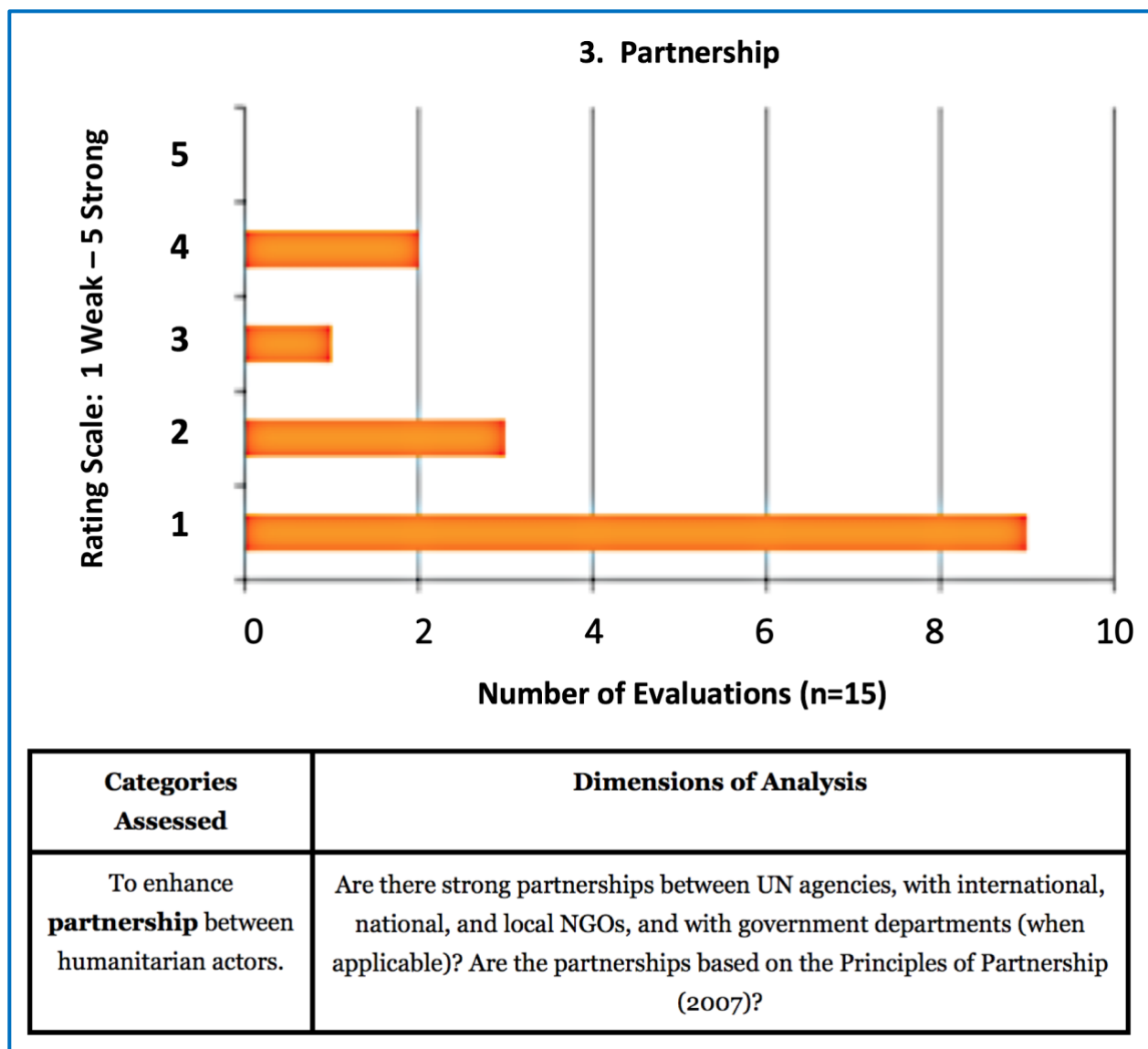


Figure 12: “Has the Cluster Approach enhanced partnership between humanitarian actors?”

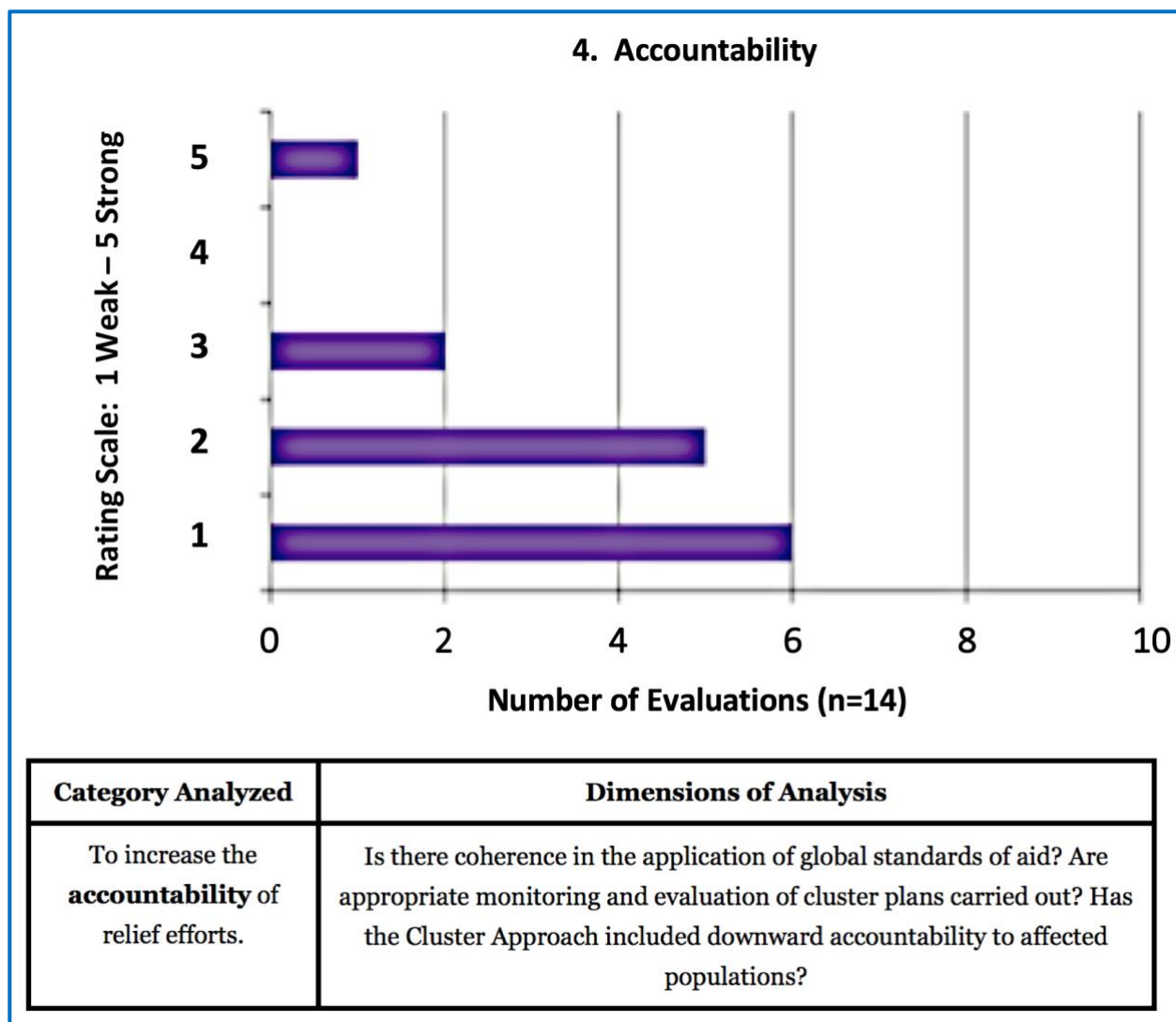


Figure 13: “Has the Cluster Approach increased the accountability of relief efforts?”

Based on the research results, the author’s opinion is that “The Cluster Approach” has indeed improved in overall effectiveness – an encouraging signal for constructive and progressive change in humanitarian response activities. In other words, while not free of criticism, the feedback and opinions from evaluations indicate that “The Cluster Approach” is presently the best structure for coordination of humanitarian efforts.

Figure 14 summarizes the average scoring for the main intended outcomes of “The Cluster Approach” based on Humphries’ research and meta-analysis.

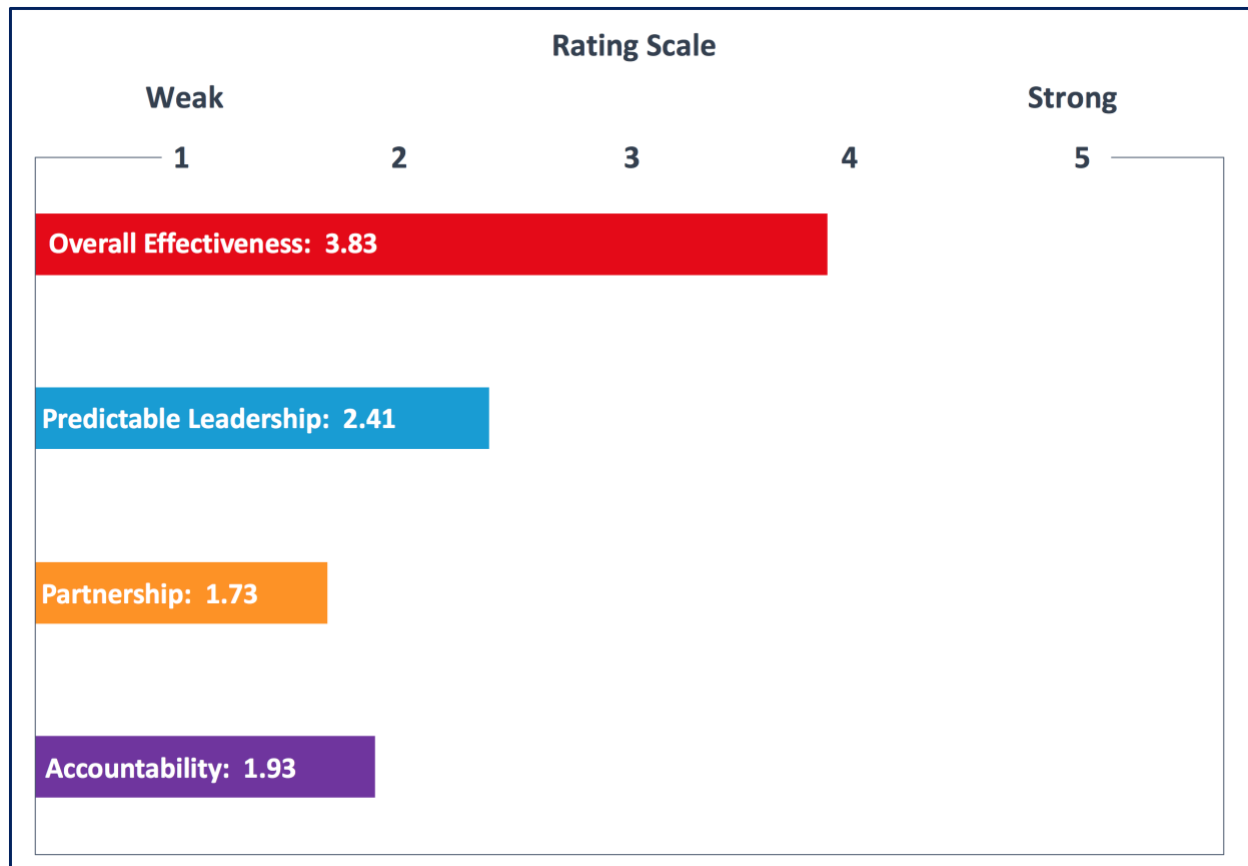


Figure 14: Average Scoring of Meta-Analysis for the IASC Intended Outcomes

However, as shown in Figure 14, despite recognition that “The Cluster Approach” has improved humanitarian activities after the recommendations implemented as a result of the 2005 Humanitarian Response Review [4] and guidance by the IASC, there are still several challenges that require attention. [24] Following are the researcher’s concluding observations with respect to challenges:

1. “First, there are large gaps in predictable leadership. This is primarily due to the high

turnover rates of cluster coordinators, lack of impartiality of cluster lead agencies, and insufficient training and experience of cluster coordinators.

2. Second, there are significant barriers to inclusive partnership in “The Cluster Approach”. Cluster coordination is not only labour intensive, requiring a significant amount of time and resources for effective participation, but it has largely failed to create a sense of NGO ownership and involvement.
3. Third, “The Cluster Approach” does not have sufficient mechanisms in place to enhance accountability to affected populations.” [24] (Note: Sentence fragments have been underlined for emphasis.)

Like previous criticism and observations by others, many challenges stem from problems relative to leadership and the actual authority of the clusters. The lack of directives or mandates, delegated to the lead agencies as central source of guidance and sense of direction and that can help cooperative efforts and accountability, significantly hinders the lead agencies to fully realize meaningful collaboration and partnerships among humanitarian actors.

It is also evident that – as stated by participants of the 2015 SOHS report – the current system has not been “deliberately engineered” (i.e., architected or designed) and a “significant structural change” to develop a “more unified system” with improved “unified lines of accountability” could strengthen humanitarian coordination. The next chapter will explore these concerns and propose alternative perspectives and visualizations for an architected humanitarian system through exploration of systems thinking techniques.

Chapter 4: Alternative viewpoint – A Systems Thinking perspective

The purpose of this chapter is to visualize the architectures of “The Cluster Approach” through systems thinking principles, including analysis and modeling. The exploration will identify a problem statement, guiding principles for the analysis, and derive architectural representations (i.e., models) using three separate but related techniques.

4.1. Problem Statement

Recall from ALNAP 2015 SOHS:

- “At some point it arguably becomes necessary to take a step back from the system that has evolved and consider how it might look and function differently if it were designed to achieve the best possible humanitarian outcomes.” and
- “Evidence from the SOHS 2015 shows that the solution is not only more money, but rather for the system to reinvent itself.”

Therefore, the fundamental objective of this research is to understand the potential application(s) of systems thinking in the humanitarian domain. For example: What could be possible system architecture representations of the current structure(s) of the humanitarian system with relation to the interaction(s) and coordination mechanisms between groups (e.g., the IASC clusters or sectors), humanitarian actors (e.g., the UN, NGOs, Red Cross/Red Crescent Movement, and others like the IOM), and affected populations – i.e., between stakeholders and beneficiaries – to support humanitarian response efforts?

