














**Triple HDP Nexus Approach
&
Climate Change Impacts in Yemen**



Part 3

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2025**

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Acknowledgment

I would like to express my heartfelt gratitude to everyone who helped and contributed to the successful completion of this project. My heartfelt gratitude goes to [Dr. Aisha Thawaba](#), [Mrs. Nora Thawaba](#), [Dr. Sarah Al Zubairy](#), and [Dr. Wafaa Al-Madhaji](#) for their significant assistance in supporting me during this project.

Again, I'd like to acknowledge [Dr. Sarah](#) for developing, publishing, and collecting the online questionnaire, as well as [Dr. Wafaa](#) for participating and providing helpful and informed advise. Their devotion, skill, and unflinching support contributed to developing this study.

Finally, I'd like to express my gratitude to the [ADO Organization](#) for selecting me for this humanitarian and environmental effort, which has really expanded my knowledge base. Finally, I'd want to convey my gratitude to everyone who contributed direction, encouragement, and constructive feedback throughout the report's writing process.

List of Acronyms

AI	– Artificial Intelligence
BBC	– British Broadcasting Corporation
BMZ	– Federal Ministry for Economic Cooperation and Development
CBOs	– Community-Based Organizations
CARE	– Cooperative for Assistance and Relief Everywhere
CSOs	– Civil Society Organizations
EPA	– Environmental Protection Authority
ESA	– European Space Agency (Europe)
EU	– European Union
EWS	– Early Warning Systems
FAO	– Food and Agriculture Organization of the United Nations
FEMA	– US Federal Emergency Management Agency
GCF	– Green Climate Fund
GHG	– Greenhouse Gas
GIS	– Geographic Information Systems
GPM	– Global Precipitation Measurement
HDP	– Humanitarian-Development-Peace
HEC-RAS	– Hydrologic Engineering Center - River Analysis System
HRP	– Humanitarian Response Plan
ICRC	– International Committee of the Red Cross
IDP	– Internally Displaced Person
IDPs	– Internally Displaced Persons
ILO	– International Labour Organization
IOM	– International Organization for Migration
IoT	– Internet of Things
KPIs	– Key Performance Indicators
MAI	– Ministry of Agriculture and Irrigation
M&E	– Monitoring and Evaluation
MEL	– Monitoring, Evaluation, and Learning Systems
MWE	– Ministry of Water and Environment
NAPA	– National Adaptation Program of Action
NASA	– National Aeronautics and Space Administration (United States)
NGOs	– Non-Governmental Organizations

(Cont.)

NWRA	– National Water Resources Authority
OCHA	– United Nations Office for the Coordination of Humanitarian Affairs
OECD-DAC	– Organization for Economic Co-operation and Development - Development Assistance Committee
PDA	– Peace and Development Association
PPPs	– Public-Private Partnerships
ROY	– Republic of Yemen
RS	– Remote Sensing
SDGs	– Sustainable Development Goals
ToT	– Training of Trainers
UN	– United Nations
UNDP	– United Nations Development Program
UNEP	– United Nations Environment Program
UNFCCC	– United Nations Framework Convention on Climate Change
UNICEF	– United Nations International Children's Emergency Fund
USAID	– United States Agency for International Development
US or USA	– United States of America
WB	– World Bank
WFP	– World Food Program
WHO	– World Health Organization
WMO	– World Meteorological Organization
WWF	– World Wide Fund for Nature
YCCI	– Yemen Climate Change Initiative
YHF	– Yemen Humanitarian Fund
YNI	– Yemen Nexus Initiative

Executive Summary

Yemen's landscape is dominated by arid and semi-arid conditions, with significant geographical variation across its five ecological zones: coastal plains, temperate highlands, high plateaus, desert interiors, and the islands' archipelago. The country experiences a monsoon-influenced climate, with distinct rainy and dry seasons that vary regionally.

Climate change is compounding these challenges, with increasing extreme weather events such as floods, droughts, and storms exacerbating displacement and environmental degradation. **IDP** camps, in particular, are highly vulnerable, with **45%** of sites at risk of flooding, leading to frequent secondary displacement.

The country has two main rainy seasons: Saif (April-May) and Kharif (July-September), with significant rainfall variations across regions. Recent extreme weather events, such as the July floods, have severely impacted western **governorates** like **Al-Hodeidah**, **Hajjah**, and **Taiz**, displacing thousands and damaging infrastructure.

Yemen lies at the crossroads of **climate change**, **humanitarian** crises, **development** challenges, and **peacebuilding** efforts. Consequently, **Yemen** is confronting one of the world's most acute **humanitarian** crises, with approximately **20.7 million** people in need of assistance and **4.3 million** internally **displaced people (IDPs)** as of **2021**.

With rising temperatures, more frequent droughts, water scarcity, and extreme weather events, the country is facing an accelerating crisis that threatens food security, displaces populations, and exacerbates resource-driven conflict. Addressing these difficulties requires a comprehensive and coordinated strategy that incorporates climate adaptation into **humanitarian**, **development**, and **peacebuilding (HDP) initiatives**, often known as the Nexus method.

While **humanitarian** aid remains the dominant focus for many organizations, followed closely by **development** and **peacebuilding** efforts, weak coordination across these

sectors limits the effectiveness of long-term resilience-building initiatives. **Climate change** is recognized as a major driver of displacement and conflict, yet only half of the organizations actively address it through adaptation strategies such as climate-smart agriculture, water management, and disaster risk reduction. Despite the urgent need for climate resilience, only a small fraction of organizations systematically measures the impact of their programs, highlighting a significant gap in monitoring and evaluation efforts. Additionally, financial constraints remain the most significant challenge, with the majority citing financing shortfalls as a barrier to long-term adaptation and resilience-building.

For the **Nexus approach** to deliver sustainable impact, organizations and policymakers must focus on stronger coordination, innovative funding mechanisms, and local capacity-building. Enhancing cross-sector collaboration through joint coordination platforms and improved data-sharing can increase efficiency and impact. Securing sustainable climate financing requires shifting from short-term emergency relief to multi-year resilience-building initiatives while promoting **public-private partnerships (PPPs)** for climate adaptation investments. Strengthening local adaptation strategies by supporting community-led climate initiatives and training programs will equip local institutions with the tools needed for climate-resilient policies. Furthermore, improving climate data collection and monitoring through **GIS, remote sensing**, and standardized impact assessment frameworks will help measure progress and ensure accountability.

To assess the **Nexus of climate change impacts on water, energy, and food security**, six key governorates have been identified based on their diverse geographical and socio-economic characteristics:

1. **Hadramout** – Faces severe water scarcity and agricultural sustainability challenges.
2. **Marib** – Historically significant for water management, with modern-day water resource vulnerabilities.
3. **Aden** – A coastal urban hub facing risks from sea-level rise, flooding, and freshwater salinization.

4. **Al-Hodeidah** – A major agricultural region affected by rising temperatures and water insecurity.
5. **Hajjah** – Experiences seasonal flooding and landslides, exacerbating humanitarian concerns.
6. **Taiz** – A densely populated conflict-affected area where **climate change** worsens water and food insecurity.

As **Yemen** continues to struggle with both environmental and **humanitarian** crises, **integrated climate adaptation and resilience strategies** are critical to mitigating the worsening impacts on communities and infrastructure.

Preface

This paper is divided into three sections, each addressing an important component of **climate change** and the **Nexus** strategy in **Yemen**. It intends to give a complete overview of the country's environmental concerns while also investigating potential responses that combine water, energy, and food security.

Part One: establishes the groundwork for the study by explaining the **Nexus** idea and its application to **Yemen's** distinct socio-environmental landscape. This section focuses on the theoretical framework and background required to understand how interconnected systems work in addressing resource management concerns.

Part two: examines the effects of **climate change** in six **governorates**: **Hadramout**, **Marib**, **Aden**, **Al-Hodeidah**, **Hajjah**, and **Taiz**. It investigates how **climate change** influences water availability, food production, and energy access in these areas. This section also looks at **Nexus**-based actions that can help to reduce climate risks and increase resilience.

Part three: offers findings from an online questionnaire study of **Yemeni** local groups. This section examines major findings from stakeholders involved in climate adaptation and resource management, providing a localized perspective on the viability and efficacy of **Nexus**-based approaches. This section finishes with major suggestions that outline concrete solutions for improving **climate resilience** and sustainable resource management in **Yemen**.

The present study aims to add to **Yemen's** continuing discourse on **climate resilience** and sustainable development. By combining empirical findings with stakeholder viewpoints, we would like to advise policies and initiatives that solve the country's pressing environmental and **humanitarian** concerns.

We extend our gratitude to all contributors that participate the online questionnaire. Their valuable insights and cooperation have been instrumental in shaping this study.



Part IV

Statistical Analysis



Assessment of Stakeholder Responses: Questionnaire and Interview Analysis

I. Assessing Humanitarian Perspectives

Background

Understanding **humanitarian** stakeholders' viewpoints is critical for improving aid program efficacy and ensuring that **humanitarian** operations are customized for the needs of affected people. **Humanitarian** work takes place in complicated situations, necessitating coordination among a variety of actors, including **NGOs**, **international organizations**, **local governments**, and affected **populations**. By evaluating different views, we can discover gaps, improve coordination, and devise solutions to promote long-term resilience, sustainability, and peace.

Questionnaire Framework: Scope and Purpose

The successful implementation of the **Humanitarian-Development-Peace (HDP) Nexus** paradigm in **Yemen** necessitates a thorough grasp of **humanitarian** stakeholders' perspectives and experiences. As a result, an online questionnaire was developed using the **KOBO** tools and used to conduct interviews with a variety of **humanitarian** stakeholders. The questionnaire form was created to address the need to understand the strategy underlying **humanitarian** operations and initiatives in **Yemen**, specifically. Furthermore, the questionnaire seeks valuable feedback to improve the efficacy of **Nexus** initiatives by concentrating on essential areas such as **humanitarian** assistance, **development**, **peacebuilding**, coordination, and the challenges and opportunities that exist.

Given the growing impact of **climate change** in **Yemen**, this questionnaire will also look into how climate-related difficulties affect **Nexus** programming and how organizations incorporate climate resilience into their **humanitarian, development, and peacebuilding** activities. By identifying gaps, best practices, and areas for improvement, the responses gathered will help to strengthen coordination and generate more sustainable and impactful actions in **Yemen**.

Based on the foregoing considerations, the questionnaire was designed to address the first element of the **humanitarian component**, while the second half addresses the impact of **climate change** on the **Yemeni** environment, as well as aid and solutions (see **Appendix A**).

Limitations: Obstacles and Challenges

Due to great distances, difficulty in travel, and a severe shortage of time, a field survey and face-to-face interviews with **humanitarian** workers were not possible. As a result, this questionnaire was created and made available online to speed up the collecting of primary data on **humanitarian** and climatic issues, which was then analyzed using **MS Excel** software. The extracted preliminary information will provide a clear picture of the **Nexus Humanitarian-Development-Peace (HDP)** approach taken on the ground in regard to **Yemen's** complex circumstances, as well as the natural disasters that occur on a regular basis, causing widespread devastation and suffering, particularly among the displaced people.

Questionnaire Data Analysis & Findings

The online survey received replies from about ten stakeholders representing diverse groups operating in southern **Yemen**. These stakeholders included representatives from the **humanitarian, development, and peacebuilding** sectors, who shared views regarding the region's difficulties, levels of coordination, and intervention effectiveness. The poll sought to examine the level of coordination among various sectors, the viability of ongoing projects, and the extent to which local communities participate in **humanitarian** operations. The findings reveal a wide range of

viewpoints, with various degrees of satisfaction with intersectoral collaboration, resilience-building techniques, and the overall impact of aid operations. The responses provide useful information for future strategies to improve **humanitarian** and **development** activities in **Yemen**.

Questionnaire Content

The questionnaire was divided into two portions, each focusing on crucial components of **Yemen's** **humanitarian**, **development**, and **peacebuilding** (HDP) operations.

Part I: The **Nexus Approach** in **Yemen** emphasized the combination of **humanitarian** assistance, **development** programming, and **peacebuilding** activities. It investigated coordination mechanisms, the problems and opportunities associated with aligning various sectors, and the efficacy of monitoring and evaluation frameworks. Additionally, an open comment section encouraged respondents to submit ideas for refining the **HDP Nexus method**.