Additionally, another important objective of researching hypothetical representations of the humanitarian system, as defined by ALNAP (per source [11]), through system architecture

principles is to hopefully offer a coherent set of ideas or a “blueprint” (i.e., visualizations) for the existing system’s structure based on straightforward and flexible modeling techniques. The analysis that follows is a deliberate exercise to better understand the complex social, management, process, policy, and organizational interactions in the humanitarian domain – not necessarily through mathematical formulas but, by exploring through the lens of the architecture of a system.

With those objectives in mind, and before further examination of the humanitarian system domain, first let’s consider and recognize the following – as stated by George E. P. Box – “Essentially, all models are wrong, but some are useful” (p. 424). [25] What this refers to is the fact that models are representations – not the real system. Models, as representations, help depict ideas for clarification or to communicate meaning, but they are still subject to the human construct and judgment (adjudication of worth). As such, there are many different ways in which something can be represented as well as many different tools, means, methods, and techniques that can be used to do so. Therefore, it is particularly important to note that any models developed through this work merely provide simplified, and in many instances abstracted graphical representations to convey approximations of complex reality. The models or representations herein are just but a few examples of the many that could potentially be developed using a number of available tools and practices.

4.2. Guiding System Architecture (SA) Principles

In considering the application of systems thinking to the humanitarian domain it is useful to examine and understand the underlying principles with respect to what makes good system architecture. Consequently, it is important to consider:

- What is system architecture? and
- What is good architecture?

First, let's examine what system architecture is. The system's architecture (i.e., the structure of a system) is what describes the system's interacting elements, activities, or sub-systems – with predicted, unambiguous, and expected behavior/emergence (i.e., predictability) – organized and integrated to form a unified, more complex whole and synchronized to perform the desirable value-related function(s), greater than that of the individual entities, towards an objective or higher purpose.

In the 2016 publication 'System Architecture: Strategy and Product Development for Complex Systems', the authors (Crawley, et al.) – citing J. Reekie and R. McAdam, 'A Software Architecture Primer, Software Architecture Primer' (2006) – describe the system's concepts of purpose, relationships, and holism as follows: "The whole consists of parts; the parts have relationships to each other; when put together, the whole has a designed purpose and fills a need." [26]

Additional examples with respect to purpose, are what D. Nightingale and D. Rhodes – in their book 'Architecting the Future Enterprise' – explain about the system's purpose and relationships between its elements:

- "An enterprise is a whole system that has a purpose, a reason for being" [27] and
- "A system is an organized, purposeful structure that consists of interrelated and interdependent elements (components, entities, factors, members, parts etc.). These elements continually influence one another (directly or indirectly) to maintain their activity and the existence of the system, in order to achieve the goal of the system" [27]

Hence, the system architecture is the representation (e.g., model) that defines the formal description of the system, its structure, its behavior – including those of all its interacting elements

– and how the system, as a whole, performs (or should perform) to ultimately influence how the desired purpose is achieved. The system’s purpose is to deliver its primary desirable function – this is often linked to the benefit.

So, what is good architecture? Good architecture is multidimensional – that is, capable of addressing the perspectives, objectives, and priorities of many while simultaneously delivering value across a broad spectrum of expectations of those who are judging it or are influenced by it.

Developing good system architecture must inevitably balance among many decisions, alternatives, risks, and uncertainty to satisfy wide ranging criteria and expectations. In doing so, the resulting systems architecture must reflect a skillful balance of all the entities of the system, which also have form and function themselves, their relationships, as well as their structural, behavioral, contextual, spatial, and temporal interfaces – within which they must exist in harmony with each other, both internally and externally. According to Crawley, et al. (2016), “Every system operates as a part of one large system or several larger systems, and each is itself composed of smaller systems. Think holistically about all of these relationships, and develop architectures that are in harmony with the larger, smaller, and peer systems.”[26]

Additionally, it must be recognized that good system architecture is not necessarily free of risks or uncertainty. Actually, every system has risks. Accordingly, developing good system architecture requires assessment (and management) of risks and uncertainty in order to incorporate measures, contingencies, frameworks, and flexibility in the system’s architecture to absorb and mitigate risks and uncertainty, should they arise. Moreover, good system architecture is also one that doesn’t completely fail (despite undesirable, unforeseen, or unanticipated adverse emergence) and confidently continues to perform – albeit at some level of capacity – to achieve safe outcomes (or operations) should unforeseen risks and uncertainty occur (e.g., through safe emergency procedures or properties, backup plans, etc.).

Furthermore, one must also consider the usefulness of a system (i.e., the value derived from its use). The usefulness of a system depends entirely on a robust systems architecture that satisfies the needs of the beneficiary, not by accident but by design. The value of a system is created by its functional and performance emergence (preferably as predicted or better) – and this value is directly proportional to a thorough and well-designed architecture. Conversely, obsolescence of a system often (and usually) results in undesirable outcomes (or adverse consequences) and render the system’s utility to stakeholders and beneficiaries worthless. Citing Crawley, et al. (2016): “Do these complex systems meet stakeholder needs and deliver value? Do they integrate easily, evolve flexibly, and operate simply and reliably? Well architected systems do!” [26]

Ultimately, good architecture performs as predicted, satisfies the needs of the stakeholders and beneficiaries, fulfills the desired purpose(s), and thus, creates value.

4.3. Technique #1 – Network modeling as a tool for socio-technical systems: Stakeholders as a system and Stakeholder Value Network (SVN) mapping

Why stakeholders? “Stakeholder relationships are an exchange” [26] and “the set the set of stakeholder exchanges can form a system” [26]. Based on these premises, a Stakeholder Value Network (SVN), also known as a Stakeholder Map, is a form of analysis of stakeholder value and can be very useful in mapping the exchanges, interactions, or transactions of the relationships between stakeholders in the humanitarian domain. In addition, modeling the system as a network (SVN) can also be useful to derive “dependency” or “connectivity” of structural relationships among stakeholders. The latter can be accomplished through a Dependency Structure Matrix (DSM) which is also known as Design Structure Matrix or Dependency System Model (more on this technique in the following section).

Figure 16 is the key for the SVN depicted in Figure 17, the SVN Mapping of the Humanitarian System. Figure 17 identifies the various stakeholders and the interactions (i.e., exchanges) between them as flows (directional arrows). The value flow exchanges (i.e., “the provision of value from one stakeholder to another” [26]) are further categorized by ranking or importance (denoted by line type) and nature of the interaction (denoted by line color). To build the SVN we ask a few questions – for example:

- Who are the stakeholders (including the focal stakeholder or group)?
- Who could satisfy the needs of each stakeholder?
- What are the outputs of each stakeholder?
- To whom are these outputs provided? and
- Are there any other transactions between stakeholders? This can be examined by pairing stakeholders (one pair at a time) and asking: Are there are any other exchanges between them?

While it is essential to think of the network mapping in terms of transactions or exchanges between stakeholders – both, the stakeholders who produce an output to address a need and the stakeholders who benefit from outputs received from others – it is important to clarify that each value flow is unidirectional and does not necessarily imply a return transaction. [26] Thus, it is entirely possible that some stakeholders’ outputs exceed the inputs received and vice versa.

It is also worth noting that SVN representations may not necessarily depict all stakeholders or that some stakeholders may be missing or abstracted. This is usually the case if there’s nothing the stakeholders can provide as an output or receive as an input – in other words, their presence in the SVN representation may be irrelevant and thus not needed for the purpose of the model. [26]

As seen in Figure 17, the focal group in the SVN representation is the “Affected Population”. The rest of the stakeholders depicted consist of the “humanitarian system” actors as considered by the IASC cluster approach and ALNAP (e.g., UN and non-UN agencies, NGOs, Donors, Governments, International Red Cross and Red Crescent Movement, and others) – refer to Ch. 2 and Ch. 3 for more information on the key stakeholders of “The Cluster Approach” and the humanitarian domain community. Based on the number of the outputs produced and inputs received by each entity, it is noteworthy highlighting that the SVN also reveals there are other significant principal groups. In no particular order, the other four important and pivotal entities include the ICRC, Donors (Individual, Public, Private, and Corporate), the ERC, and the Host Nation Government and NGOs. This is no surprise, as humanitarian assistance to affected populations – coordinated by the ERC at the global level – is usually the primary responsibility of the host nation government (that is unless any other actors may have to step in as ‘provider of last resort’). It also makes sense that the ICRC and Donors would also play a major role in the structure of the system due to the major role these play in supporting the humanitarian domain.

4.4. Technique #2 – Visualizing and rethinking interactions and groupings of stakeholders: Dependency Structure Matrix (DSM) of the SVN mapping

A DSM is also a “representation of structure”. The DSM is a network modeling tool to represent the elements comprising a system and their interactions, and thus highlight the system’s architecture (i.e., its designed structure). [28] However, in contrast with the SVN, the DSM representation maps interactions in a matrix view format in a square N rows x N columns matrix, where N refers to the number of system elements. [26], [28] DSM analysis can help group (e.g., cluster, arrange, or sequence) stakeholders based on their relationships and interactions through the connectedness of dependencies (or exchanges) between stakeholders. Like the SVN, not all stakeholders need be represented – and some stakeholders can be abstracted for the sake of relevance or simplicity. In addition, to ‘System Architecture: Strategy and Product Development for Complex Systems’ by Crawley et al. (2016) [26] and ‘Design Structure Matrix Methods and

Applications’ by Eppinger and Browning (2012) [28] more information for in-depth review and guidance on use of DSM models can also be found at ‘DSMweb.org: Tutorials: Overview’ [29].

In their book, Eppinger and Browning outline the following five step approach to architectural modeling and analysis [28] – these are:

1. “Decompose: Break the system down into its constituent elements perhaps through several hierarchical levels.” [28]
2. “Identify: Document the relationships among the system’s elements.” [28]
3. “Analyze: Rearrange the elements and relationships to understand structural patterns and their implications for system behavior.” [28]
4. “Display: Create a useful representation of the DSM model, highlighting features of particular importance or of special interest.” [28]
5. “Improve: Most DSM applications result in not only better understanding of the system but also improvement of the system through actions taken as a result of the DSM analysis and interpretation of its display.” [28]

Figure 15 [28] below depicts the 5 steps outlined by Eppinger and Browning.

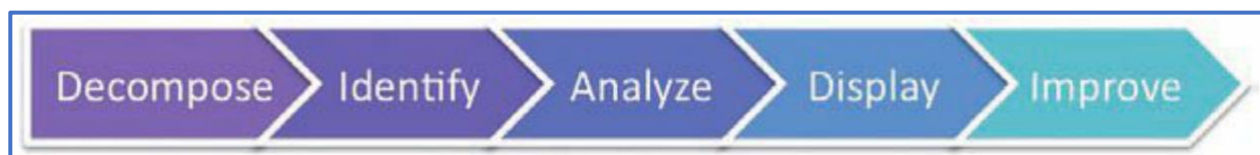


Figure 15: DSM Approach to Architectural Modeling and Analysis

For the purpose of this work, the DSM analysis is based on the stakeholders (and interactions) of the SVN depicted in Figure 17.

Figure 18 depicts the unclustered DSM. The entities on the left side of the matrix are grouped by the respective category and colored as denoted by the SVN node key in Figure 16 – for example all UN Member Agencies are highlighted in bright blue, NGOs are highlighted in bright green, etc. The connections (e.g., interactions) between stakeholders are denoted by an “X” (shaded in light green cells) for “Direct Contact, Support, or Primary/Lead Role” or an “I” (shaded in light yellow cells) for “Indirect Contact, Support, or Secondary Role”.

Figure 19 depicts the potential clusters – before partition analysis – that could be derived based on the probable logical groupings of entities derived from their respective categories (e.g., UN Members, Non-UN Members, Donors, NGOs, etc.). The clusters of the pre-partition analysis are shown in black borders. The degree of connectivity⁶⁹ before partition analysis is approximately 60%.

Figure 20 depicts the results of the initial partition analysis (clustering or grouping based on interactions and relationships). The arrangement of clusters (shown in black borders) was based on the following criteria:

- Matching, pairing, and clustering the lead agencies for “The Cluster Approach” to their respective clusters of responsibility.
- Clustering the Focus Group (i.e., Affected Population) as well as the other pivotal entities (i.e., Host Nation Government, ICRC, ERC, Donors, and NGOs.)
- Identifying other logical groupings (e.g., International Governments, Military, other IASC members).
- Sorting to minimize the number of connections outside new clusters.

⁶⁹ Degree of Connectivity calculated as follows: Connectivity (%) equals the number of colored cells within bordered DSM clusters divided by the number of all the colored cells.

After the partition analysis, the degree of connectivity increased to more than 95%. The results show there are both “overlapping” and “non-overlapping” clusters or groupings. The overlapping clusters make sense because according to “The Cluster Approach”, some agencies lead more than one cluster (e.g., WFP leads the Logistics Cluster, the Emergency Telecommunications Cluster, and the Food Security Cluster).

Figure 21, the second unclustered DSM of the humanitarian system, introduced a new connection type to evaluate if any new patterns would emerge. The new connection is denoted by a “CC” (shaded in light pink cells) for “Collaboration and Coordination on cross-cutting issues”. This new connection between stakeholders is a tactical-level connection for performance in the field. The purpose of its representation in the DSM analysis is to better understand and simulate the structure of interactions between the clusters, especially on areas of expected collaboration due to intersection of similar concerns or needs within their respective areas of activities.

Figure 22 is the partition analysis with the new connection introduced in Figure 21. The analysis sorted and arranged all entities exactly as the partition analysis of Figure 20. The rationale for leaving the sorted arrangements the same was to leave one variable of the analysis fixed while evaluating if and how patterns changed – and what impacts it had on structure, if any.

The partition analysis depicted in Figure 22 revealed the emergence of two larger and more dense overlapping clusters. The new mega-clusters are highlighted in the blue and red dashed squares, respectively. The new clusters overlapped at the “Logistics Cluster” (cell number 33 on the matrix diagonal) and can be divided to consist of the following sub-clusters as seen in the following table (next page):

Blue mega-cluster	Red mega-cluster
Early Recovery	Logistics
Camp Coordination and Camp Management	Food Security
Protection	Nutrition
Shelter	Education
Emergency Telecommunications	Water, Sanitation, and Hygiene
Logistics	Health

The emerging pattern suggests that perhaps – based on recognizing the importance of collaboration and coordination – the humanitarian system could be architected to incorporate these new, larger integrated clusters in order to address the broader set of humanitarian principles and concerns. In addition, the larger and more integrated clusters could significantly leverage capabilities across their respective humanitarian response entities (i.e., the sub-clusters) and stakeholders through interoperability to address common dimensions of aid more effectively through collaboration and coordination on cross cutting issues.

The infographics depicted in Figure 23 (adapted from source [13]) show the proposed modifications to “The Cluster Approach” – the dashed blue and red lines on the right-side infographic correspond to the mega-clusters of the DSM partition analysis. The graphics have been re-arranged the to show the two new mega-clusters according to the partition analysis in Figure 22. In terms of leadership for the mega-clusters, each could be led by a joint council comprised of the respective leaders of the sub-clusters (as currently designated by “The Cluster Approach”) – see below:

- Logistics Cluster for Infrastructure, Communications, and Protection & Security
(Led by Joint Council of UNHCR, WFP, IOM, UNDP, and IFRC)
and
- Logistics Cluster for Health and Wellness
(Led by Joint Council of WHO, WFP, FAO, UNICEF, and Save the Children)

Notionally, each council could jointly decide how to address coordination and collaboration among the constituent sub-clusters and other actors in the humanitarian system. In addition, each joint council could still choose to activate sub-clusters individually (as needed) but do so within a support network that is strengthened by a collaborative environment and partnerships with other sub-clusters.

Figure 24 depicts a variation to the earlier unclustered versions of the DSM. Like Figure 21, this variation also introduced a new connection type to evaluate if any new patterns would emerge. The new connection (i.e., interaction) is denoted by a “P” (shaded in light blue cells) for “Global and In-Country Partnerships and Collaboration”. This connection differs from the “Collaboration and Coordination” connection of Figure 21 in that it primarily addresses high-level partnering at upper leadership levels and includes long-term strategic considerations to bolster the tactical level response efforts of the sub-clusters.

The results of the partition analysis in Figure 25 depict a larger and denser cluster encompassing the two previous blue and red mega-clusters – see the green dashed square. As before, the fixed variable for the analysis was maintaining the sorting and arrangements of all entities exactly as the partition analysis of Figures 20 and 22 while observing the pattern emergence of the new connections. The new pattern reveals more networking and partnering among lead agencies and humanitarian actors responsible for clusters and response activities, respectively. This demonstrates the significance of partnering at the leadership level (for strategic and long-term outlook) which can then propagate to the mega-clusters and sub-clusters in the field (for improved tactical execution and performance). Figure 26 is merely a revision to the infographic depicting the encompassing aspect of the “Partnering and Collaboration” connections around both the blue and red mega-clusters.

In Figure 27, the “Partnering and Collaboration” connectivity approach is taken a step further to

simulate commitments by Donors and NGOs (including NGO consortia and associations) to coordinate their actions with the mega-clusters and sub-clusters – both at the leadership and field levels – as appropriate. The resulting partition analysis of Figure 27 to evaluate extending partnering and collaboration to donors and NGOs is depicted in Figure 28 – denoted by the orange dashed square. The importance of partnering and collaboration among humanitarian actors can be seen in the heavier color filled density of the outlined area. The magenta dashed square outline denotes the overall humanitarian system and all its entities. Figures 29 and 30 depict and compare the overall modifications to the current infographic for “The Cluster Approach.”

The stakeholders’ dependencies and connections (i.e., interactions) of the DSM analyses and simulations originated with the SVN. In addition, the various types of interactions – “Direct”, “Indirect”, “Collaboration and Coordination”, and “Partnering and Collaboration” – were purposely and specifically designated to better understand the emergence of patterns and what these would reveal in terms of structures. The results of the DSM analysis – including the opportunities to improve structures – can then be compared to the results of the meta-analysis conducted by Humphries in her research, ‘Improving Humanitarian Coordination: Common Challenges and Lessons Learned from the Cluster Approach’ (see Ch. 3, Figures 10 through 13). Conceivably, the patterns and structures that emerged from the DSM interactions and partition analyses – both unclustered and clustered – could serve as analogs to the dimensions studied by Humphries and support additional research to potentially pursue remedial measures in the areas that scored low in Humphries’ meta-analysis. For comparison purposes, below are the relationships of the figures in the DSM analyses and the figures of Humphries’ meta-analysis:

- Fig. 18, 19, and 20 → Fig. 10: “Overall effectiveness at improving humanitarian response”
- Fig. 21 and 22 → Fig. 11: “Creating predictable leadership”
- Fig. 24 and 25 → Fig. 12: “Enhancing partnership between humanitarian actors”
- Fig. 27 and 28 → Fig. 13: “Increasing the accountability of relief efforts”

4.5. Technique #3 – Optimization and reconsidering the current organizational structure:

Hierarchic decomposition modeling of the optimized DSM and a revised SVN

Modeling through hierarchic decomposition is another way to think and reason about the structure of systems.

Hierarchy is characteristic of social systems and is defined as a system in which its elements (or levels) are “ranked one above the other because they have more scope, importance, performance, responsibility, or function.” [26] It is also important to note that a system has both form (“what the system is”) and function (“what the system does”) – and that the set of entities (e.g., elements) that constitute the form, also have form and function. [26] The elements of the distributed humanitarian system constitute the form – its overarching function: “humanitarian response and assistance”. For the purposes of the hierarchic decomposition, the analysis focuses on the humanitarian system’s form as whole to identify the system’s entities and their hierarchical structure. The representations of form (and function) of the constituent entities and systems are abstracted for simplicity.

Following the SVN and DSM analyses, the re-designed humanitarian system is hierarchically decomposed as depicted in Figure 31. It adheres to what is conventionally thought of as a manageable number for span of control of seven +/- two. [26]

Figure 32 illustrates the modified SVN based on the DSM final partition analysis and the hierarchic decomposition depicted in Figure 31.

4.6. Summary of the Architecture Analysis of “The Cluster Approach”

The results of the DSM analysis (e.g., clustering, sorting, re-arranging, etc.) suggest that, theoretically, “The Cluster Approach” as envisioned by its implementation after the 2005

Humanitarian Reform can indeed be modeled as a structured (i.e., architected) system – see Figures 18, 19, and 20. Furthermore, the analysis also shows it can improve relationships and interconnectivity between stakeholders – that is, as long as the stakeholders’ connectedness – which is largely driven by behaviors (e.g., voluntary collaboration, coordination, etc.) – exists. The degree of connectivity – based on the assumption that all actors behave (i.e., perform) as expected and that the interactions (e.g., connections or interactions) do exist – improved from a range of approximately 60% to well over 95% when comparing connectedness between stakeholders before and after the 2005 Humanitarian Reform, respectively. However, this is assuming (1) interactions exist and are well-coordinated, (2) there’s good communication and cooperation among actors, and (3) structural system barriers are eliminated or minimized through improved and predictable partnering to tackle strategic level aspects as well as tactical (field) level response efforts. The table below summarizes the degree of connectivity between stakeholders before and after the HRA.

DSM Type	Degree of Connectivity
Unclustered (based on probable relationships before the 2005 HRA)	60%
Clustered (based on partition analysis to model “The Cluster Approach”, after the HRA)	95%

In order to close the feedback loop based on the various results of the DSM analysis, a hierarchical decomposition was developed (Figure 31) and the initial SVN (Figure 17) was revisited to incorporate the outcomes (i.e., proposed modifications) as improvements (Figure 32) to the previous SVN structure consistent with the five-step approach to architectural modeling and analysis as recommended by Eppinger and Browning.

Finally, as stated in Section 4.1 when discussing the nature of models, it is important to emphasize that while all these techniques and analysis methods can be very useful and powerful tools to

visualize couplings and interactions (mutual, bilateral, multilateral, or unilateral) between stakeholders in order to architect and better understand the structures of socio-technical systems, any representations are still very much subjective (and at times speculative) models affected by the human construct. As such, it is strongly encouraged to exercise caution with respect to biases, to avoid and reject narrative that only suits a narrow point of view, to challenge existing models, to be flexible regarding thinking foundations (and at times, replace old assumptions), to examine or consider new evidence (when necessary), and to test the resulting models through feedback cycles for continuous improvement. Only then – through genuine convergence of the right ideas, assumptions, and scrutiny – the accuracy of the models will improve and yield robust and trustworthy results.

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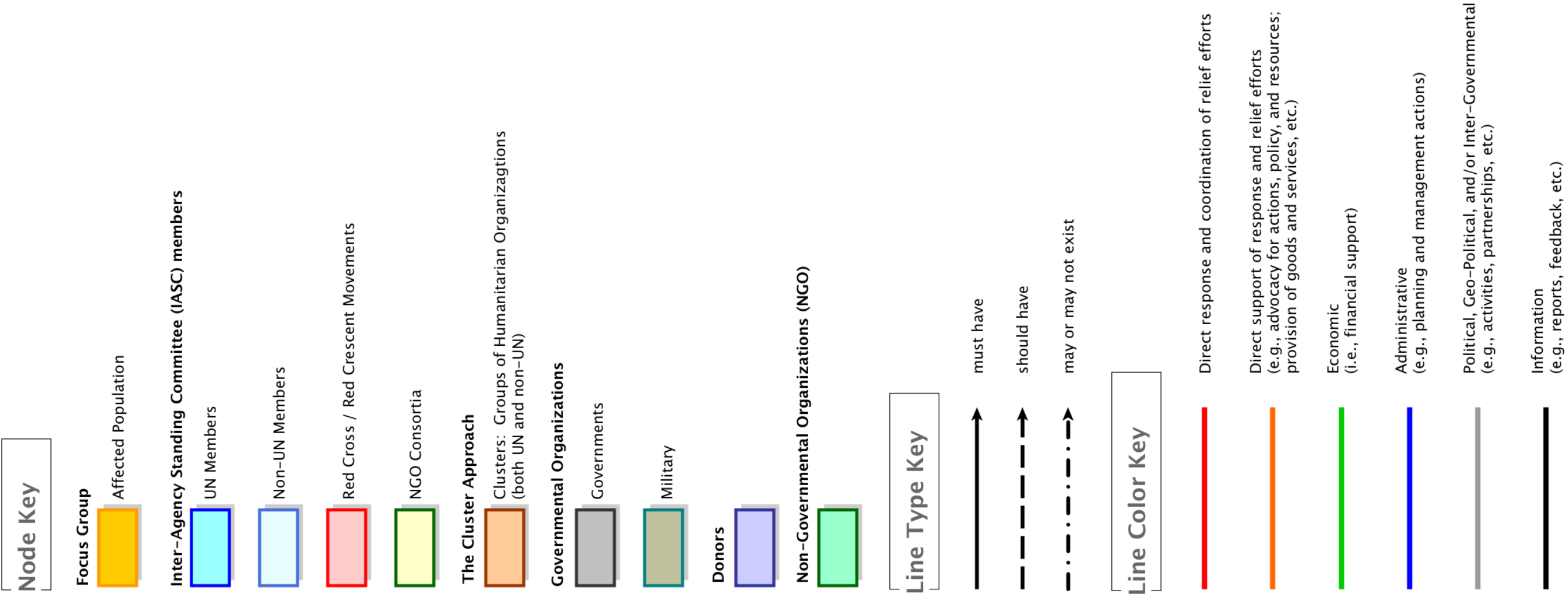