Part II: Climate Change Impacts using a **Nexus Approach** in **Yemen** investigated the relationship between **climate change** and **HDP** efforts, emphasizing the consequences on vulnerable groups. It evaluated adaptation options, difficulties to tackling **climate change** within the **HDP** framework, and stakeholder coordination efforts. It, like the first component, includes monitoring and evaluation of climate-focused programs, as well as an open feedback section to solicit proposals for improving climate resilience using the **Nexus** method.

The questionnaire provided an in-depth investigation of **Yemen's** **humanitarian** and **development** scenario, incorporating viewpoints on both crisis response and long-term sustainability, particularly in light of climate-related difficulties (see **Appendix A**).

Participants' Responses to the Questionnaire

11 local organizations responded to the questionnaire. The majority of poll participants work in **humanitarian** relief, **development** and **peacebuilding**. The following paragraph describes the contents of the questionnaire collected from some of **Yemen's** **local organizations**.

1. Key Sector Areas Working in Yemen

The pie chart (**Fig. 1**) depicts the proportion of **HDP (Humanitarian, Development, and Peacebuilding)** activities in **Yemen**, highlighting the distribution of resources across sectors. **Humanitarian** actions make for the greatest portion, **31%**, highlighting the critical need for rapid relief and life-saving initiatives. Development activities follow closely at **31%**, emphasizing the importance of long-term economic and social stability. **Peacebuilding** initiatives account for **27%**, highlighting the importance of promoting regional stability and conflict resolution. Finally, **11%** of activities fall into the "**Others**" category, which could include cross-sector efforts or specialized programs. The reasonably fair distribution of **humanitarian, development, and peacebuilding** initiatives indicates a multifaceted strategy to **Yemen's** crisis, enabling both urgent relief and long-term rehabilitation efforts. However, the slightly smaller share of **peacebuilding** efforts could imply difficulties in conflict resolution and governance changes.

The bar chart (**Fig. 2**) depicts the distribution of organizational operations across **Yemen**, categorizing them as **humanitarian, development, peacebuilding, and others**.

Key Observations:

- **Balanced Distribution of Activities** - Most organizations are involved in a combination of **humanitarian, development, and peacebuilding** operations, demonstrating a multi-sectoral approach to tackling **Yemen's** issue.
- **Prominent Organizations** - The **Peace and Development Association (PDA)** has the most operations, notably in **peacebuilding** and **humanitarian** efforts, indicating a significant emphasis on stability and quick help.

PROPORTION OF HDP ACTIVITIES IN YEMEN

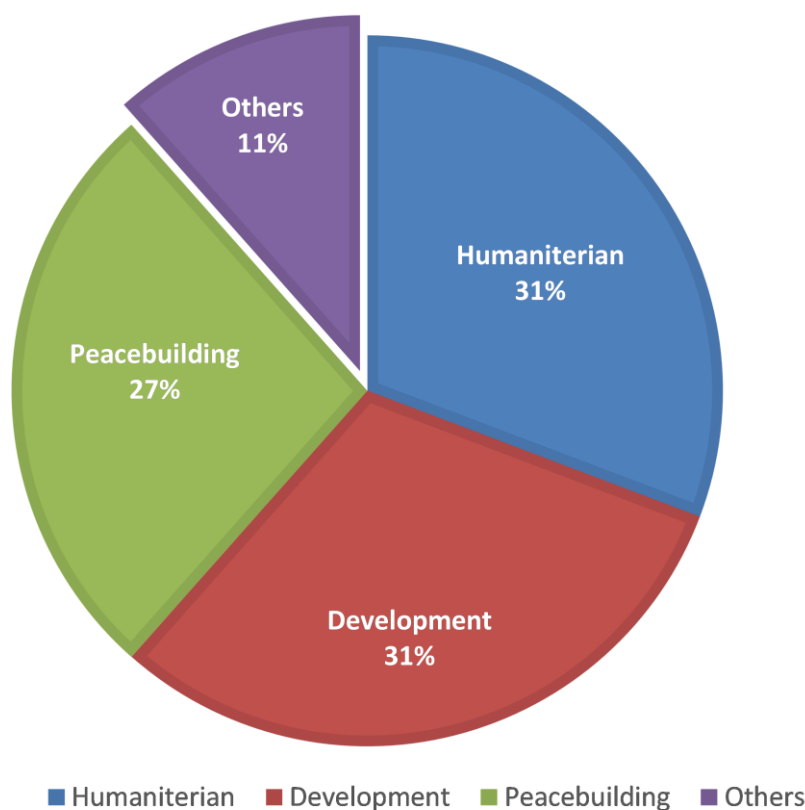


Fig. 1: Statistical pie form depicts the proportion of HDP activities in **Yemen** (Source: **the author**).

- **Humanitarian and Development Focus** - Organizations such as the **Creativity Association for Women's Development**, **Al-Kristalah Women's Development Association**, and **Bard Al-Ataa Humanitarian Development Association** place nearly equal emphasis on **humanitarian** and **development** initiatives, emphasizing the need to integrate relief efforts with long-term growth plans.
- **Variability in Peacebuilding Contributions** - Some groups, such as the **Watan Foundation for Development and Training** and the **Deem Organization for Development**, have a strong emphasis on **peacebuilding**, while others, such as the **Yemeni Women's Union Marib**, focus exclusively on **humanitarian** assistance.

- **Limited presence in the 'Others' category.** A few organizations, such as the **Correction Foundation**, focus only on activities classed as "Others," which may represent specialized interventions that do not fit into the three main categories.

In conclusion, the distribution of organizational functions (Figs. 3 & 4) indicates a comprehensive strategy to resolving Yemen's difficulties, with a significant emphasis on **humanitarian** and **development** efforts. **Peacebuilding** activities, while prevalent, tend to be less prominent in some organizations, indicating difficulty in maintaining long-term stability and conflict resolution. Improving coordination among these sectors may increase the overall impact of aid and **development** activities.

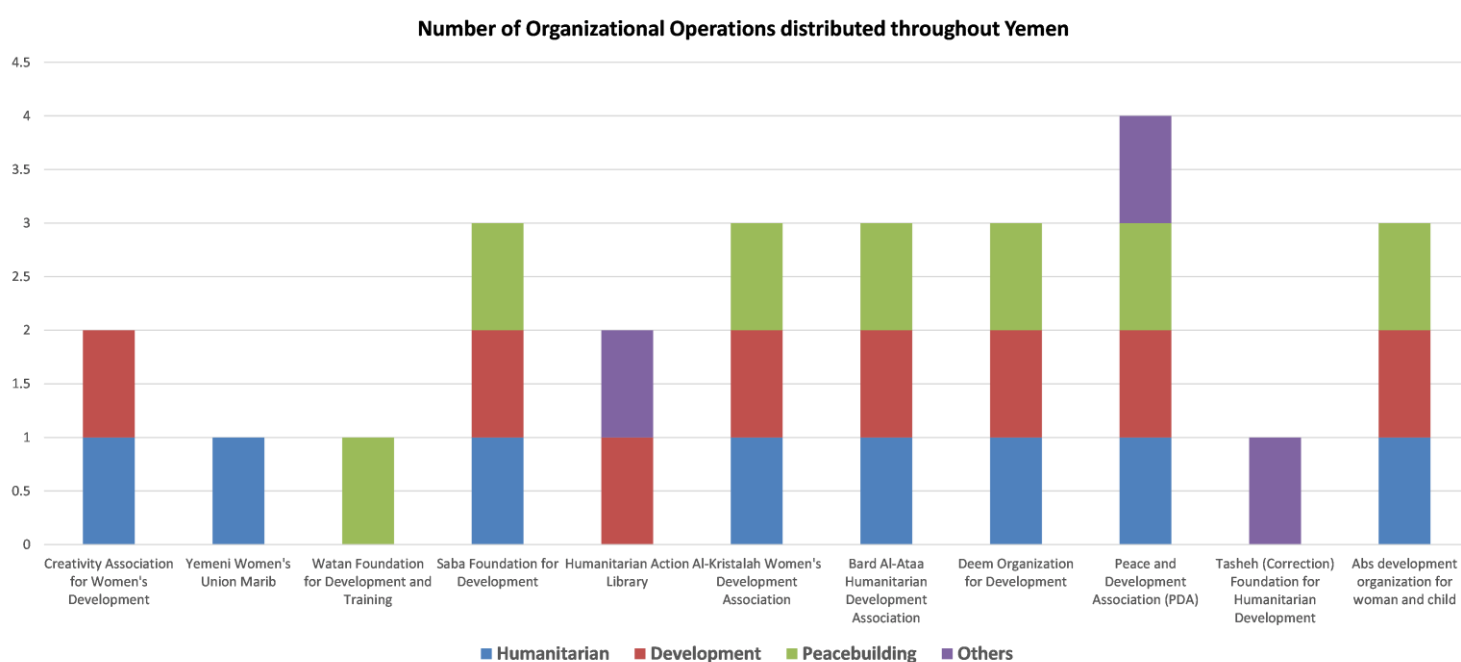


Fig. 2: A bar chart displays various local organizations working in the **Southern** part of **Yemen**. (Source: **the author**).

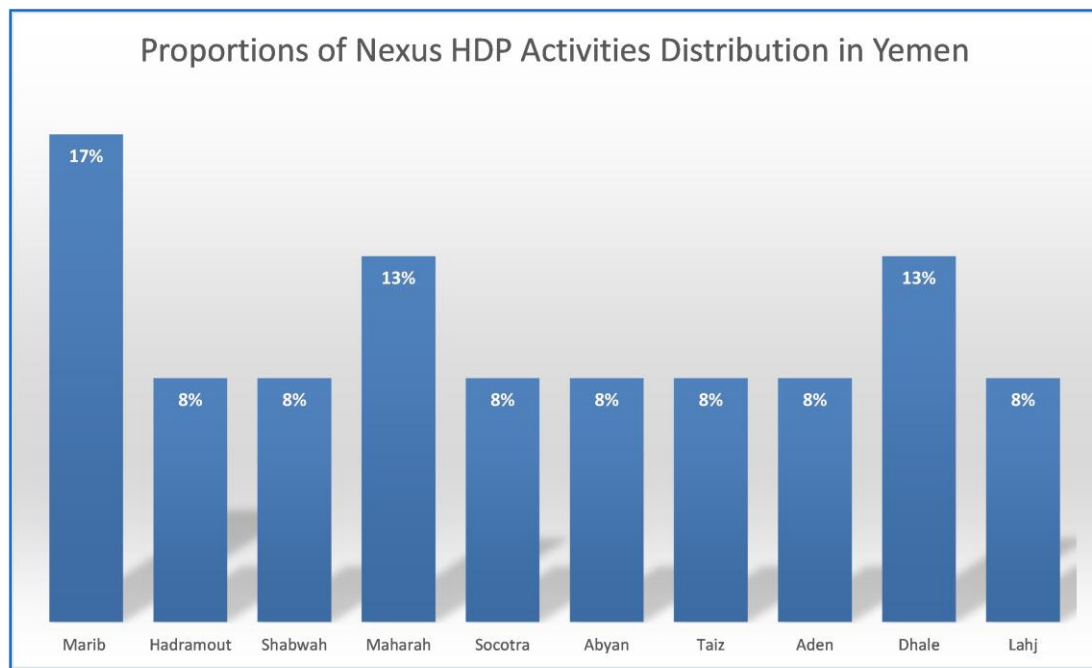


Fig. 3: A bar chart depicts the **Nexus HDP** activity spread throughout **Yemen**.