Figure 16: Legend for SVN Mapping of the Humanitarian System

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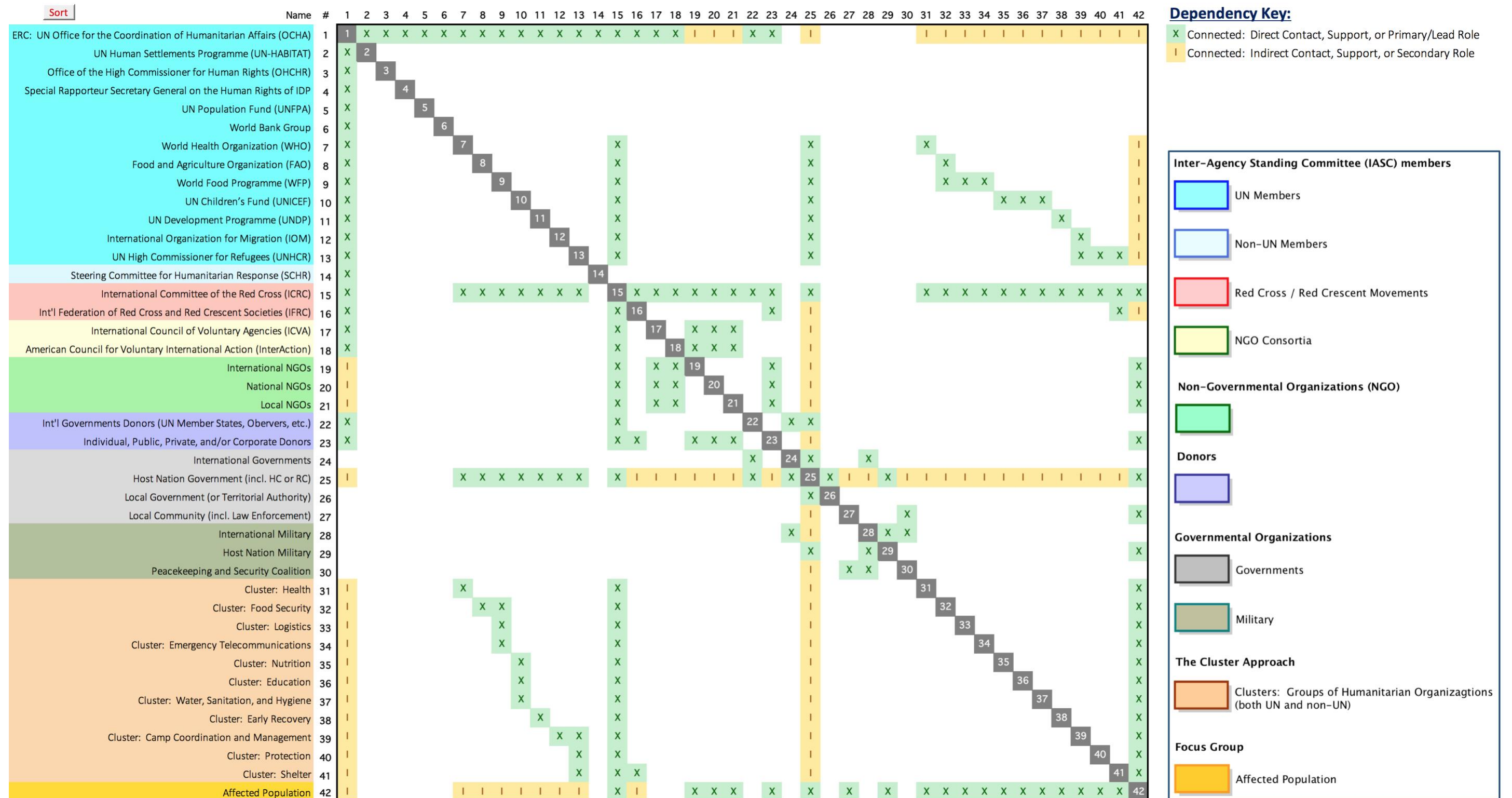
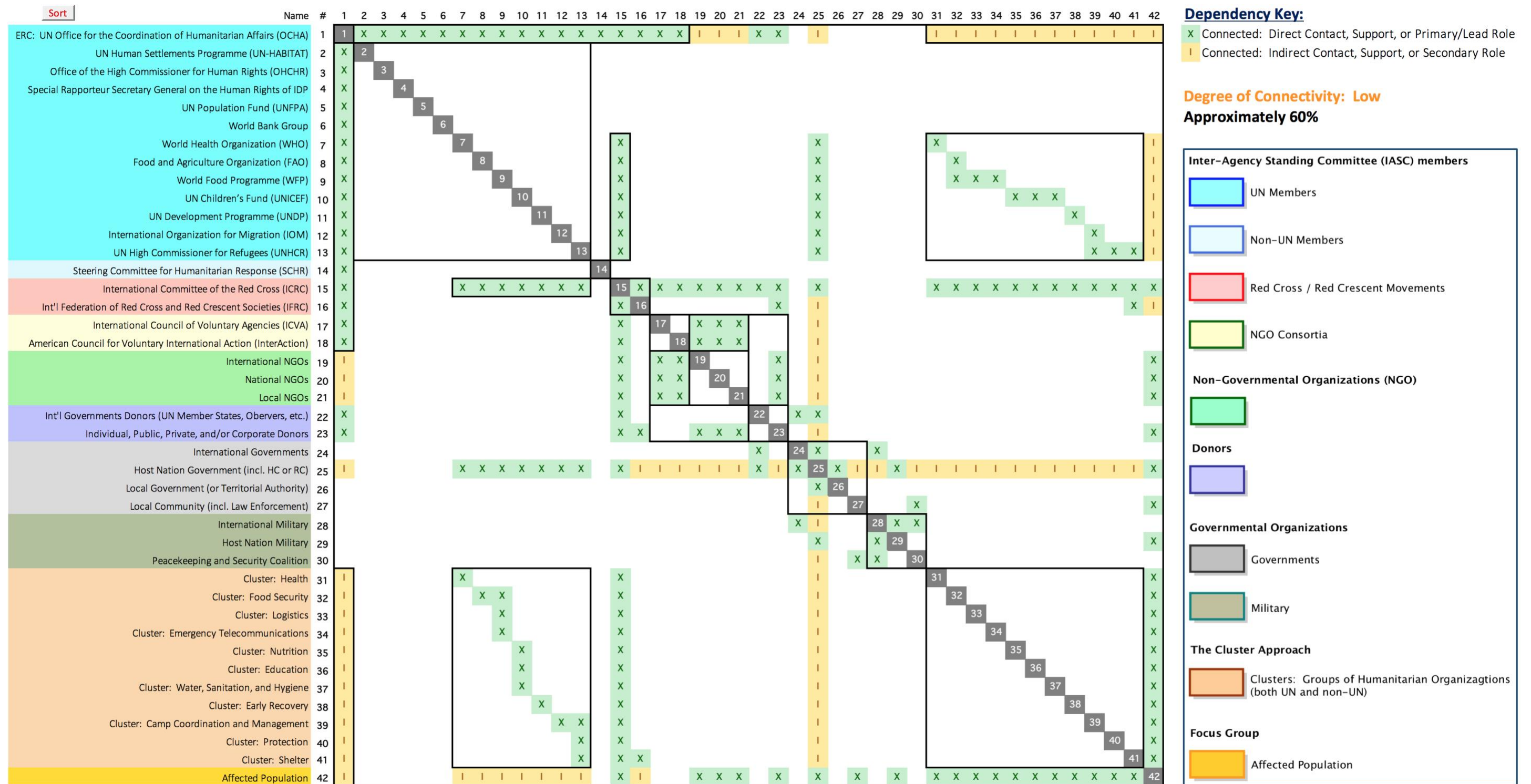


Figure 18: Initial Unclustered DSM for the Humanitarian System Entities and Actors

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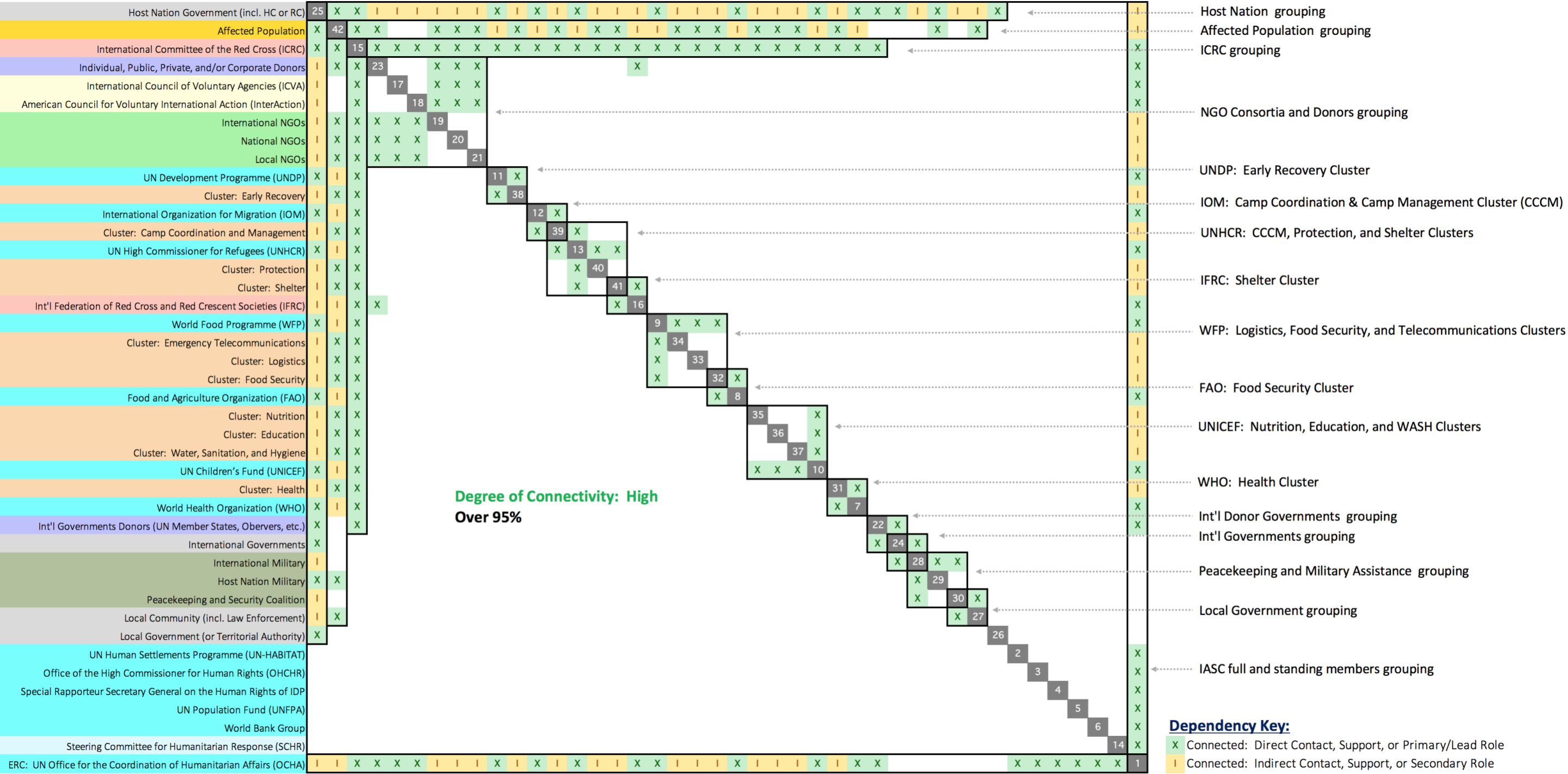


Figure 20: Initial DSM Partition Analysis of the Humanitarian System

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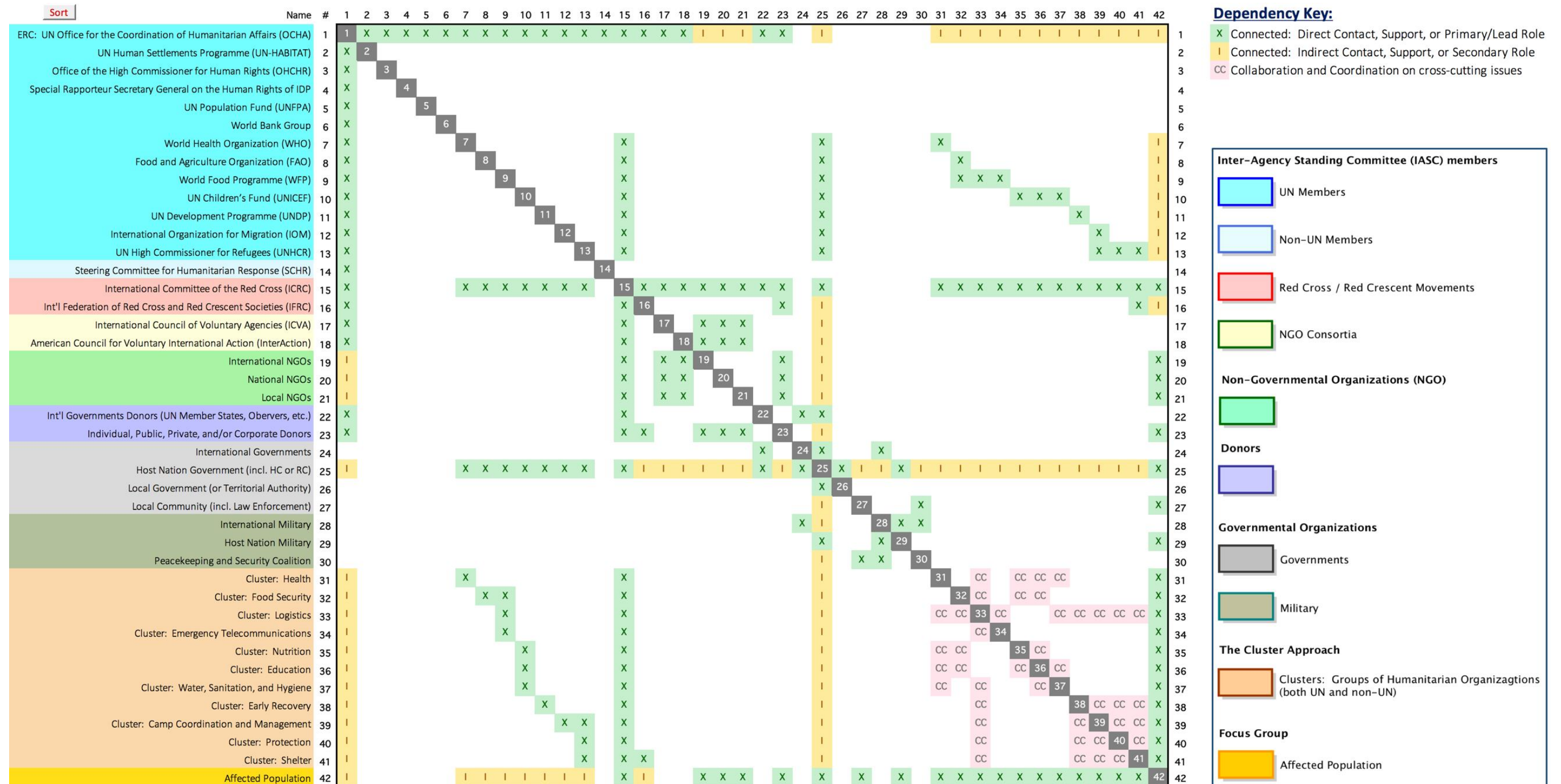
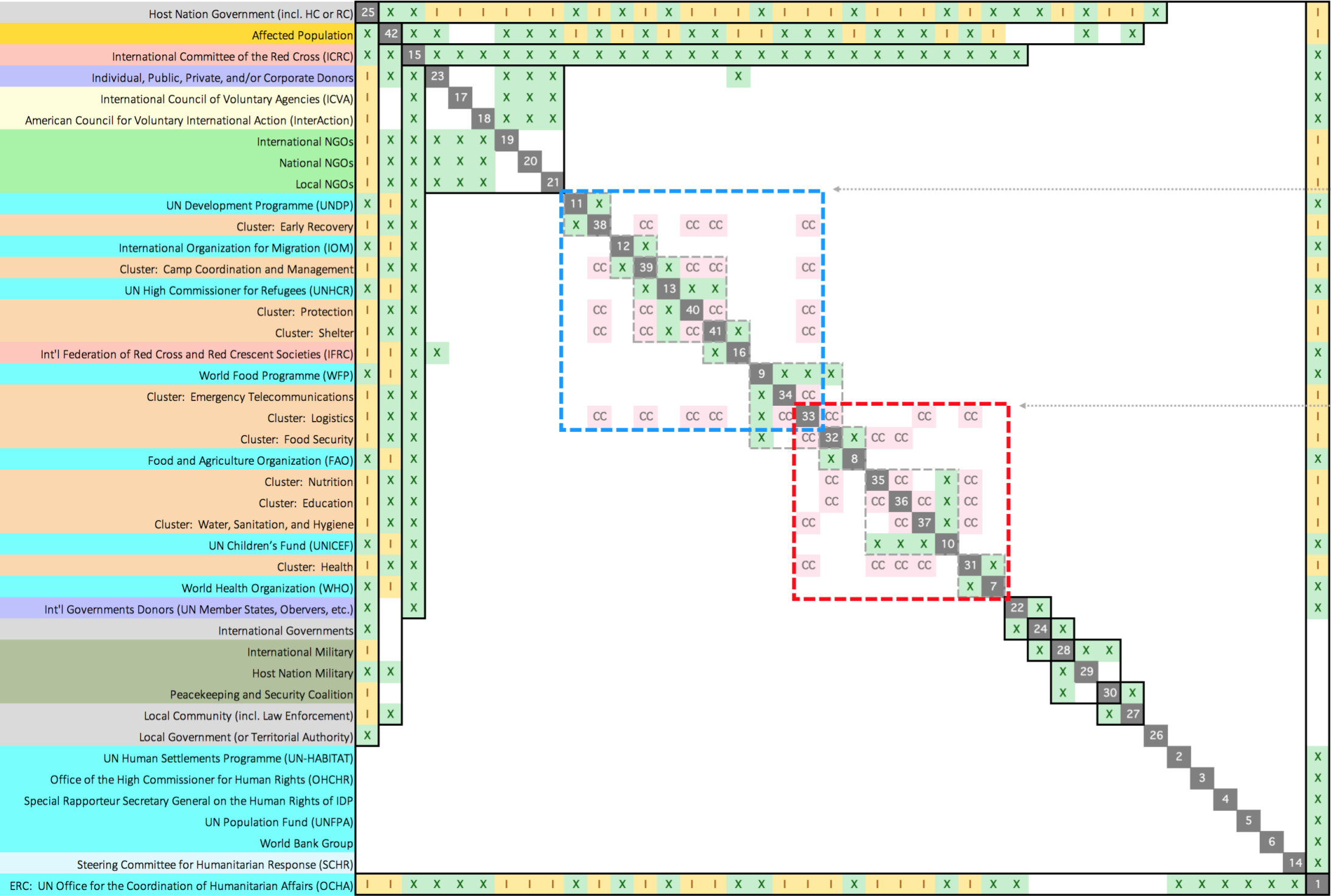


Figure 21: Second Unclustered DSM (with added interactions for “Collaboration and Coordination”)

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Dependency Key:

- X Connected: Direct Contact, Support, or Primary/Lead Role
- I Connected: Indirect Contact, Support, or Secondary Role
- CC Collaboration and Coordination on cross-cutting issues

Logistics cluster for:

- a. Infrastructure,
- b. Communications, and
- c. Protection & Security

Joint council of:
UNHCR, WFP, IOM, UNDP, and IFRC

Logistics cluster for:

- a. Health, and
- b. Wellness

Joint council of:
WHO, WFP, FAO, UNICEF, and Save the Children

New Potential Larger Integrated Clusters:

New integrated clusters based on broader set of concerns and principles that can leverage capabilities across humanitarian response entities through interoperability in order to address common dimensions of aid more effectively through collaboration on cross cutting issues.

The clusters intersect at the Logistics and thus could be categorized as:

- Logistics Cluster for Infrastructure, Communications, and Protection & Security
- Logistics Cluster for Health and Wellness

Figure 22: Second Partition Analysis (with added interactions for “Collaboration and Coordination”)

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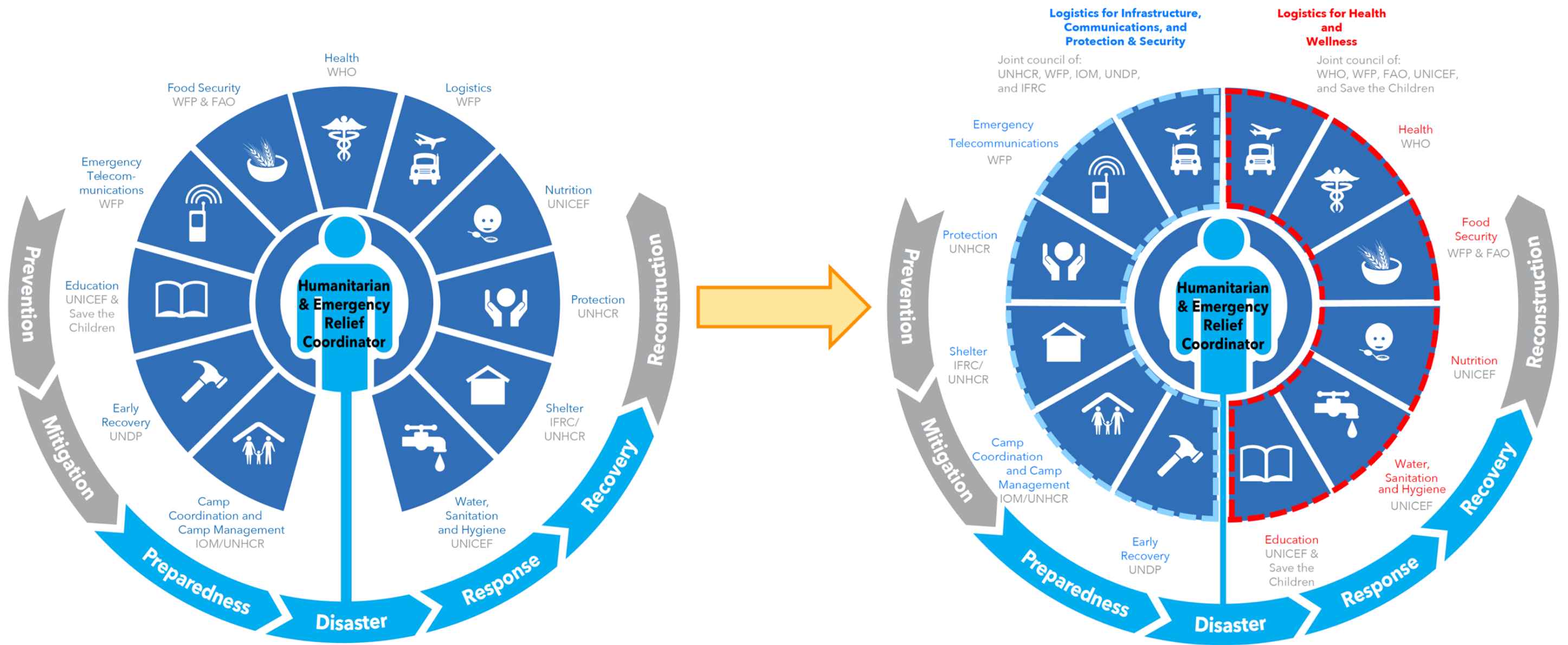
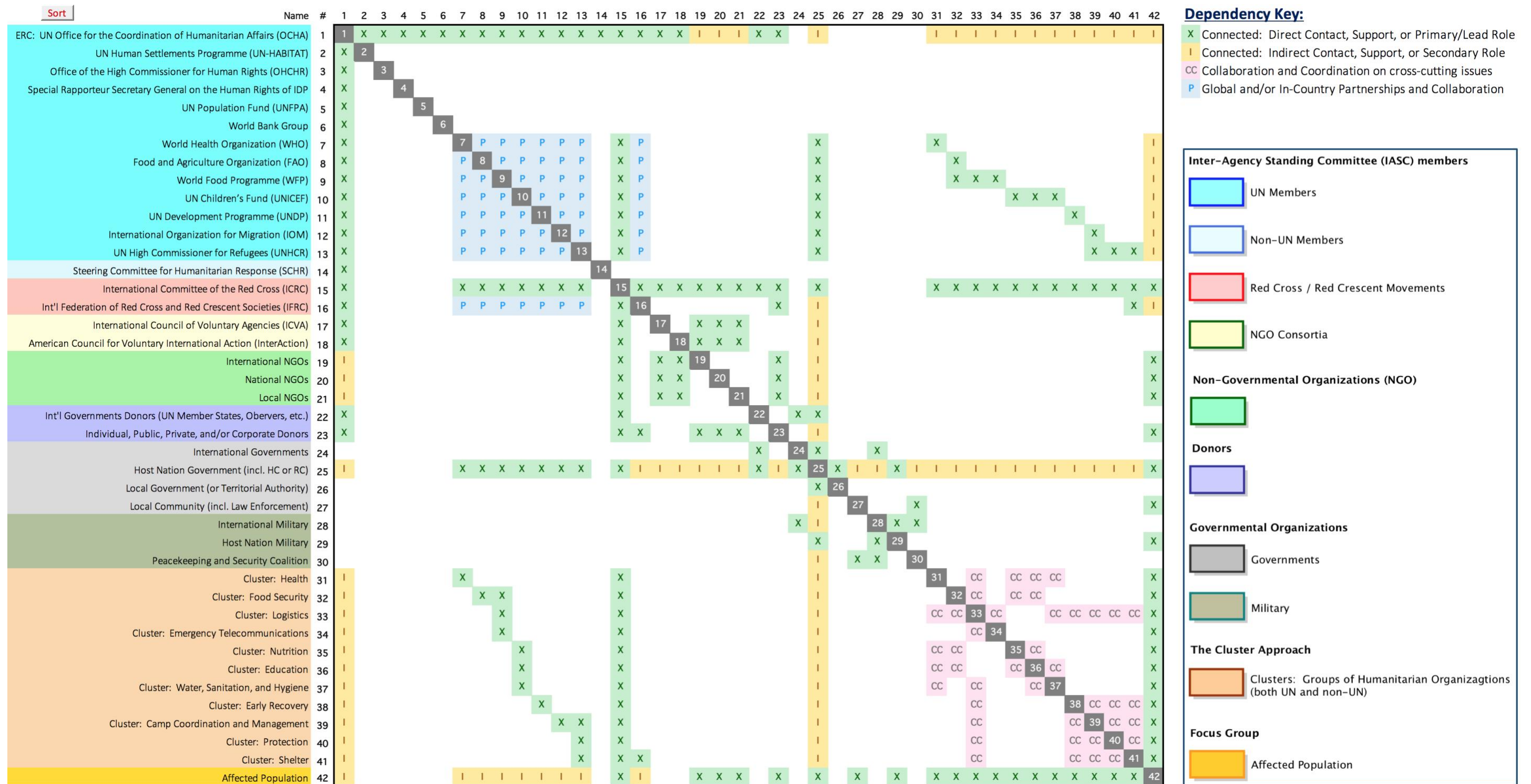


Figure 23: Infographic – proposed modifications to the “The Cluster Approach”

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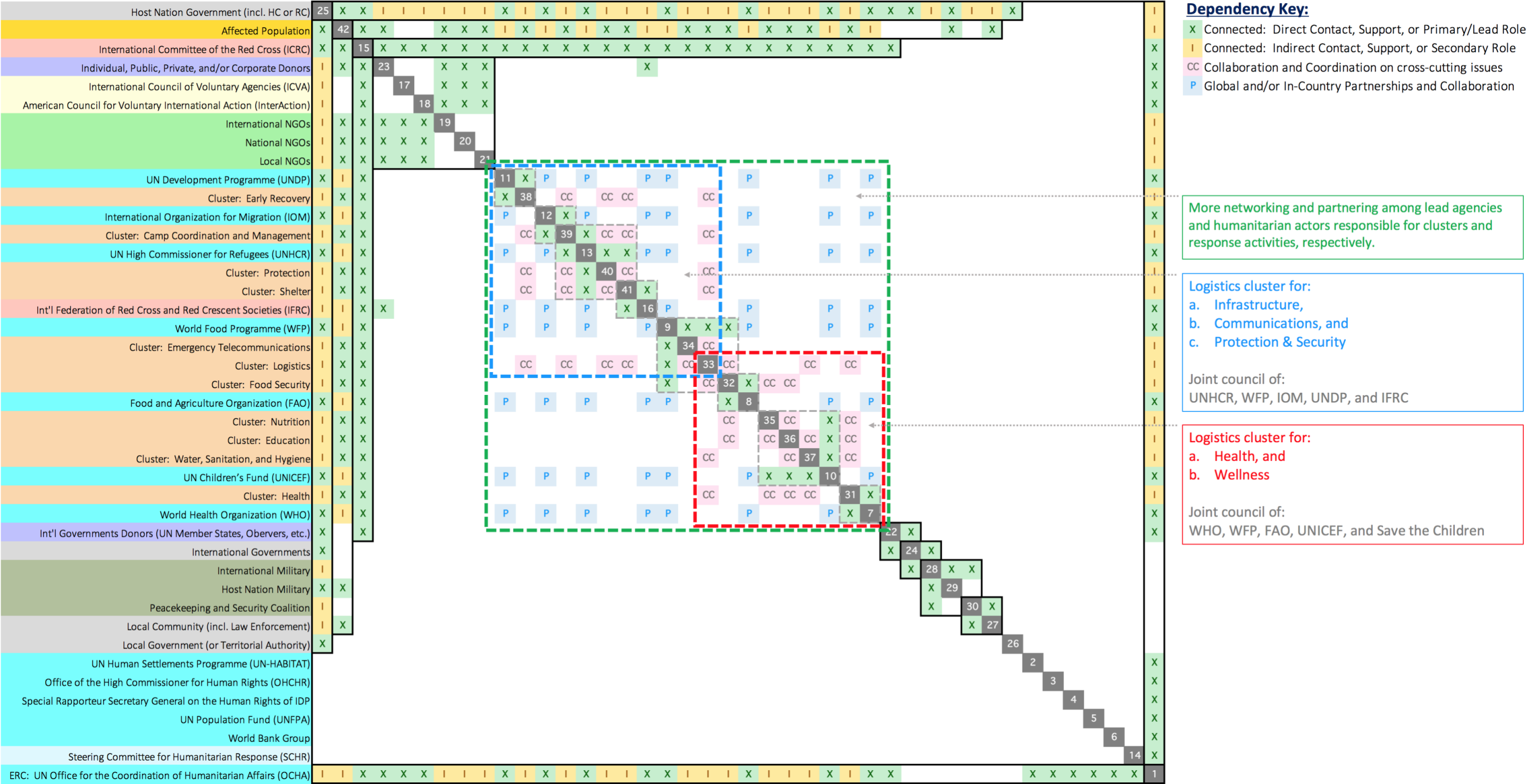