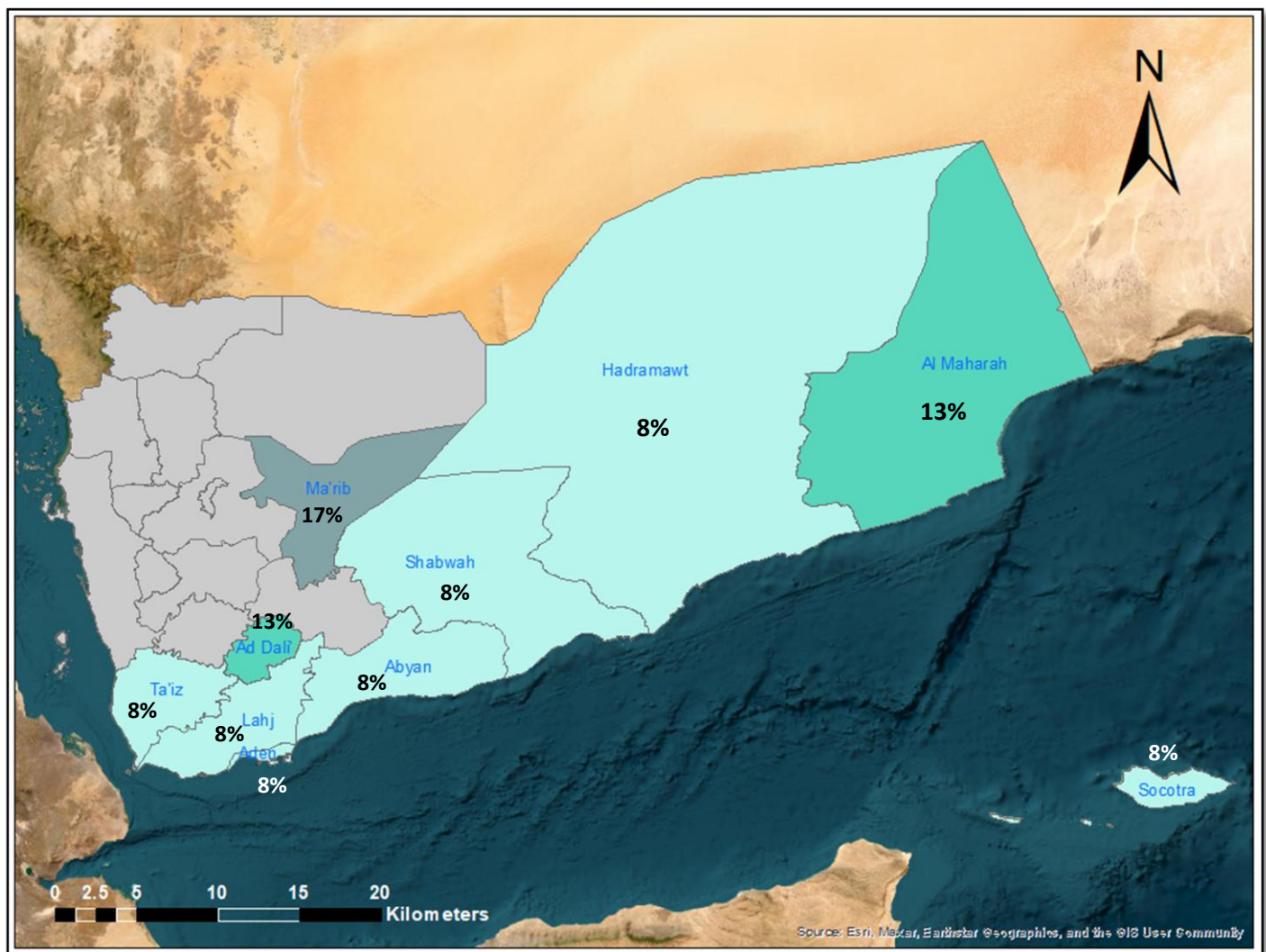


Fig. 4: Geographic distribution of several organizations and their percentage of operations in **Southern Yemen**.
(Source: **the author**).

2. Key Humanitarian Challenges Facing Organizations in Yemen

Yemen has been facing one of the world's most severe **humanitarian** crises, driven by ongoing conflict, economic instability, and environmental challenges. The situation has led to widespread food insecurity, a collapsed healthcare system, mass displacement, and deteriorating infrastructure¹. Addressing these challenges requires a comprehensive approach that not only provides immediate relief but also aligns **humanitarian** interventions with long-term stability and **development** goals². Implementing sustainable programs that enhance community resilience is essential in ensuring lasting impact, particularly in sectors such as agriculture, healthcare, and education³. Additionally, active involvement of local communities in designing and executing **humanitarian** projects fosters relevance, efficiency, and long-term success⁴. By integrating short-term aid with sustainable strategies and community participation, humanitarian efforts in **Yemen** can move beyond crisis response to support long-term recovery and resilience.

The challenges faced by **humanitarian** organizations in **Yemen** can be grouped into four main categories:

1. Financial and Funding Challenges

- **Fund problems**
- **Lack of sustainable funding (mentioned twice)**
- **Building trust with donors**
- **Operational sustainability**

¹ UN OCHA, 2023

² World Bank, 202

³ FAO, 2021

⁴ IFRC, 2022

Many organizations face intermittent or insufficient funding, making it difficult to sustain long-term initiatives. Donor trust is critical, since organizations must demonstrate transparency and accountability to secure long-term financial support.

2. Structural and Administrative Barriers

- **Project and marketing study is not adequate**
- **Weak technical and administrative capacities**
- **Lack of transparency in resource allocation**
- **Bureaucratic barriers**

Organizations encounter internal and external administrative hurdles, including limited technical skills, ineffective planning, and bureaucratic obstacles that slow down aid delivery. Addressing these issues needs capacity-building efforts and enhanced governance structures.

3. Accessibility and Operational Challenges

- **Access to remote areas**
- **Competition with international organizations**
- **Local skills shortage**

Delivering aid to remote and conflict-affected areas is a major challenge due to security concerns, a lack of infrastructure, and logistical constraints. Additionally, international organizations frequently dominate the aid landscape, making it difficult for local **NGOs** to compete for funding and resources. Shortages of skilled local workers further impede effective program implementation.

4. Conflict and Societal Factors

- **Impact of armed conflict**
- **Cultural and societal challenges**

The continuous armed conflict greatly hampers **humanitarian** work, posing security hazards, displacing people, and creating instability. Furthermore, cultural and societal conventions might provide difficulties, especially for organizations working on sensitive themes like women's empowerment and human rights. **Yemen's humanitarian** sector is facing a complex mix of difficulties that necessitate deliberate solutions and increased stakeholder coordination. Addressing financing shortfalls, building local capacity, boosting transparency, and strengthening coordination between local and international groups are all crucial to ensuring an effective and long-term **humanitarian** response. Additionally, understanding conflict dynamics and cultural sensitivities is critical for optimizing impact and promoting long-term stability in **Yemen**.

3. The Level of Cooperation Among the Humanitarian, Development, and Peacebuilding Sectors in Yemen

The level of coordination between the **humanitarian**, **development**, and **peacebuilding** sectors in **Yemen** is mixed (**Fig. 5**). According to the results, **30%** of participants assessed the coordination as very good, showing that efforts are aligned in some areas, allowing for effective intervention and resource allocation. However, an equal **30%** rated the coordination as moderate, indicating that while some collaboration exists, there are still obstacles in properly integrating **humanitarian** help with long-term **development** and **peace** activities. Furthermore, another **30%** assessed coordination as poor, indicating major gaps, which could be due to fragmented activities, a lack of communication, or competing agendas among groups. The remaining **10%** of replies were diverse, which could represent sector-specific disparities or particular issues faced by specific stakeholders. Overall, these findings indicate that, while there are some encouraging examples of cooperation, significant efforts are still required to guarantee a more unified and coordinated approach across all sectors in **Yemen**.

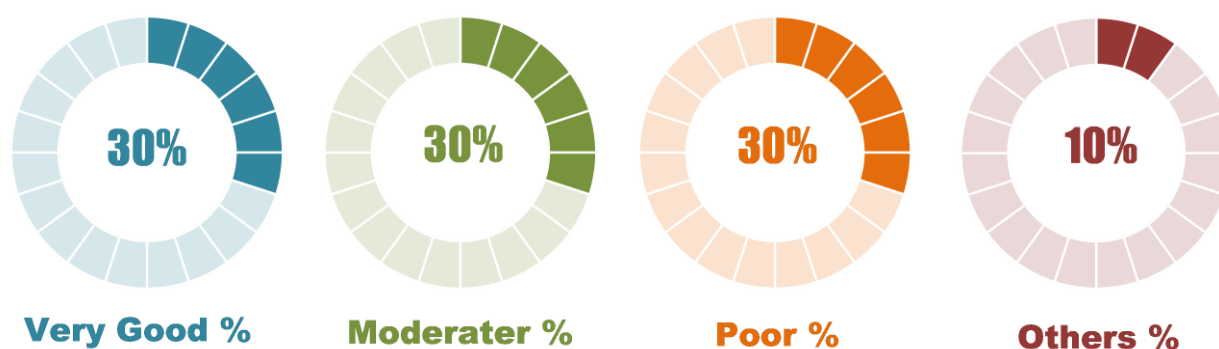


Fig. 5: level of coordination between the humanitarian, development and peacebuilding sectors in Yemen, (Source: the author).

4. Aligning interventions for humanity with long-term development objectives.

Based on questionnaire responses, this section highlights many important problems and approaches to merging humanitarian operations with long-term development goals. These can be divided into four major categories:

1. Lack of Long-Term Development Planning

- Many organizations have **not fully implemented long-term development goals**.
- There is a need to **balance urgent humanitarian aid with sustainable development**.
- **Adapting interventions to the pace of changing needs** is essential but challenging.

Significant Realization: *Organizations should look beyond emergency relief and incorporate sustainability and development frameworks into their plans.*

2. Community-Centered and Needs-Based Approaches

- Interventions must be **based on field assessments and local needs**.
- **Community participation** and the role of local authorities are crucial.

- **Empowering local communities** through training, education, and capacity-building enhances self-reliance.

Significant Realization: *Local engagement ensures that programs are relevant and sustainable, decreasing reliance on external aid.*

3. Financial and Resource Limitations

- There is a need for **sustainable funding models** to ensure long-term impact.
- Organizations like **Bard Al-Ataa** and **Deem** focus on **income-generating projects**, such as the **prison bakery initiative**, to support self-sufficiency.

Significant Realization: *Investing in productive and livelihood projects can help communities become self-sufficient and reduce their need on humanitarian aid.*

4. Collaboration, Monitoring, and Strategic Planning

- **Joint planning with stakeholders** (government, NGOs, private sector) enhances coordination.
- **Monitoring and evaluation mechanisms** ensure interventions are effective.
- **Strategic partnerships** provide expertise, funding, and long-term sustainability.

Significant Realization: *Improving cross-sector collaboration can boost the efficacy of humanitarian and development activities.*

5. Building Resilient and Sustainable Humanitarian Programs in Yemen

The responses can be grouped into three main categories based on the level of sustainability integration:

1. No Sustainability Integration

- Some organizations responded with a direct "**No**" indicating that their programs do not currently focus on resilience and sustainability. This suggests a gap in long-term planning and a potential reliance on short-term relief efforts.

2. Partial Sustainability Efforts

- Some organizations have implemented programs that include sustainability, though not always in a methodical fashion. Examples include income training and family aid programs to improve lives, the installation of a sustainable bakery for inmates, and the construction of a primary school with extension possibilities, all of which represent future development planning.

3. Comprehensive Resilience and Sustainability Approaches

- Several organizations have incorporated sustainability into various areas of their **humanitarian** initiatives, indicating a long-term strategic vision. Examples include sustainable agriculture initiatives that give improved seeds and promote contemporary farming techniques, renewable energy solutions such as solar power installations in distant areas, and vocational training for youth and women to promote economic independence. Furthermore, infrastructure improvement in water, sanitation, and education provides long-term advantages beyond emergency relief efforts, while food security measures help local agricultural productivity and supply linkages. **Peacebuilding** and social integration programs strengthen communities and lay the groundwork for long-term growth.

Commentary on the findings

The responses demonstrate a different approach to resilience and sustainability in **humanitarian** programs. While some groups remain focused on short-term relief, others have made major attempts to incorporate long-term **development** into their operations. However, there is a clear need to increase systematic sustainability initiatives, particularly in businesses that have yet to implement such methods. Strengthening coordination, increasing funding for long-term projects, and using best

practices in sustainable **development** can all assist to improve the overall impact of **humanitarian** aid in **Yemen**.