Figure 25: Third Partition Analysis (with added interactions for “Partnerships” as well as “Collaboration and Coordination”)

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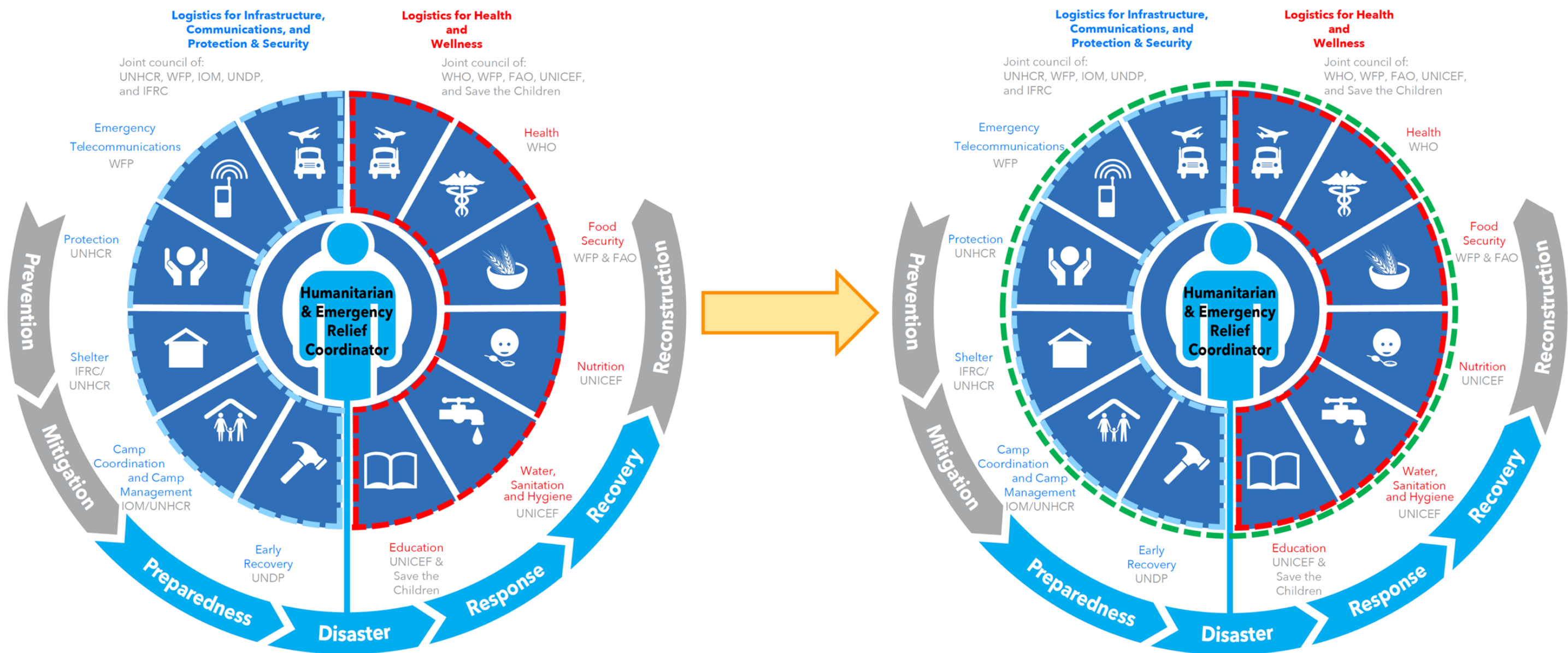
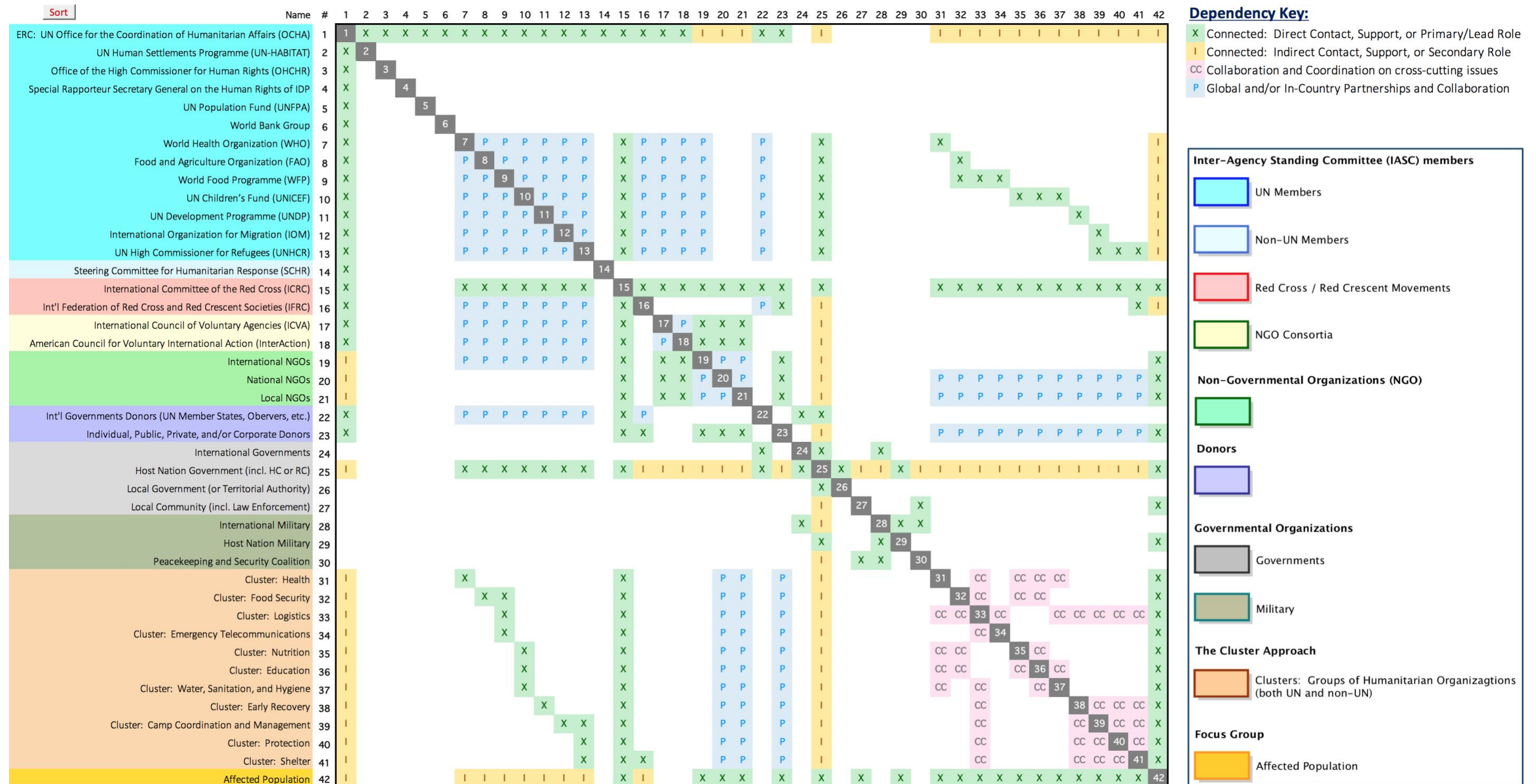


Figure 26: Initial Revision to Infographic – proposed modifications to the “The Cluster Approach”

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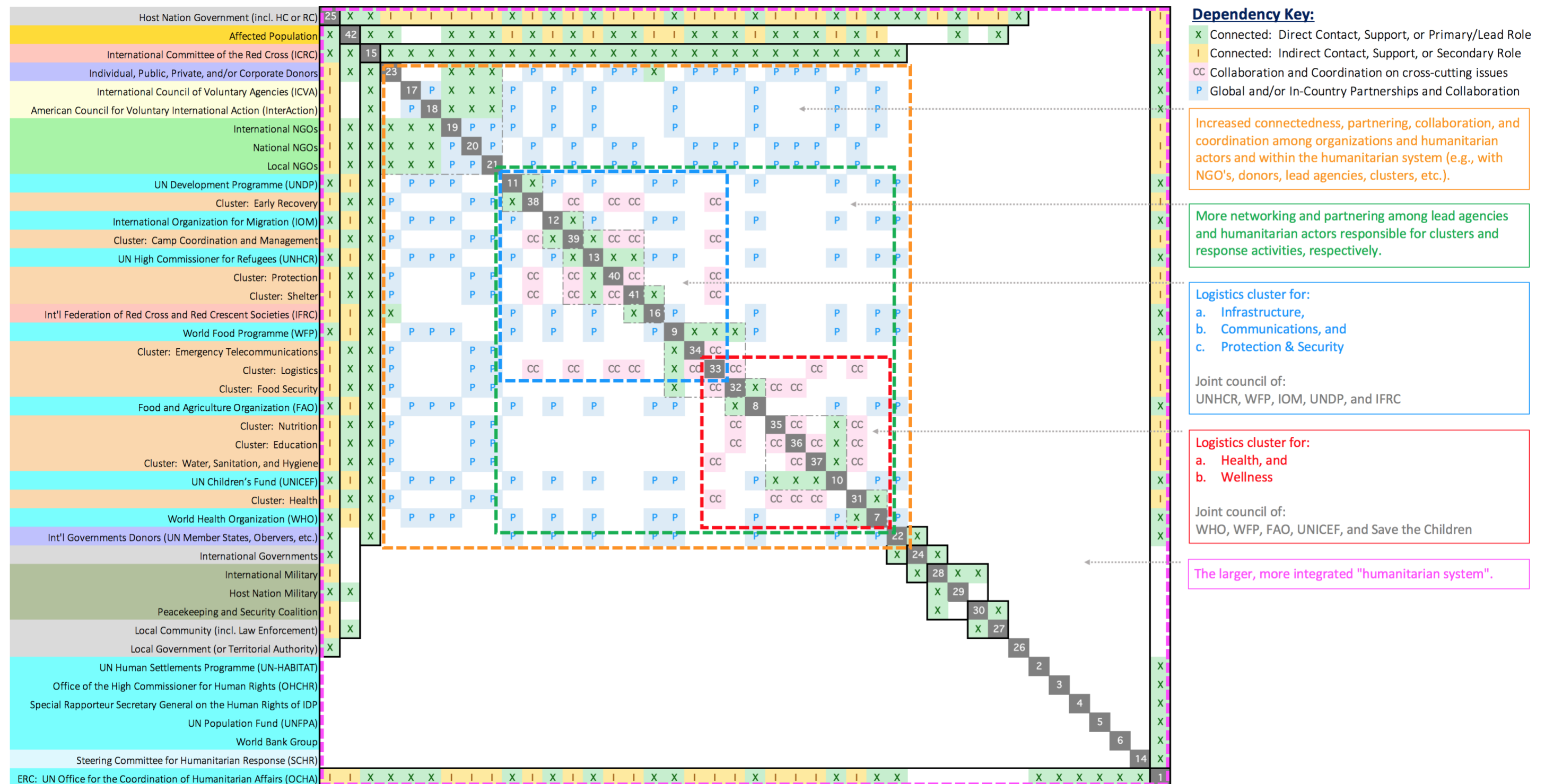


Figure 28: Final Partition Analysis (with more interactions for “Partnerships” as well as “Collaboration and Coordination”)

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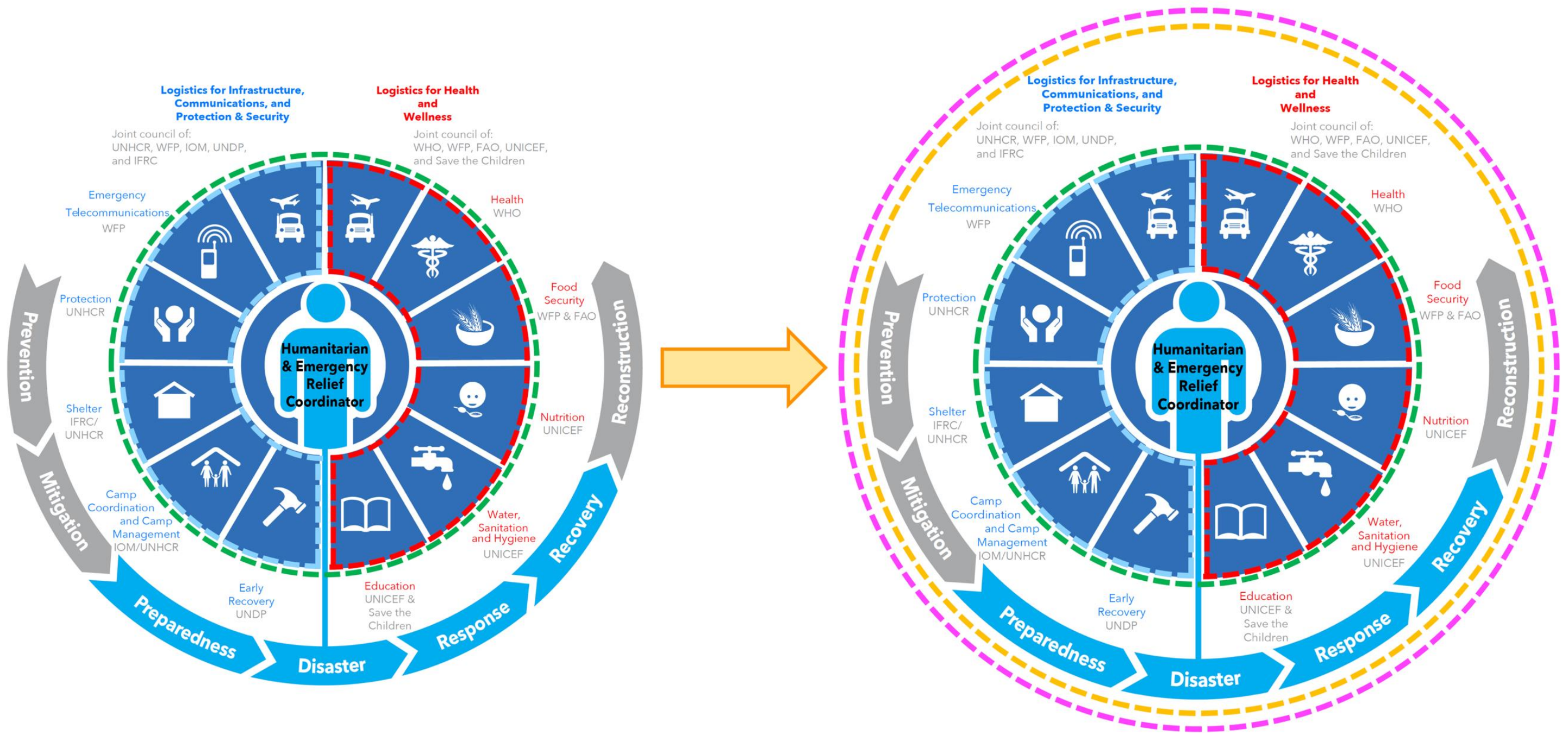