6. Local Community Participation in Humanitarian Projects for Infrastructure Repair in Yemen.

Local community involvement in the design and execution of humanitarian projects

The good response to local community participation in **humanitarian** infrastructure repair projects in **Yemen** demonstrates that community engagement is increasingly recognized as a critical ingredient in project success. When **local** communities actively participate in the design and implementation of these programs, the projects are more effective, sustainable, and responsive to actual needs. This participation promotes a sense of ownership, builds confidence between organizations and beneficiaries, and ensures that treatments are culturally and contextually appropriate. To optimize impact, continuing collaboration, capacity building, and participatory decision-making processes should be improved, empowering communities to shape their own recovery and growth.

Contributing rebuilds the infrastructure in Yemen

The results show that different organizations in **Yemen** are involved in infrastructure rebuilding to differing degrees. Some groups do not participate in infrastructure projects, while others prioritize them and include them into their **humanitarian** operations. Several groups work on school renovations, healthcare facility upgrades, water and sanitation initiatives, and renewable energy solutions. Furthermore, community participation is stressed as a critical component in achieving sustainability and resilience. Awareness initiatives are also being implemented to promote the long-term upkeep and sustainability of these infrastructural **developments**.

Commentary

Several **humanitarian** groups' commitment to reconstructing important infrastructure in **Yemen** is critical to improving living conditions and promoting long-term **development**. Projects like school restoration, healthcare facility renovation, and clean water efforts not only meet immediate needs, but also improve community resilience and sustainability. The combination of renewable energy and capacity-building efforts boosts these approaches. However, the lack of cooperation from some organizations suggests that greater coordination and budget allocation are required to achieve broader and more sustainable infrastructure **development** throughout **Yemen**.

7. How to connect development projects and existing humanitarian activities?

The answers demonstrate a comprehensive and integrated strategy to **humanitarian** and **development** activities in **Yemen**. To achieve long-term sustainability, organizations prioritize community needs, collaboration with authorities, and specialized project implementation. The initiatives can be organized into important areas:

- **Sustainable Livelihoods and Economic Empowerment** - Training programs in handicrafts, small business management, and vocational skills assist youth and women in achieving economic independence.
- **Renewable Energy and Infrastructure Development** - Solar energy solutions, water network rehabilitation, and education and healthcare facility improvements all help to assure long-term service continuity.
- **Agriculture and Food Security** - Supporting local farmers, organic farming techniques, food banks, and climate-smart agriculture improves food sustainability.
- **Disaster Preparedness and Community Resilience** - Training communities in natural disaster preparedness, resource management, and self-sufficiency improves their ability to resist disasters.

- **Collaboration and Coordination** - Working with **local governments, NGOs, and international organizations** promotes coordinated efforts and maximum impact.

Commentary

The **humanitarian** response in **Yemen** is shifting from short-term aid to long-term resilience and sustainability. Organizations are integrating emergency aid and **development** initiatives to ensure that interventions result in self-sufficiency rather than dependency. The emphasis on capacity building, sustainable infrastructure, and food security reflects a desire to empower people and promote stability. However, improved stakeholder coordination and resource allocation are required to ensure widespread and long-term **development** throughout **Yemen**.

8. Supporting peacebuilding initiatives in Yemen

Humanitarian operations in **Yemen** are increasingly focusing on sustainability and resilience through strategic programs that target long-term impact rather than immediate assistance. The key focus areas include economic empowerment and livelihoods, infrastructural **development**, food security and agriculture, disaster preparedness and resilience, and coordination and strategic partnerships.

In terms of economic empowerment, organizations provide training programs for young people and women in handicrafts, small companies, and vocational education. They also encourage business and resource management to foster self-sufficiency. These measures serve to strengthen local capabilities and promote long-term economic stability.

Humanitarian initiatives to develop infrastructure include the rehabilitation of schools, health facilities, and water networks, all of which are vital to community rebuilding. In addition, renewable energy solutions such as solar-powered schools and healthcare institutions are being implemented to assure long-term, sustainable energy access.

Humanitarian actors help local farmers with food security and agriculture by training them in organic farming and water-efficient irrigation techniques. They are also

building food banks and advocating for climate-smart agriculture methods to promote food security and resilience in the face of **climate change**⁵.

Disaster preparedness initiatives aim to train communities in natural disaster preparedness, improving their ability to respond to calamities. Furthermore, efforts to improve water and sanitation infrastructure seek to promote long-term public health and reduce the impact of future calamities.

Effective coordination and strategic alliances are required to ensure that aid is distributed efficiently and effectively. **Humanitarian organizations** collaborate closely with **local governments**, **non-governmental organizations (NGOs)**, and **international organizations** to create integrated, long-term relief efforts that go beyond short-term aid.

The ongoing violence, economic challenges, and environmental vulnerabilities in **Yemen** shape the prioritization of **humanitarian** efforts. Food security is the top priority due to widespread starvation, with the **WFP** requiring **\$1.5 billion** by **2025**⁶. Economic empowerment is also critical, given high unemployment and poverty, although funding figures remain unclear. Disaster preparedness follows, with the **UN** allocating **\$20 million** for assistance⁷. Infrastructure development is vital for long-term recovery, with the **EU** contributing **€125 million** in aid⁸. Lastly, coordination and strategic partnerships receive less attention, with **OCHA** stressing the need for increased funding⁹.

While progress is being made, obstacles such as limited finance, coordination issues, and inaccessibility to rural locations remain. These issues necessitate greater collaboration and capacity building to improve the long-term impact and durability of **humanitarian** initiatives in **Yemen**.

⁵ alsahwa-yemen.net

⁶ alsahwa-yemen.net

⁷ [Reuters.com](https://reuters.com)

⁸ civil-protection-humanitarian-aid.ec.europa.eu

⁹ yemenmonitor.com

In summary, the prioritization of **humanitarian** interventions in **Yemen** is shaped by the country's ongoing conflict, economic challenges, and environmental factors. **Humanitarian** organizations are focusing on sustainability and resilience through various strategic interventions.

These activities were prioritized based on their relevance and the information given by entities and organizations involved in similar projects in **Yemen**. The projected percentage allocations for **humanitarian** activities in **Yemen** are based on existing funding data and critical needs outlined in various studies. Here's a breakdown of the allocations as follows:

1. Food Security – 40%

- **Funding:** The **World Food Program (WFP)** received approximately **\$621.6 million**, accounting for **28%** of total funding in **2024**¹⁰.
- **Justification:** Given the severity of hunger affecting millions in **Yemen**, food security remains the top priority.

2. Economic Empowerment & Livelihoods – 20%

- **Funding:** The **U.S.** has provided over **\$1.1 billion** in **humanitarian** aid to **Yemen** since **2019**, including support for economic recovery.
- **Justification:** Addressing high unemployment and poverty is crucial for long-term stability, warranting significant investment¹¹.

3. Disaster Preparedness & Resilience – 15%

- **Funding:** The **United Nations** has highlighted the need for increased resources to address acute and growing **humanitarian** needs in **Yemen**.
- **Justification:** **Yemen's** vulnerability to natural disasters necessitates substantial investment in preparedness and resilience¹².

¹⁰ fts.unocha.org

¹¹ state.gov

¹² unhcr.org

4. Infrastructure Development – 15%

- **Funding:** In 2023, the **Federal Ministry for Economic Cooperation and Development (BMZ)** committed a total of **163.7 million euros** in new funding for **Yemen**, including infrastructure projects.
- **Justification:** Rebuilding essential infrastructure is vital for long-term recovery and development¹³.

5. Coordination & Strategic Partnerships – 10%

- **Funding:** The **UN Office** for the Coordination of **Humanitarian Affairs (OCHA)** emphasizes the need for increased funding to support coordination efforts in **Yemen**¹⁴.
- **Justification:** Effective coordination among **humanitarian** actors is essential for efficient aid delivery, though it often receives less focus.

These allocations are derived from funding data and the critical importance of each sector in addressing **Yemen's humanitarian** crisis. It's important to note that actual funding levels can fluctuate based on evolving circumstances and donor commitments.

9. Addressing local conflicts over resources such as water and land.

The questionnaire responses emphasize the fundamental issues and options associated with **Yemen's** resource conflicts, notably those regarding water and land (**Fig. 6**). Scarcity, mismanagement, and rivalry for these critical resources can cause community problems. To address these concerns, **humanitarian** groups and local stakeholders are launching awareness campaigns, mediation efforts, long-term resource management programs, capacity-building initiatives, and strategic alliances. These responses serve as the foundation for the analysis and comments presented,

¹³ [bmz.de](https://www.bmz.de)

¹⁴ gcc.unfpa.org

which focus on how different techniques contribute to dispute resolution, societal cohesiveness, and long-term sustainability. These efforts can be **grouped into five main categories**, each contributing to **peacebuilding** and resilience in **Yemen** as follows:

1. Community Engagement & Awareness

❖ Key Strategies:

- Involving **local authorities and community leaders** in conflict resolution.
- Organizing **awareness workshops** on sustainable resource management.
- Promoting **youth and women participation** in decision-making.

❖ Challenges:

- Resistance from **traditional leadership structures**.
- Need for **long-term behavioral change** in conflict-prone communities.

❖ Commentary:

- Awareness campaigns are **a critical first step**, but they must be **paired with concrete action plans** to yield lasting impact.

2. Conflict Mediation & Dialogue

❖ Key Strategies:

- **Mediating land and water disputes** through structured dialogue sessions.
- Establishing **community committees** to resolve conflicts independently.
- Organizing **open forums** where different groups can negotiate resource-sharing agreements.

❖ Challenges:

- **Ensuring neutrality** in mediation efforts.
- **Lack of enforcement** mechanisms for agreements.

❖ **Commentary:**

- Mediation is **effective in reducing immediate tensions**, but success depends on **strong enforcement mechanisms** and **continued dialogue**.

3. Sustainable Resource Management & Infrastructure Development

❖ **Key Strategies:**

- Implementing **modern irrigation techniques** to optimize water use.
- Constructing **water wells and repairing irrigation networks** to ease resource scarcity.
- Developing **community-based mechanisms for fair resource distribution**.

❖ **Challenges:**

- **High cost** of infrastructure projects.
- **Potential for mismanagement** without community ownership.

❖ **Commentary:**

- **Infrastructure development is essential** for reducing competition over resources, but projects must be **designed with long-term sustainability** in mind.

4. Capacity Building & Institutional Strengthening

❖ **Key Strategies:**

- Training **local committees** on conflict resolution and resource management.
- Strengthening **the rule of law** in resource governance.
- Establishing **volunteer groups** to support peace initiatives.

❖ **Challenges:**

- **Ensuring community buy-in** and long-term participation.
- **Limited government capacity** to enforce regulations.

❖ **Commentary:**

- **Empowering local structures is crucial**, but they must be given **legal and financial support** to function effectively.

5. Strategic Partnerships & Sustainability

❖ Key Strategies:

- Collaborating with **international and local organizations** for financial and technical support.
- Developing **sustainable development projects** that integrate humanitarian aid with economic growth.

❖ Challenges:

- **Dependence on external funding** for sustainability.
- **Coordination issues** between multiple stakeholders.

❖ Commentary:

- **Partnerships enhance resource availability**, but **local ownership** is necessary for long-term impact.