Figure 29: Final Revision to Infographic – proposed modifications to the “The Cluster Approach”

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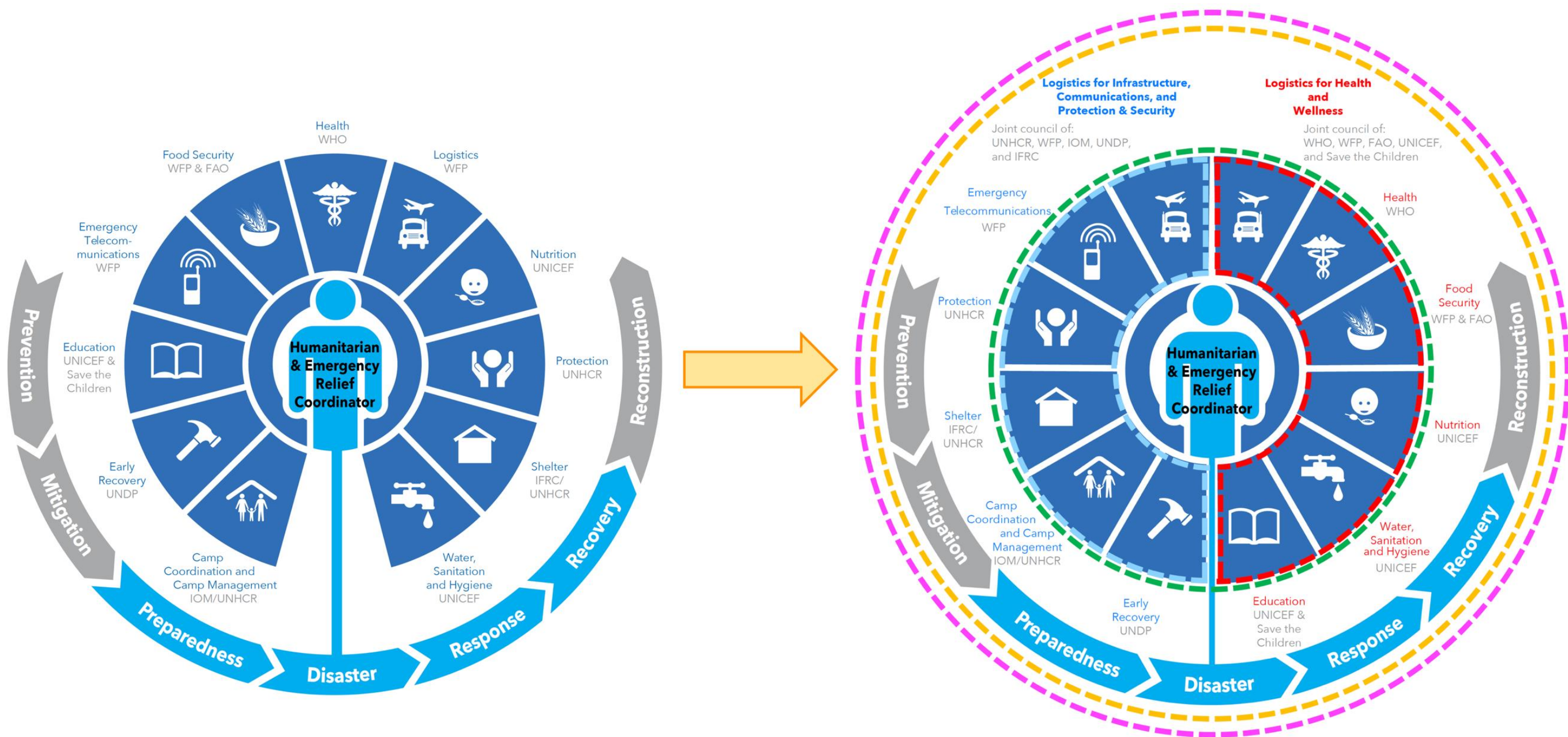


Figure 30: Infographics comparison of “The Cluster Approach” between the current version (left) and the proposed modified version (right).

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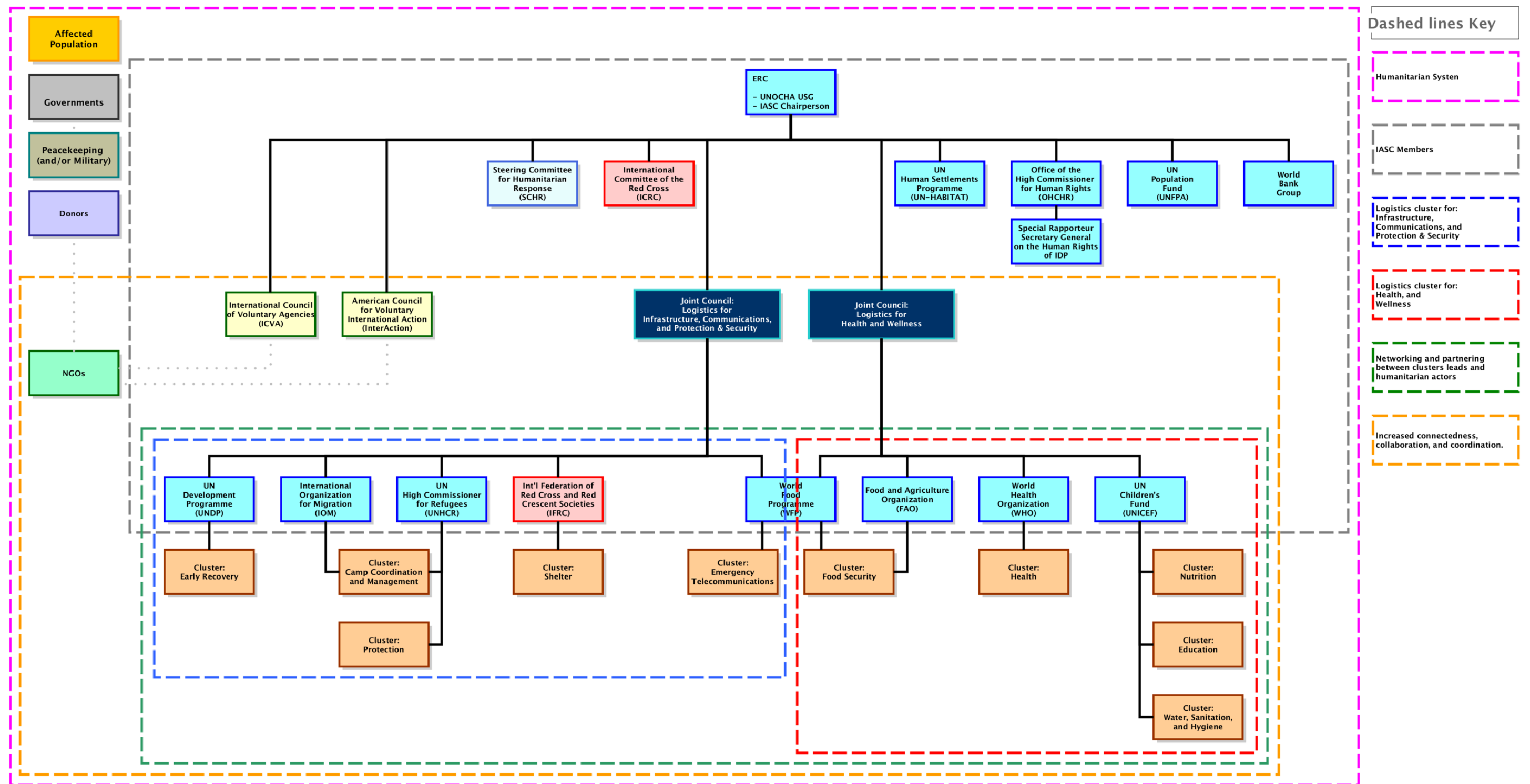


Figure 31: Hierarchic Decomposition of Re-Clustered (i.e., redesigned) Humanitarian System

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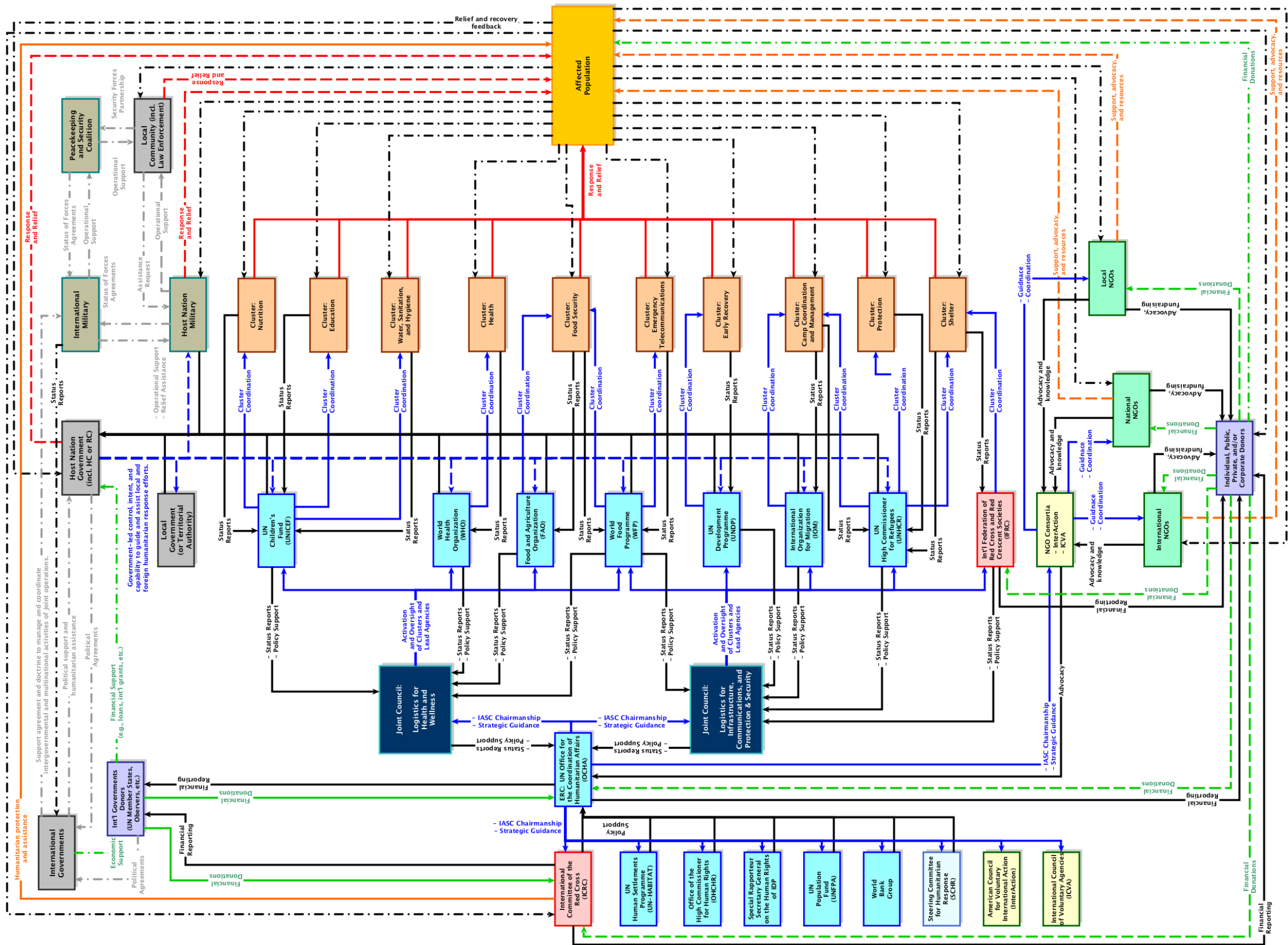


Figure 32: Revised SVN Mapping of the Humanitarian System

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Chapter 5: Insights and final thoughts

5.1. Systems thinking for effective and principled humanitarian response actions

While “The Cluster Approach” is a fundamental structural shift from past practices that has underscored the importance of inter-agency cooperation and has indeed made significant progress in terms of frameworks, relationships, processes and guidance, there is still much that can be improved to reinforce and strengthen communications, partnerships, cooperation, and collaborative coordination towards achieving the principal relief objectives and enhance accountability to affected populations. Principally, the need to engage and structure humanitarian actors and their response activities from a systems thinking perspective. In fact, feedback from the 2015 SOHS suggested the need to redesign the system – refer to Ch. 3 (Sections 3.2 and 3.3) and Ch. 4 (Section 4.1).

Architecting the humanitarian system is not inconsistent or in conflict with the definition attributed to it by ALNAP (refer to Section 3.3). As a matter of personal opinion and as demonstrated in Ch. 4, visualizing the humanitarian system through systems thinking principles can complement that definition. Nevertheless, it is extremely important to acknowledge that, like all big ideas face big challenges, so is the enormous task to, not only architect a humanitarian system but more importantly, actually implement it as intended and needed. Consequently, the system architecture must be congruent with the definition and vice versa, but more importantly it must be a useful and effective tool to enhance humanitarian response efforts.