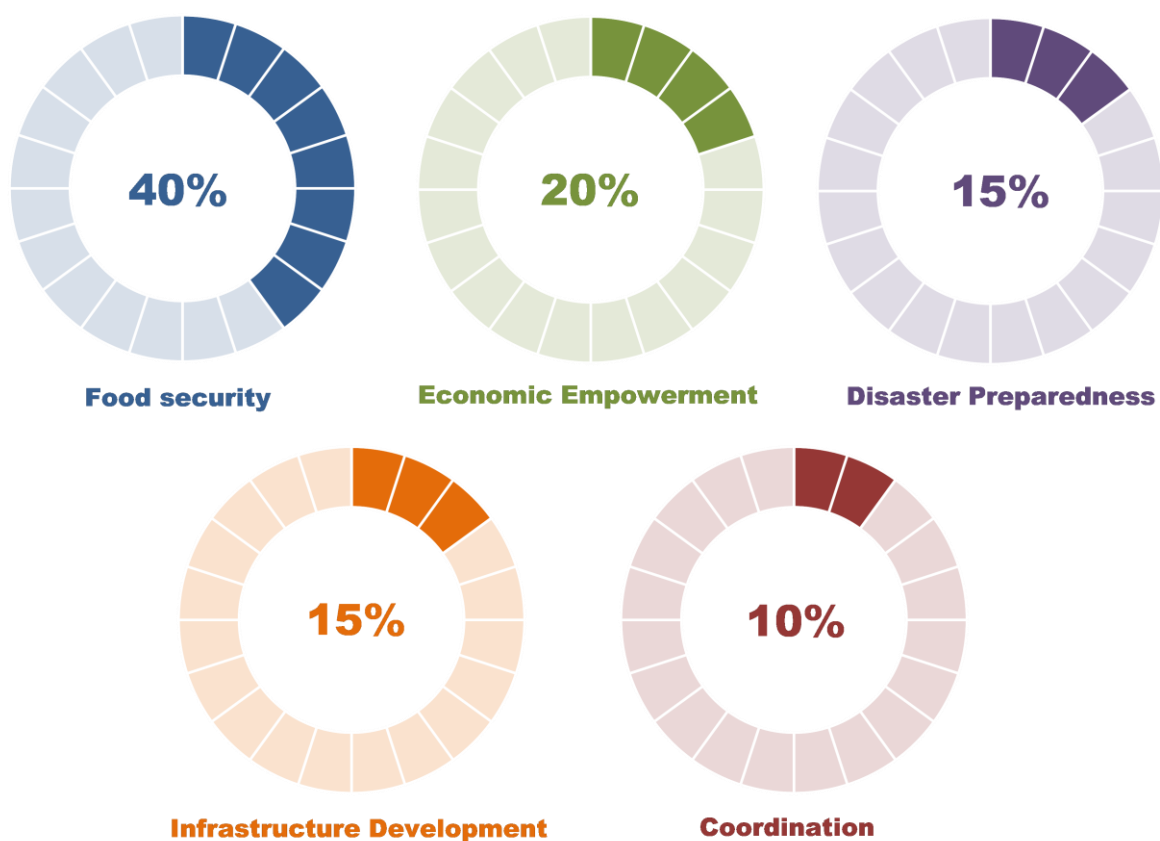


Fig. 6: The different humanitarian activity sectors in Yemen, (Source: the author).

Final Thoughts

The initiatives demonstrate a **comprehensive approach** to conflict resolution by addressing both **immediate disputes** and **long-term resource sustainability**. However, **greater emphasis on enforcement, long-term sustainability, and institutional support** is needed to ensure these interventions **translate into lasting peace and stability** in **Yemen**.

10. Local and Stakeholder Participation in Peacebuilding & Coordination Among Humanitarian, Development, and Peacebuilding Sectors in Yemen

The majority (**90%**) of respondents believe local stakeholders are involved in **peacebuilding** efforts. However, the single "**No**" response may indicate gaps in participation, possibly in specific regions or sectors. More inclusive mechanisms may be needed to improve engagement (**Fig. 7**).

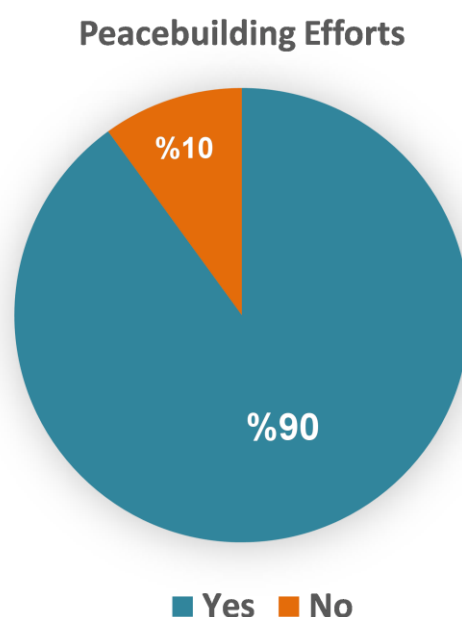


Fig. 7: The pie chart depicts the percentage of peacebuilding initiatives in **Yemen** (source: **the author**).

In **Yemen**, perceptions of coordination between the **humanitarian**, **development**, and **peacebuilding** sectors are varied (**Fig. 8**). While **30%** of respondents feel coordination is extremely effective, **40%** rank it as moderate, showing space for growth, and **30%** rate it as poor, highlighting considerable gaps. Positive perceptions (**30%**) indicate that some firms benefit from strong networks and structured collaborations. Moderate responses (**40%**) suggest limited success with discrepancies in communication and collaboration. Negative feedback (**30%**) indicates fragmentation, a lack of coherent policies, and competing interests across sectors. These variances indicate that cooperation is not consistent across regions and organizations. To improve collaboration, greater integration mechanisms are required, such as collaborative planning, shared data systems, and cross-sector meetings. Targeted efforts should concentrate on regions and sectors where coordination is weakest, resulting in a more unified and effective **humanitarian** and **development** response in **Yemen**.

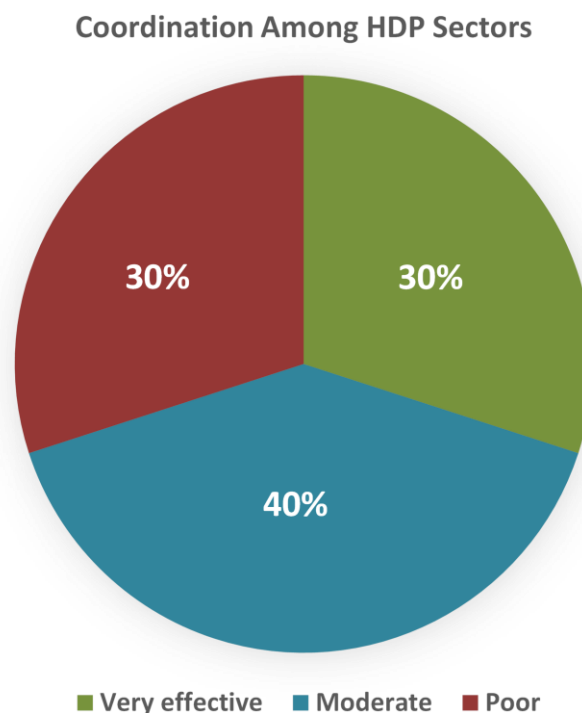


Fig. 8: The Pie chart illustrates the percentage of **coordination** among **HDP** in **Yemen**, (Source: **the author**).

Finally, while local participation in **peacebuilding** is high, coordination among **humanitarian**, **development**, and **peacebuilding** sectors remains inconsistent. Strengthening collaboration frameworks and ensuring equitable engagement across all actors will be key to enhancing the overall effectiveness of **peacebuilding** efforts in **Yemen**.

11. opportunities to improve the triple nexus programming in Yemen.

The **questionnaire** results (**Fig. 9**) show that, while local and stakeholder participation in peacebuilding is broadly accepted (**90%** favorable response), coordination across the **humanitarian**, **development**, and **peacebuilding** sectors is inconsistent. The data show that **30%** rank coordination as poor, **40%** as moderate, and **30%** as extremely good, highlighting both gains and gaps. Strengthening collaboration, organized alliances, and integrative mechanisms is critical to optimizing impact in **Yemen's Triple Nexus approach**.

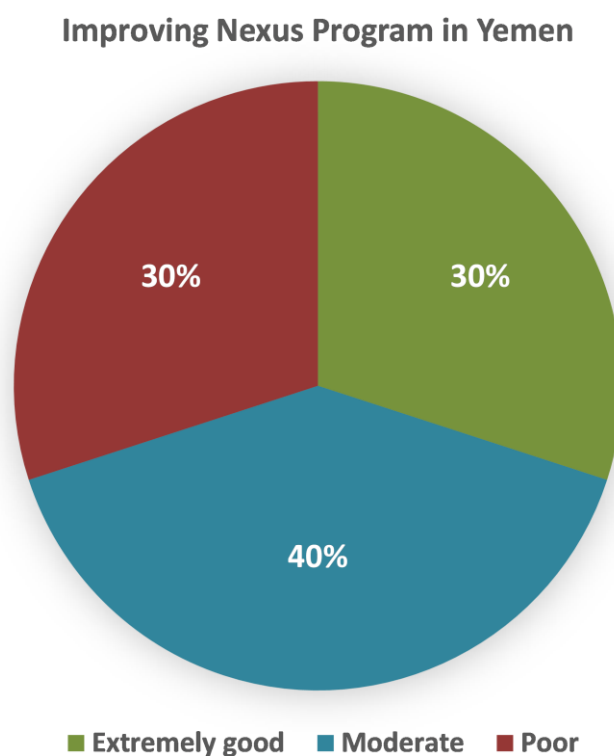


Fig. 9: The Pie chart illustrates the percentage of improving **Nexus** in **Yemen**, (Source: **the author**).

Enhancing Triple Nexus Programming in Yemen: Key Opportunities

In light of the complex **humanitarian** and **development** situation in **Yemen**, there are many opportunities to enhance the triple **Nexus approach**, which integrates **humanitarian** assistance, **development**, and **peacebuilding**. These opportunities enable organizations such as the **Bard Al-Ataa Humanitarian Development Association** and the **Correction Foundation for Humanitarian Development** to achieve greater and more sustainable impacts. The following key areas highlight the main opportunities and strategies for advancing this approach:

1. Strengthening Institutional and Community Capacities

- **Building Institutional Capacities:** Strengthening local organizations and governance structures ensures sustainability in **humanitarian** and **development** efforts.
- **Community Engagement:** Local communities play a crucial role in identifying needs, implementing projects, and ensuring long-term success.
- **Education & Awareness:** Organizing training, workshops, and awareness campaigns can empower communities and enhance program effectiveness.

2. Promoting Partnerships and Coordination

- **Local & International Collaboration:** Strengthening cooperation between local and international **NGOs**, **UN** agencies, and **government** bodies can maximize impact.
- **Networking & Coordination:** Improved coordination among organizations helps streamline efforts, reduce duplication, and optimize resources.
- **Leveraging Global Interest in Yemen:** Increased **international** focus on **Yemen** can attract more funding and advocacy for **Nexus** programs.

3. Addressing Root Causes Through Sustainable Development

- **Infrastructure Development:** Investing in water, health, and education projects bridges emergency relief with long-term **development**.
- **Utilizing Natural Resources:** **Yemen's** agricultural and marine resources can be leveraged for sustainable livelihoods and food security.

- **Climate Resilience:** Programs addressing drought, floods, and environmental sustainability (e.g., irrigation, solar energy) align with global funding priorities.

4. Fostering Peacebuilding and Conflict Resolution

- **Local Mediation Initiatives:** Addressing resource-based conflicts (e.g., water, land) through mediation and trust-building efforts.
- **Political Support for Peacebuilding:** Linking development projects with reconciliation programs can strengthen peace efforts.
- **Empowering Youth & Women:** Engaging youth and women in resource management, leadership, and **peacebuilding** fosters stability.

5. The Urgent Need for Sustainable Development

- **Situation:** Ongoing crises in **Yemen** have heightened the demand for sustainable solutions addressing the root causes of issues.
- **Opportunity:** Implement integrated projects that link **humanitarian** response with long-term **development**. Improve infrastructure such as water, health, and education services to support triple **Nexus** initiatives.

6. Engaging Youth and Women

- **Situation:** Youth and women constitute a significant proportion of the population and can contribute to **development** and **peacebuilding**.
- **Opportunity:** Design training and empowerment programs targeting youth and women, integrating them into resource management and **peacebuilding** efforts.

7. Sustainable Use of Natural Resources

- **Situation:** **Yemen** has unexploited natural resources, including agricultural land and marine assets.
- **Opportunity:** Launch sustainable agricultural and marine fishing projects to create jobs and support food security.

8. Increased Donor Awareness

- **Situation:** Donors increasingly recognize the need for comprehensive programs that integrate relief, **development**, and peace.
- **Opportunity:** Capitalize on this trend to secure financial and technical support for integrated programs.

9. Climate Change as a Driver for Programming

- **Situation:** **Yemen** faces **climate change** impacts such as droughts and floods.
- **Opportunity:** Develop climate-responsive projects, such as modern irrigation and solar energy initiatives, to strengthen the **humanitarian-development Nexus**.

10. Engaging Local Communities

- **Situation:** Local communities possess extensive knowledge of their needs and challenges.
- **Opportunity:** Strengthen community participation in program design and implementation, ensuring sustainability through community-led initiatives.

11. Political Support for Peacebuilding

- **Situation:** International and local parties increasingly support peace efforts in **Yemen**.
- **Opportunity:** Implement reconciliation programs, such as tribal dialogues and conflict resolution projects, linking them with **development** efforts.

12. Global Attention on Yemen

- **Situation:** **Yemen** is a focal point of **international humanitarian** concern.
- **Opportunity:** Attract funding and advocacy for **Nexus** programming by leveraging global attention to support integrated approaches beyond short-term relief.

These outlines can be described as follows: triple **Nexus** programming is an essential strategy to solving **Yemen's** numerous issues. Organizations such as the **Correction Foundation** can contribute to long-term solutions that combine relief, **development**, and **peace** by capitalizing on existing opportunities, enhancing coordination, and overcoming obstacles. Strategic investments in partnerships, innovation, and community engagement will be required to achieve long-term impact and resilience in **Yemen**.

12. Funding Mechanisms for the Nexus Program in Yemen

In **Yemen**, effective funding mechanisms are crucial to advancing the **Nexus approach**, which integrates **humanitarian** aid, **development**, and **peacebuilding**. Given the country's prolonged crises, donor strategies must shift towards long-term, flexible, and results-driven financing to ensure sustainable impact. Strengthening partnerships, supporting local organizations, and promoting innovative funding models can enhance the efficiency and effectiveness of **Nexus** programming in **Yemen**.

Key Opportunities

1. Long-Term and Flexible Funding

- **Challenge:** Short-term funding limits sustainability and strategic planning.
- **Solution:** Donors should provide multi-year funding to ensure long-term program impact and allow organizations to adjust to changing **humanitarian** and **development** needs.

2. Strengthening Strategic Partnerships

- **Challenge:** Limited coordination between donors, **humanitarian**, and **development** actors.
- **Solution:** Encourage joint funding mechanisms where multiple donors collaborate on integrated programs, avoiding duplication and fragmentation.

3. Increased Support for Local Organizations

- **Challenge:** Local organizations lack financial and technical resources to lead **Nexus** initiatives.
- **Solution:** Capacity-building investments for local organizations in financial management, project development, and governance, allowing them to take ownership of **Nexus** programs.

4. Results-Based Financing and Monitoring

- **Challenge:** Funding is often tied to activities rather than measurable outcomes.
- **Solution:** Shift towards results-based financing, where funding is linked to achieving **development**, **humanitarian**, and **peacebuilding** outcomes, using clear performance indicators.

5. Supporting Innovation and Technology

- **Challenge:** Limited use of digital tools for data-driven decision-making.
- **Solution:** Donors should invest in technology-driven solutions such as digital platforms for communication, data collection, and **early warning systems**.

6. Research and Evaluation Investments

- **Challenge:** Lack of context-specific data to inform **Nexus** programming.
- **Solution:** Provide funding for research, impact assessments, and evidence-based strategies to enhance program effectiveness.

7. Simplified Funding and Administrative Procedures

- **Challenge:** Complex funding requirements hinder local organizations from accessing funds.
- **Solution:** Reduce bureaucratic hurdles, introduce flexible reporting, and rely on self-evaluations with periodic donor audits.

8. Integrating Gender and Community Engagement

- **Challenge:** Women and marginalized groups are often excluded from decision-making in **Nexus** programs.
- **Solution:** Ensure gender mainstreaming in all program phases, empower women in leadership roles, and support community-driven initiatives.

To effectively support **Nexus** programming, donors must transition from short-term, activity-based funding to long-term, flexible financing that prioritizes local leadership, partnerships, results-based approaches, and innovation.

13. Monitoring the long-term impact of humanitarian and development efforts in Yemen.

Effective long-term monitoring of **humanitarian** and **development** programs is essential to ensuring their viability and impact. To review and improve the success of programs, some organizations, such as **Bard Al-Ataa Humanitarian Development Association**, employ a multifaceted approach that involves continual evaluation, data-

driven analysis, community participation, and strategic collaborations. The primary strategies for **HDP** impacts monitoring in Yemen are as follows:

Key Strategies for Long-Term Impact Monitoring

1. Integrated Monitoring and Evaluation System

Real-time data is captured utilizing quantitative (**KPIs**, statistics) and qualitative metrics (beneficiary experiences, behavior changes). Baseline studies and frequent follow-ups are used to track and analyze improvement.

2. Post-Project Sustainability Assessments:

Independent evaluations are conducted six months to a year following project completion to assess long-term benefits in income production, food security, and healthcare access.

3. Community-Led Evaluations

Local communities are engaged in monitoring procedures, improving ownership and providing a genuine assessment of needs and successes. Feedback sessions and participation workshops are used to improve project strategy.

4. Advanced Data Analytics & GIS Technology

Big data and geospatial analysis (**GIS**) are used to track environmental and socio-economic changes over time. AI-powered data analytics are used to identify patterns and areas needing further intervention.

5. Behavioral and Social Impact Tracking

Long-term transformation indicators include shifts in community attitudes, social cohesion, and gender equality. Longitudinal studies, focus group talks, and social perception surveys are used.

6. Financial & Institutional Sustainability Analysis

Projects' potential to sustain itself post-funding is evaluated, including community-led maintenance, entrepreneurship models, and local policy support, while self-reliance mechanisms including cooperative business models and microfinance programs are supported.

7. Technical Audits & Infrastructure Reviews

Infrastructure projects (water, sanitation, education, etc.) undergo periodic audits to maintain operational efficiency and longevity, while technical professionals

conduct frequent inspections to prevent system breakdowns and improve service delivery.

8. Collaboration with Local & International Partners

Joint research is performed with universities and non-governmental organizations (NGOs) to improve data accuracy and best practices, while partnerships with UN agencies, donor organizations, and government authorities guarantee that impact tracking meets global standards.

9. Adaptive Risk & Opportunity Analysis

Political, economic, and environmental risks are regularly reviewed in order to adjust resilience and crisis preparedness programs, which include early warning systems, flexible funding sources, and contingency planning.

10. Transparent Reporting & Knowledge Sharing

Findings are documented, analyzed, and disseminated via public publications, conferences, and digital platforms, while lessons gained inform future program designs and impact policy-making at the local and international levels.

14. Enhancing the Design and Implementation of Nexus-Based Programs

The **Nexus approach** integrates **humanitarian** relief, **development**, and **peacebuilding** to create sustainable and impactful programs. To improve their design and implementation, organizations must adopt strategic measures that strengthen coordination, enhance community participation, and ensure long-term sustainability. The following important recommendations from participants highlight practical methods to improve **Nexus**-based programs' efficacy and resilience.

1. Strengthening Coordination Between Sectors

Effective coordination between **humanitarian**, **development**, and **peace** actors ensures synergy and maximizes impact. Establishing coordination platforms, conducting regular joint meetings, and integrating sectoral strategies help align efforts and avoid duplication.

2. Flexible and Sustainable Funding

Programs require long-term and adaptable funding mechanisms to cover all **Nexus** aspects. Donors should support multi-year financing models, flexible funding pools, and community-led financial solutions to enhance sustainability beyond immediate relief efforts.

3. Integrating Peacebuilding in All Stages

Peace components must be embedded throughout the program lifecycle to promote stability and social cohesion. This includes conflict-sensitive programming, local mediation initiatives, and activities that address root causes of instability, ensuring long-term resilience.

4. Strengthening Community Participation

Local communities should be actively involved in program design, implementation, and evaluation. Conducting participatory assessments, organizing community-led decision-making forums, and building local capacity ensures interventions align with real needs and are culturally appropriate.

5. Leveraging Technology and Innovation

Utilizing digital tools enhances data collection, monitoring, and decision-making. Implementing AI-driven analytics, **GIS**-based assessments, open data platforms, and smart monitoring technologies improves efficiency, accountability, and responsiveness.

6. Capacity Building for Local Actors

Investing in the skills and leadership of local organizations, youth, and women strengthens their ability to manage programs independently. Providing technical training, leadership development, and institutional support ensures sustainable impact and resilience.

7. Continuous Monitoring and Evaluation

Establishing adaptive evaluation systems helps measure long-term impact and improve program effectiveness. Using integrated monitoring frameworks, real-time feedback mechanisms, and impact-driven assessments ensures evidence-based decision-making and strategic adjustments.

II. Climate Change Impacts

Part II: Climate Change Impacts and the Nexus Approach in Yemen

Background

This section investigates how **climate change** affects **Nexus** programming in **Yemen** and how organizations incorporate climate resilience into **humanitarian**, **development**, and **peacebuilding** operations. The **Next** lines describe the participants' perspectives on the impact of **climate change** and **humanitarian** assistance in **Yemen**, as obtained from a questionnaire survey.

1. Key Observed Impacts of Climate Change in Yemen

Organizations operating in **Yemen** have identified several critical **climate change** impacts affecting the region. The most significant include:

- **Water Scarcity** – A persistent challenge, limiting access to clean water for communities and agriculture.
- **Flooding and Extreme Weather Events** – Repeatedly reported as a major concern, leading to displacement, infrastructure damage, and loss of livelihoods.
- **Desertification** – The expansion of arid land, reducing agricultural productivity and exacerbating food insecurity.
- **Increased Drought** – Prolonged dry periods affecting water availability, crop yields, and overall ecosystem stability.

These climate-related **challenges** highlight the urgent need for resilience-building strategies in **Yemen's** humanitarian, **development**, and **peacebuilding** efforts.

2. Addressing the Effects of Climate Change in Yemen.

Regarding **humanitarian** assistance initiatives in the context of the consequences of **climate change** on various **Yemeni** regions, the following question was posed to the survey participants: **Do your programs directly address the effects of climate change in Yemen? If the answer is yes, please provide examples.** The responses were as follows:

Response Breakdown (Yes/No): **Yes** – 5 responses, **No** – 5 responses (**Fig. 10**). This indicates that half of the surveyed organizations directly address **climate change** impacts in **Yemen**, while the other half do not have dedicated programs for this issue.

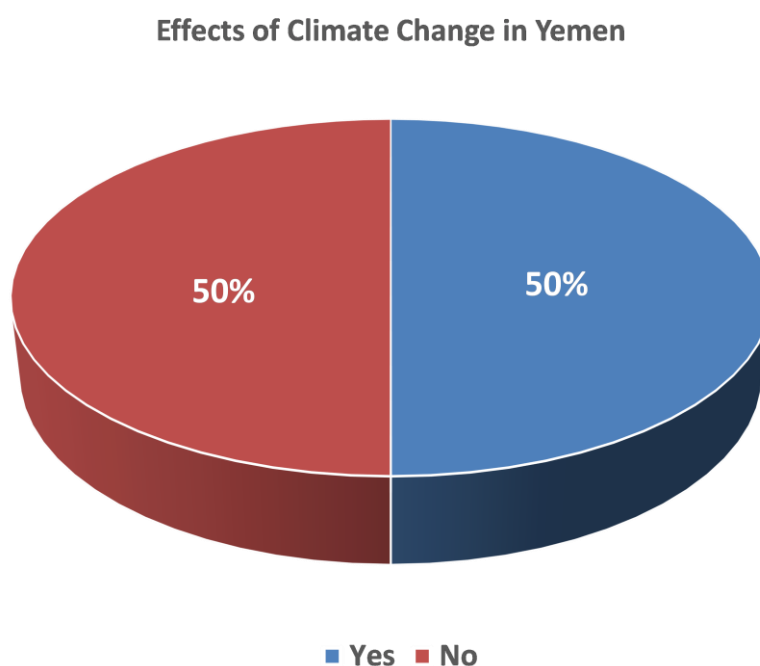


Fig. 10: The pie chart depicts the percentage of climate change's impact in Yemen (source: **the author**).

Organizations that Address Climate Change

The organizations that responded "Yes" implement a variety of strategies, including:

1. Adaptation and Resilience Projects

❖ Rehabilitation of Irrigation Systems:

- Implementing modern irrigation techniques (e.g., drip irrigation).
- Training farmers in water conservation and sustainable agriculture.
- Constructing wells and rainwater harvesting systems to improve water access.