Additionally, the system’s ability to react properly to networks effects, risks, and uncertainties – both internal and external – is fundamentally important. Ignoring or failing to adequately address these can have unintended, or worse, disastrous consequences. Therefore, it is crucial to consider the system’s resiliency and to understand, anticipate, and address potential system failures (i.e.,

undesirable or unanticipated emergence or failure to achieve desirable emergence) in order to incorporate measures to deal with them and accomplish the minimum threshold of acceptable and safe performance of the system(s). In the case of the humanitarian domain, this includes the safety of stakeholders and beneficiaries (i.e., humanitarian actors).

Further complicating matters is the perception (perhaps true) that the application of systems thinking in the humanitarian domain lacks adequate governance structure – in other words, the question of who is in charge of the system and of managing the performance of the constituent elements. In a research paper, commissioned and published by the Humanitarian Practice Network (HPN)⁷⁰ at ODI about humanitarian response in pastoral areas in the Horn of Africa, the authors (S. Levine et al.) stated: “The problem with working with systems is that they are often not managed: no one is in charge of the system, even if, in theory, governments take responsibility for the systems within their own countries.” [30] This question of governance and centrality of authority is still highly debatable between advocates and unyielding opponents. In a paper titled ‘Harmonizing the Humanitarian Aid Network: Adaptive Change in a Complex System’, the author explores this issue and finds that the large size of the humanitarian system pushes towards centralization. [31] He explains that while UN agencies are the core organizations of the system and provide (in most crises) the basic infrastructure for the relief operation – including flow of critical resources through them such as money, materials, and information – NGOs are the actors that do most of the actual delivery of goods and services, and thus centralization is limited by their interest in remaining independent. [31] So, the debate persists about what is the best type of structure for the humanitarian system - “Should it be centralized, or dispersed and highly connected?” [31] In an interview by Brian W. Simpson⁷¹ with Paul Spiegel, director of the Hopkins Center for Humanitarian Health at the Johns Hopkins Bloomberg School of Public Health, about

⁷⁰ Link to organization site – Source: <https://odihpn.org>

⁷¹ Brian W. Simpson is editor-in-chief of Global Health NOW and editor of Hopkins Bloomberg Public Health Magazine at the Johns Hopkins Bloomberg School of Public Health

reconfiguring humanitarian response to make it more coordinated and effective, Spiegel offered the following on the matter of humanitarian response and control: “It doesn’t need to be centralized at a Geneva or a Washington level, but there needs to be someone on the ground—not even necessarily in the capital level but as close to the affected populations as one can be—who is] going to make decisions. It just can’t be a free-for-all where anyone who wants to help will be able to come in and set up shop. Humanitarian action is a profession now. It’s nice to be idealistic, and it’s important to be idealistic, but this is a profession, and we need to make sure that we provide services as efficiently and effectively as we can, and that means a limited amount of organizations that have the expertise and experience, who are operational.” [32] Therefore, any architected system must necessarily be built on a strong level of trust among stakeholders and with acknowledgement and confidence that it should be managed by someone with decision-making authority, preferably on-site, in order to better coordinate activities among participating actors.

An example of standard management hierarchy is the Incident Command System (ICS). The ICS uses a standard approach for command, control, and coordination of emergency response and establishes a common hierarchy within which responders from multiple agencies can be effective. [2], [33] The ICS is widely applicable and is used to “organize both near-term and long-term field-level operations for a broad spectrum of emergencies, from small to complex incidents, both natural and manmade.” [2] In the U.S. the ICS represents “best practices” learned since its implementation in 1970 in response to improving inter-agency coordination to wildfires in California and Arizona – and currently it is the standard for emergency management across the country. A few of the essential features of ICS include but are not limited to: “Use of Common Terminology”, “Establishment and Transfer of Command”, “Chain of Command and Unity of Command”, “Unified Command”, “Management by Overarching Objectives”, “Modularity in the Organization”, and “Manageable Span of Control” among others. [2]

Another challenge is skepticism or lack of confidence in systems thinking. In 2016, drawing from the research and lessons in the Horn of Africa, Levine stated in his published work, ‘System Failure? Why Humanitarian Assistance Can’t Meet Its Objectives Without Systems Thinking—and Why It Finds It so Hard to Use It’, that: “Systems theorists have perhaps not helped as much as they could, being seen too easily as creating as esoteric jargon that seeks to describe in opaque terms what was already abundantly clear to everyone anyway – but not really offering a way forward that anyone connected with the problem could actually find helpful.” [34] However, Levine remains hopeful. Despite setbacks and failures in the Horn of Africa, Levine found that “practitioners found the use of systems thinking – without any systems jargon or intellectualization – to be a refreshing take on an old problem and they saw that it offered a different way to do something about long standing failures.” [34] Clearly, this is an area where system theorists and experts could offer more in terms of assisting the humanitarian community to architect systems, instruments, and models that are less pedagogical (i.e., strictly academic in nature) and instead focus more on the practical, real-life applications of systems thinking to humanitarian response efforts.

Any crisis response effort is subject to a plethora of unknown variables, risks, and uncertain outcomes. Skeptics without confidence in the benefits of architecting a structured humanitarian system that is based on systems thinking principles could argue that the architecting effort wouldn’t be productive as (1) outcomes (i.e., emergence), (2) commitment by stakeholders, and (3) management (e.g., leadership or governance) would be difficult, if not impossible, to achieve or predict due to the inordinate number of unknowns and lack of trust between stakeholders. Yet, the real value and significance of architecting the humanitarian system is to reliably predict the interdependence and integration of stakeholders so that the “predicted emergent properties” of the system are:

- Predictable leadership and governance
- Improved partnerships

- Joint and mutually agreed-upon objectives (e.g., including common mental models)
- Improved collaboration and coordination
- Improved accountability (among stakeholders and to affected populations)

If (and when) these emergent properties are persistently achieved, then the overall outcome(s) of the response efforts can only but repeatedly improve over time.

No system is perfect – perhaps centralization and hierarchy for decision-making are not needed after all if partnering, collaboration, coordination, and agreements on joint objectives can be achieved through other means in “The Cluster Approach”. However, based on the research these are challenges that remain and must be addressed for the humanitarian system to succeed.

5.2. Emphasis on the focus group, local systems, and local solutions: Harmonizing the humanitarian system architecture, actors, and objectives with contextual specificity

A good example of recognizing the importance of local organic capabilities and systems is the shift by the U.S. Agency for International Development (USAID) to adapt and institutionalize systems thinking and methods.

In 2013, USAID adopted and emphasized a “local solutions” framework to work directly with in-country governments, local civic society groups, and the private sector in terms of policy, operations, and programming efforts. [35] As a result of the initiative, the USAID published a policy document to serve as foundation and guidance to achieve sustainable development. [35] The ‘Local Systems Framework’ (USAID 2014a [36]) sets “policy within the context of the aid effectiveness principles enumerated in the Busan Partnership Agreement⁷² and the accumulated experience on capacity development, sustainability, and contextual specificity.” The framework

⁷² Busan Partnership Agreement – Source:
<http://www.oecd.org/development/effectiveness/busanpartnership.htm>

aims to implant systems thinking principles in the Agency's actions and to focus attention on relevant local systems through the participation of local stakeholders. [35] The framework is based on ten principles for working effectively with in-country stakeholders [35] – see Figure 33 [36].

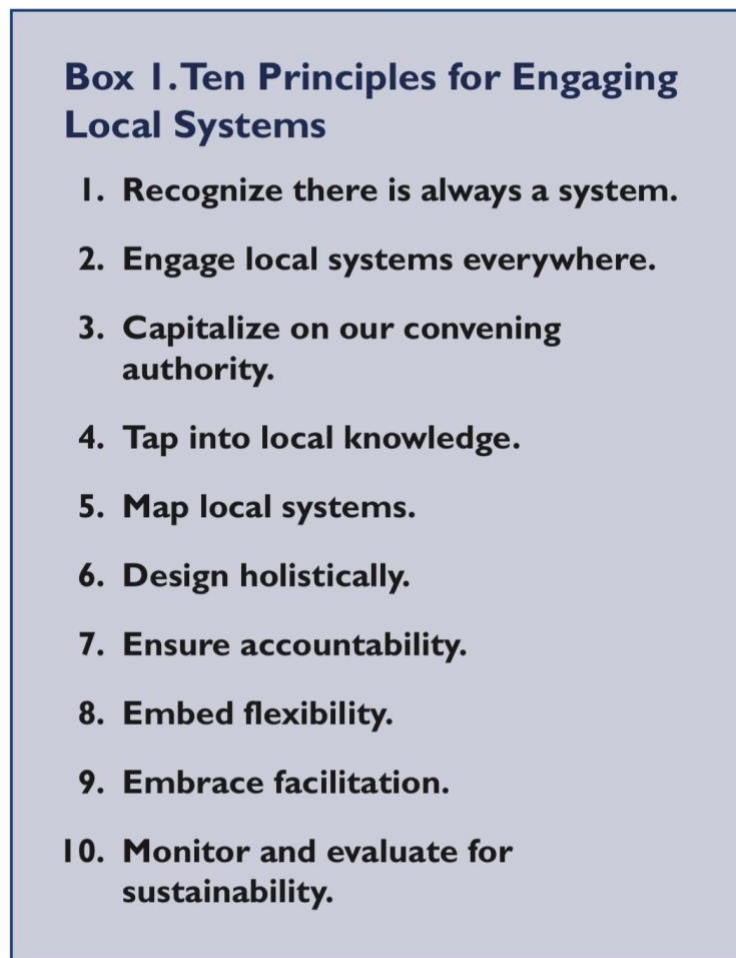


Figure 33: Ten Principles for Engaging Local Systems (USAID 2014a)

A holistic systems thinking perspective – with emphasis and consideration of social, structural, spatial, temporal, and other contextual effects and influences specific to the focus group (i.e., affected population) – is critical to fully recognize the interconnectedness of stakeholders (both external and internal). In addition, the view of the response system as a whole can help address and overcome the challenges that may impair partnerships, collaboration, and coordination

effectiveness among stakeholders. The interrelationships of stakeholders and the repeatable consistency of reliable and predictable interactions between these interconnected and codependent humanitarian actors does not only improve the system's performance but also strengthens response efforts. Therefore, it is fundamental to architect flexible, adaptable, and holistic humanitarian response systems comprised of motivated, engaged, and integrated stakeholders committed to mutually agreed objectives and designed around the needs of the focus group. The negative consequences of ignoring the local stakeholders, solutions, and systems cannot be overstated.

5.3. Recommendations for further research

The objective of this thesis was to examine the humanitarian domain and “The Cluster Approach” framework (i.e., the current “humanitarian system”) through systems thinking principles. Yet, it is abundantly clear that there are limitless other opportunities to expand on the techniques used throughout this work including application of other pertinent analysis and modeling methods. Ideally, extensions of this research could help (1) design critical humanitarian coordination priorities, (2) incorporate architectural flexibility to manage exceptions to crises, and (3) improve situational awareness of actors to achieve the desired performance. Combined, these could significantly help advance more effective and socially meaningful humanitarian response efforts. Below are some thoughts on other potential areas and methods to explore further in future research:

- Network and path analysis to (1) trace and determine the magnitude, significance, and causal exchanges (e.g., connections, interdependencies, etc.) between stakeholders and (2) identify topological and other systemic patterns of critical network relationships, flows, or transactions.
- Examination and meta-analysis of guidance and policy literature, evaluations,

stakeholders' surveys, and other accumulated documented experience by the humanitarian community of practice to support joint development of comprehensive Key Performance Indicators (KPI) and performance management.

- Characterizing and prioritizing needs across all stakeholders (e.g., Kano analysis – see source [37]) to determine how to prioritize and rank stakeholders' inputs and outputs. This could also support determining the value paths of the system's network(s).
- Exploration of Multi-Domain DSM to research mapping of Organization Architecture (i.e., humanitarian actors – e.g., people, organizations, teams, etc.) to Process Architecture (i.e., humanitarian system activities) and Product Architecture (i.e., humanitarian deliverables).
- Modeling breakdown structures for (1) Organizations Breakdown Structures (OBS – e.g., people), (2) Work Breakdown Structures (WBS – e.g., activities), and (3) Product Breakdown Structures (PBS – e.g., deliverables). Tools like “TeamPort©”⁷³ software for theoretical modeling can help with visualization of integrated, products, processes, and organizations to analyze real-world scope, risk, dependence, progress, utilization, and coordination. [38]

5.4. Final thoughts

The examination and analysis of “The Cluster Approach” architectures through systems thinking principles demonstrate that (1) representations to illustrate it as an architected and structured system are indeed possible, (2) visualization(s) and analyses can help validate and test the framework, and (3) deliberate design of new and flexible variants can help improve understanding about the connectivity of critical interdependencies and interactions. Ultimately, a robust and

⁷³ TeamPort (Copyright © 2014) by Global Project Design, LLC. Link to developer site – Source: <http://www.gpdesign.com/teamportsoftware.html>

tested system architecture can help strengthen the formal and functional relationships of the humanitarian system stakeholders and thus contribute to a more predictable and effective emergence of adequate response and relief efforts.

In 1959, while addressing the Green Bay Packers football team, coach Vince Lombardi is quoted as follows during the first team meeting: “Gentlemen, we are going to relentlessly chase perfection, knowing full well we will not catch it, because nothing is perfect. But we are going to relentlessly chase it, because in the process we will catch excellence. I am not remotely interested in just being good.”⁷⁴ [39]

Similarly, perhaps the best anyone can hope for with respect to an architected humanitarian system is to recognize that while perfection – in its purest sense – may never be achieved, the consistent and determined pursuit of it will lead to excellence. The agreement among humanitarian actors for (1) a coherent architected humanitarian system and (2) models that can help enhance response efforts could be mutually agreed upon objectives to complement and strengthen foundational humanitarian principles.

In closing, the overarching message of this thesis about an architected humanitarian system is the very notion that its effectiveness depends entirely on all interconnected parts being predictably and reliably interdependent on the others to achieve one cohesive imperative:

“Unity of Effort”

That is, to be unified in form, purpose, action, and time to meet the ever-increasing challenges of delivering humanitarian aid — not by accident, but by design.

⁷⁴ First team meeting as Packers coach (1959), reported in Chuck Carlson, ‘Game of My Life: 25 Stories of Packers Football’ (2004), p. 149; Richard Scott, Jay Barker, ‘Legends of Alabama Football’ (2004), p. 78

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