❖ **Climate-Smart Agriculture:**

- Promoting drought-resistant crops and soil conservation techniques.
- Using organic fertilizers to enhance sustainability.

2. Water Management Initiatives

- ❖ Building small dams, drilling wells, and implementing rainwater harvesting.
- ❖ Developing sustainable water storage and distribution systems.

3. Community Awareness and Capacity Building

- ❖ Conducting climate education campaigns.
- ❖ Training local communities on risk management and disaster preparedness.

4. Environmental Protection and Disaster Mitigation

- ❖ Reforestation programs to combat desertification and improve soil stability.
- ❖ Establishing early warning systems for extreme weather events.
- ❖ Constructing protective structures such as retaining walls and coastal barriers.

5. Policy and Sustainable Development Support

- ❖ Collaborating with **governments** to integrate climate adaptation into policies.
- ❖ Supporting **peacebuilding** efforts to create a stable environment for climate initiatives.

Organizations That Do Not Directly Address Climate Change

While these organizations do not have specific climate-focused programs, their broader **development** and **humanitarian** work may indirectly contribute to resilience by:

- Strengthening community infrastructure.
- Enhancing food security.
- Providing emergency response services during extreme weather events.

The responses highlight a growing awareness of climate change challenges in **Yemen**, with several organizations actively working on solutions. However, there is a gap in climate-specific programs among some organizations. Strengthening partnerships, integrating climate considerations into existing projects, and expanding funding for adaptation initiatives could enhance resilience efforts across the country.

3. Climate Change Impact on Displacement and Migration in Yemen

Migration and displacement in **Yemen** are significantly influenced by **climate change**, which exacerbates already-existing **humanitarian** issues. Many people have been compelled to relocate in quest of more secure living conditions due to factors like desertification, water scarcity, extreme weather occurrences, and diminishing agricultural production. In addition to highlighting the larger socioeconomic and conflict-related issues impacting displacement patterns, this analysis looks at survey responses to determine the amount of migration brought on by **climate change**.

Response Breakdown and Statistical Analysis

1. Significant Impact (Majority - 78%)

- **78% of respondents** believe that **climate change** has significantly influenced displacement and migration patterns in **Yemen**.
- Extreme weather, desertification, water scarcity, and decreased agricultural output are the main causes of **Yemen's** displacement brought on by **climate change**. While the loss of arable land and water sources exacerbates economic instability and leads to increased migration, frequent flooding and droughts compel populations to shift in pursuit of more secure living conditions (see [Table 1](#), [Fig. 10](#)).

2. Moderate Impact (11%)

- **11% reported a moderate impact**, indicating that while **climate change** contributes to migration, other factors may also play a role.
- The **climate change** contributes to migration, socioeconomic and conflict-related factors may be equally or more significant drivers. However, some communities with adaptation strategies in place experience a reduced direct displacement effect ([Table 1](#), [Fig. 10](#)).

3. Minimal Impact (11%)

- **11% believe the impact is minimal**, suggesting that in some areas, **climate change** may not be the primary driver of migration.
- In certain regions, conflict, economic conditions, and governance issues may have a greater influence on migration patterns than **climate change** alone. These areas may also exhibit greater resilience or face fewer direct climate-related pressures ([Table 1](#), [Fig. 11](#)).

Key Climate Change Impacts on Displacement and Migration

1. Water Scarcity and Drought

- Reduced groundwater levels and severe droughts have caused agricultural decline, resulting in soil degradation and the forced displacement of numerous farmers. Competition for limited water resources has intensified,

causing community tensions and aggravating food shortages. As arable land becomes less productive, rural communities are compelled to migrate to cities in pursuit of alternate livelihoods, putting further strain on already overburdened infrastructure and public services. Without long-term water management and climate adaption policies, these issues will continue to jeopardize livelihoods, economic stability, and social cohesion.

2. Floods and Extreme Weather Events

- Flooding and storms have rendered many homes unsuitable, forcing people to relocate owing to infrastructure damage such as destroyed roads, schools, and hospitals. The predicament for displaced people living in temporary shelters is exacerbated by their increased vulnerability to extreme weather.

3. Desertification and Land Degradation

- Many farmers and pastoral communities have been forced to relocate into urban regions or neighboring nations as a result of the lack of arable land caused by expanding desert areas and soil erosion.

4. Rising Temperatures and Food Insecurity

- Rising heat and droughts have led to food shortages and price inflation, causing many people to struggle to meet basic needs. Families are forced to relocate more frequently in search of better living conditions and food security.

5. Sea Level Rise and Coastal Erosion

- Rising sea levels are forcing residents of coastal villages to relocate inland. Migration has been worsened by the loss of coastal livelihoods and fisheries, leaving many people without a source of income.

Compounding Factors Worsening the Crisis

- **Armed Conflict:** Climate change worsens humanitarian conditions, while war destroys infrastructure, making adaptation more difficult.

- **Poverty:** High poverty rates make it harder for communities to cope with climate-related displacement.
- **Overstressed Resources:** Increased migration places pressure on host communities, worsening water and food shortages.
- **Loss of Livelihoods and Agricultural Lands:** Displaced individuals, particularly those from rural areas, have been forced to abandon their agricultural lands due to climate-induced challenges such as drought, desertification, and soil erosion. This has led to the loss of their primary sources of income, making them more vulnerable to poverty.

Table 1: Displays the proportion of questionnaire responses for **climate change** implications on displacement in **Yemen**.

Impact Level	Responses	Percentage (%)
Significantly	7	78%
Moderately	1	11%
Minimally	1	11%

Climate Change Impact on Displacement & Migration

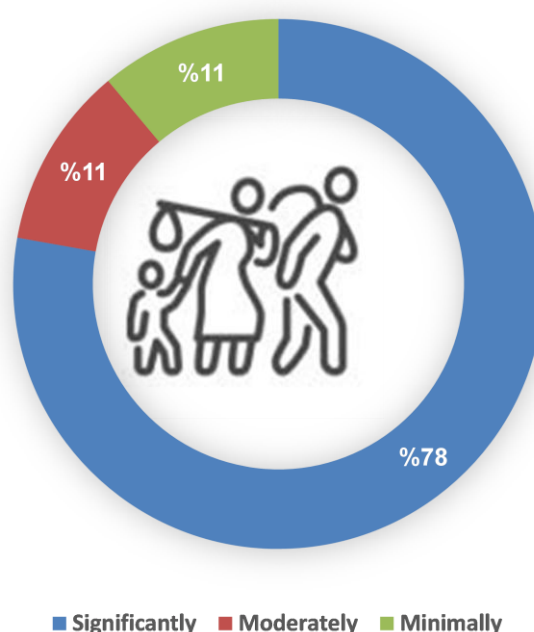


Fig. 11: The pie graphic shows the percentage of **climate change's** impact on **IDP** (source: **the author**).

- **Family Disintegration:** The displacement of families due to **climate change** has led to the fragmentation of households. As members search for work and safer living conditions in different regions, family unity is often disrupted, which further exacerbates their vulnerability and reduces support systems.
- **Increased Poverty Rates:** Many displaced people are now living in temporary shelters, facing extreme poverty due to limited access to basic services such as food, healthcare, and sanitation. The harsh conditions of these shelters, compounded by extreme temperatures (sun heat and winter cold), worsen their living standards, thereby increasing poverty.
- **Pressure on Resources in Receiving Areas:** The influx of displaced people into urban areas or safer regions puts immense pressure on local resources such as water, food, and shelter. As the demand for these resources increases, competition intensifies, potentially leading to further social conflicts and scarcity.

Impact of Climate Change on Displacement and Migration Patterns:

1. Drought:

Water scarcity, exacerbated by prolonged droughts, has severely affected agriculture and water availability, forcing rural populations to migrate in search of better living conditions and access to essential resources.

2. Rising Temperatures:

Increasing temperatures have had a direct impact on agricultural productivity, leading to declining crop yields and increased food insecurity. This has forced many families to abandon their farms and migrate to urban areas or neighboring regions for better opportunities.

3. Desertification:

The ongoing desertification process has led to the degradation of arable lands, pushing farmers and pastoral communities to seek more fertile land in urban centers or neighboring countries. This trend highlights the broader environmental threat of land degradation.

4. Floods:

Increased flooding, driven by **climate change**, has resulted in the destruction of homes, infrastructure, and essential services. This has caused widespread displacement, particularly in coastal and low-lying areas that are more susceptible to flooding.

5. Environmental Threats:

The cumulative effect of climate-induced environmental changes, including extreme weather events such as storms and floods, has driven internal migration as people flee to more stable regions in search of safety and a better quality of life.

Types of Migration:

- **Rural to Urban Migration:** As rural areas become less habitable due to droughts and desertification, many displaced families are relocating to urban areas in search of water and economic opportunities.
- **Internal Displacement:** Families are moving within **Yemen** to areas less affected by climate change or to receive **humanitarian** assistance.
- **Cross-border Migration:** In some cases, displacement due to environmental threats has forced individuals to migrate to neighboring countries.

Key Impacts on Communities:

- **Agricultural Decline:** Loss of livelihoods due to the destruction of farmland and reduced agricultural productivity.
- **Health and Shelter Issues:** Displaced people face inadequate shelter and are vulnerable to extreme weather conditions, which negatively impact their health.
- **Economic Pressures:** Increased poverty and reduced access to basic services are common among displaced populations, contributing to greater dependence on aid.

Climate change is a significant driver of displacement in **Yemen**, with droughts, floods, land degradation, and extreme weather events forcing people to leave their homes. Migration patterns are shifting towards urban areas and safer regions, increasing **humanitarian** pressures. Urgent climate adaptation strategies—such as improved water management, sustainable agriculture, and resilient infrastructure—are needed to mitigate future displacement and reduce vulnerabilities.

The statistics and grouping show that **climate change** is a significant driver of displacement in **Yemen**, contributing to the loss of livelihoods, family disintegration, and increased pressure on resources in receiving areas. As climate conditions worsen, the need for sustainable adaptation strategies and increased **humanitarian** support becomes more urgent to address the growing challenges faced by displaced populations.

4. Address Yemen's Climate Change Effects.

Yemen's humanitarian catastrophe is getting worse due to **climate change**, which is also causing migration and displacement. Many populations are compelled to relocate in quest of food, water, and safer living circumstances as a result of the growing frequency of droughts, floods, and desertification. Some organizations lack the resources to directly address these issues, while others actively pursue adaption measures like disaster mitigation, water management, and sustainable agriculture. This report looks at how well **Yemeni** organizations are addressing the effects of **climate change** and emphasizes the need for increased efforts to strengthen resilience in impacted communities. The following are the survey results for addressing **Yemen's climate change** effects (**Fig. 12**).

Response Breakdown and Statistical Analysis

- **Yes: 50%** and **No: 50%** responses

This indicates that half of the surveyed organizations directly address **climate change** impacts in **Yemen**, while the other half do not have dedicated programs for this issue.

1. Organizations Addressing Climate Change (Yes Responses – 50%)

The organizations that actively tackle climate change impacts focus on:

- **Awareness & Education:** Conducting workshops, campaigns, and training programs to inform communities about **climate change**.
- **Water Resource Management:** Implementing projects to rehabilitate irrigation systems, drill wells, harvest rainwater, and introduce modern water-saving techniques.
- **Climate-Smart Agriculture:** Promoting drought-resistant crops, sustainable farming methods, and the use of organic fertilizers.
- **Disaster Mitigation:** Building retaining walls, stabilizing sand dunes, and setting up **early warning systems** to reduce climate-related disasters.
- **Afforestation & Land Protection:** Implementing reforestation projects to restore soil fertility and combat desertification.

2. Organizations Not Addressing Climate Change (No Responses – 50%)

Half of the respondents do not have programs directly targeting **climate change**.

Possible reasons may include:

- Limited resources and funding constraints.
- Focus on other **humanitarian** or **development** priorities.
- Lack of technical expertise in climate adaptation strategies.

While **50%** of organizations are actively addressing **climate change**, the remaining half lack dedicated programs to mitigate its impacts. Expanding funding, technical support, and policy integration could help bridge this gap and enhance **Yemen's** resilience to **climate change** (Fig. 12).

5. Climate Adaptation, Resilience and Peacebuilding Efforts

Statistical Analysis of Responses

1. Integration of Climate Adaptation Strategies into Humanitarian Programming

Address Yemen's Climate Change Effects

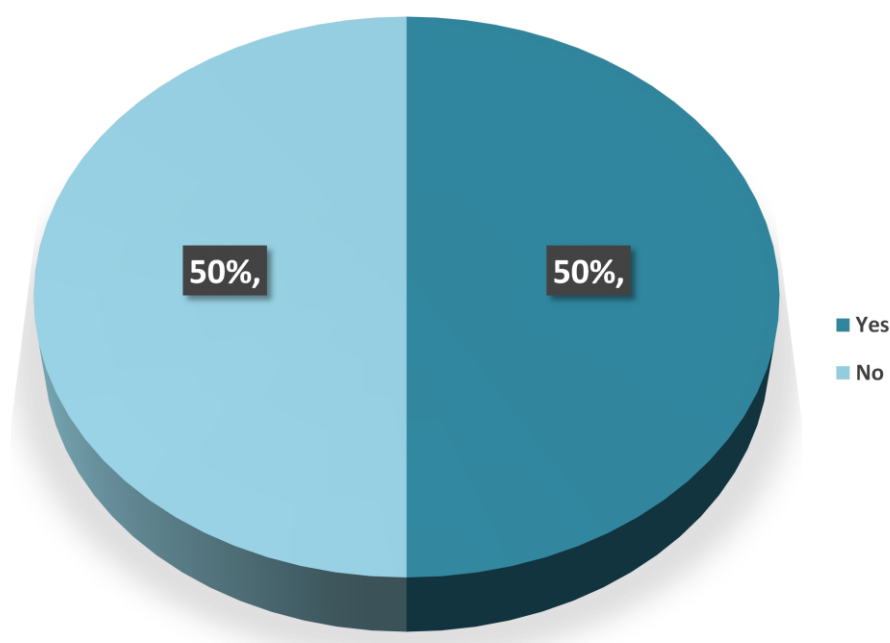


Fig. 12: The pie graph depicts the percentage of **climate change's** effects in **Yemen** (source: **author**).

Yes: 6 responses (60%) **No:** 4 responses (40%), ([Table 2](#) and [Fig. 13](#)).

Interpretation: A majority (60%) of organizations incorporate climate adaptation strategies, but a significant portion (40%) still does not, indicating room for improvement in integrating climate resilience into humanitarian efforts.

2. Peacebuilding Efforts to Mitigate Climate-Related Conflicts

- Yes:** 8 responses (80%), **No:** 2 responses (20%), ([Table 2](#) and [Fig. 13](#)).

Interpretation: Most organizations (80%) recognize the link between climate change and conflicts (e.g., over water and pasture) and actively incorporate peacebuilding efforts to mitigate these challenges.

3. Community Engagement in Building Climate Resilience and Adaptability

- Yes:** 6 responses (60%), **No:** 4 responses (40%), ([Table 2](#) and [Fig. 13](#)).

Interpretation: While **60%** of organizations engage with communities to enhance climate resilience, the remaining **40%** do not, highlighting the need for broader participation in resilience-building programs.

Table 2: The Responses **Climate** Adaptation, Resilience and **Peacebuilding** Efforts.

Question	Yes (%)	No (%)
Integration of climate adaptation strategies into humanitarian programming	60%	40%
Peacebuilding efforts to mitigate climate-related conflicts	80%	20%
Community engagement in climate resilience	60%	40%

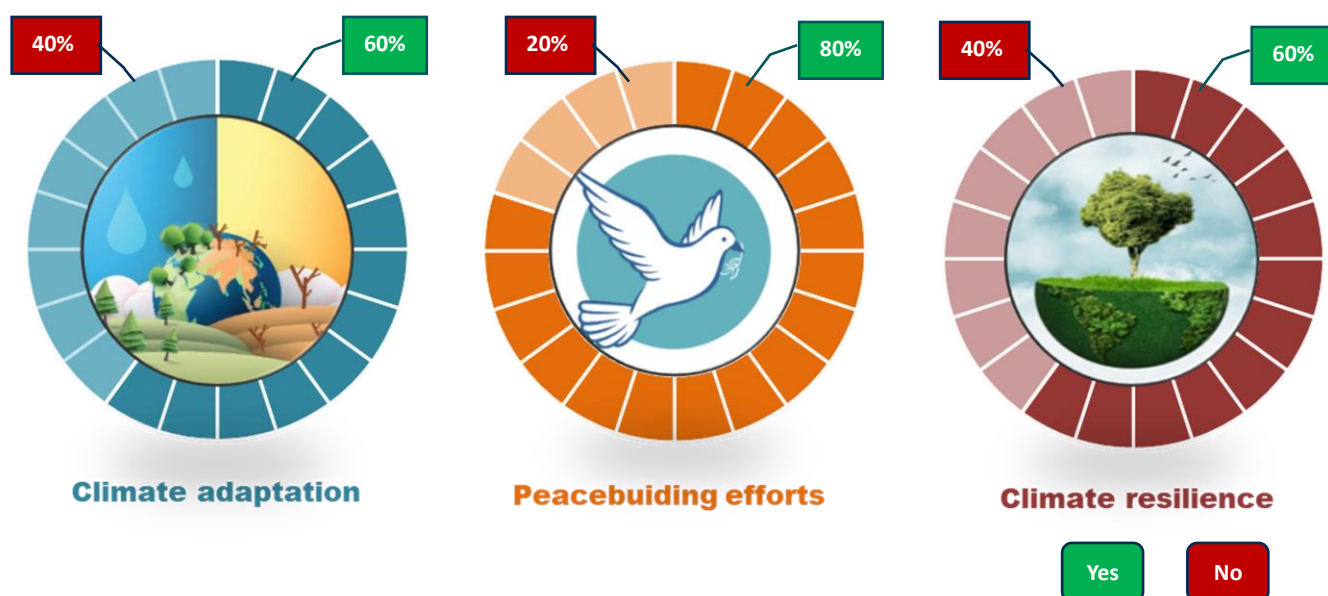


Fig. 13: The circle graphs depict the percentage of **climate** and **peace** effects in **Yemen** (source: **author**).

6. Collaborating with Local Communities to Increase Climate Adaptation and Resilience

Effectively tackling the issues brought on by **climate change** requires working with local people to improve resilience and climate adaptation. **Local** communities are frequently at the forefront of **climate changes** and have important knowledge about their surroundings. By collaborating with these communities, strategies for adaptation can be customized to meet local requirements, improving their capacity to foresee, address, and recover from disruptions brought on by **climate change**. This partnership ensures that climate adaption initiatives are both realistic and effective by empowering communities to create sustainable solutions and fostering long-term resilience.

Engagement Strategies and Activities

- **Bureau sessions and meetings:** Facilitating discussions and knowledge exchange to develop localized climate adaptation strategies.
- **Local handicrafts and rooftop afforestation:** Supporting economic diversification and environmental sustainability by promoting sustainable livelihoods.

Holistic Approach to Climate Adaptation

Some **local** organizations, like the **Bard Al-Ataa Humanitarian Development Association**, work closely with communities to improve resilience and increase their ability to adapt to **climate change**. The strategy is focused on empowering **local** communities through education, resource distribution, and sustainability-oriented actions because of their pivotal role in tackling climate concerns.

Important Projects:

1. Training on Climate Adaptation Techniques

Farmers and local people participate in workshops on drought-resistant farming and efficient water management, with an emphasis on methods like

drip irrigation systems that maximize crop yields in arid areas while consuming the least amount of water.

2. Participatory Adaptation Strategies

In order to guarantee region-specific solutions, local adaptation strategies are created in partnership with communities. One such strategy is the creation of community committees to manage floods and droughts through local infrastructure projects like modest water reservoirs and rainwater harvesting.

3. Sustainable Natural Resource Management

Long-term resource sustainability is ensured by improving land and water management practices, such as planting trees on degraded areas and conserving soil.

4. Infrastructure Strengthening

Communities are supported in rebuilding and enhancing climate-resilient infrastructure, including deploying solar energy systems in remote areas to provide sustainable electricity and mitigate power outages.

5. Empowering Youth and Women in Climate Resilience

Youth and women are given access to education and training programs on environmental governance, water conservation, and sustainable agriculture. These programs include resource management workshops and campaigns to promote women's involvement in climate adaptation decision-making.

6. Innovative Climate Solutions

Building flood-resistant housing and installing renewable energy sources in disaster-prone locations are two examples of technology-driven strategies being used to lessen climate issues.

7. Monitoring and Assessment of Climate Change Impacts

Data-driven methods, such as the use of **Geographic Information Systems (GIS)** to track environmental changes and their effects on nearby communities, are used to evaluate climate risks and develop focused adaption strategies.

Fundamental Ideas of the Approach

- **Needs Assessment:** Engaging with local leaders to understand specific climate vulnerabilities.
- **Capacity Building:** Providing training in drought-resistant agriculture, efficient water use, and disaster preparedness.
- **Community-Led Decision Making:** Ensuring active participation in project planning and implementation.
- **Institutional Strengthening:** Empowering local organizations and councils to drive sustainable change.
- **Partnership Development:** Collaborating with **local** and **international** stakeholders to maximize impact.
- **Sustainable Financing:** Providing funding opportunities for community-driven projects.

Project Highlights

- **Small-Scale Irrigation Projects:** Establishing irrigation systems utilizing rainwater or groundwater sources.
- **Early Warning Systems:** Developing mechanisms to anticipate and mitigate natural disasters.
- **Training of Trainers (ToT):** Equipping local trainers to disseminate knowledge and expand impact.

Long-Term Goals

1. Strengthen climate resilience at the community level.

2. Enhance food and water security.
3. Promote environmental conservation.
4. Support sustainable development initiatives.

Impact and Future Outlook

By enabling local communities to take the initiative to address **climate change** issues, these programs guarantee sustainability and long-term resilience. Because these activities align with broader **development** and **humanitarian** aims, they support the need for integrated climate adaptation approaches in **humanitarian** projects. By linking climate adaptation to disaster risk reduction and sustainable development, both organizations make a substantial contribution to enhancing community resilience to **climate change**. Although **peacebuilding** initiatives targeting climate-related conflicts are well-integrated (**80%**), there is a moderate gap between community resilience efforts (**40%**) and climate adaptation methods (**40%**). This implies that long-term climate adaption and sustainability projects need to receive increased focus.

7. Challenges Facing Organizations in Addressing Climate Change in Yemen

Key Observations and Comments

1. Funding Constraints Dominate

A substantial majority (**82%**) of respondents said the biggest difficulty is a lack of financing for climate-specific activities, indicating financial restrictions as a major impediment to successful climate action in **Yemen**. To secure long-term solutions, this issue must be addressed through increasing donor engagement, creative finance mechanisms, and the integration of climate measures into larger **development** programs (**Table 3**).

Table 3: Frequency Distribution of Identified Challenges.

Challenge	Frequency	Percentage (%)
Lack of funding for climate-specific initiatives	9	82%
Limited technical expertise	1	9%
Other	1	9%

2. Need for Technical Expertise

9% of respondents identified limited technical skills as a difficulty, highlighting the importance of capacity-building and specialized knowledge in effective climate adaption initiatives, in addition to finance concerns.

3. Other Challenges Exist but Are Less Reported

The presence of an "Other" category (9%) indicates that there may be less often cited difficulties that need more examination.

Recommendations

- **Increase Climate-Specific Funding:** Advocate for **international** climate funds and partnerships to support adaptation efforts.
- **Capacity Building:** Invest in training programs to enhance technical expertise in climate resilience and adaptation strategies.
- **Further Research:** Conduct in-depth assessments to explore additional barriers not captured in this survey.

Comprehensive Analysis of Challenges Facing Climate Change Efforts in Yemen

Statistical Analysis of Immediate Challenges

The survey responses indicate that **82% of organizations cite lack of funding** as the primary obstacle, followed by **limited technical expertise (9%)**, and **other challenges**

(9%). This overwhelming emphasis on financial constraints aligns with broader structural issues affecting Yemen's climate adaptation efforts.

Broader Contextual Challenges in Addressing Climate Change in Yemen

Aside from financial and technical obstacles, **climate change** activities in Yemen are hampered by interconnected problems such as conflict, **humanitarian** crisis, poor governance, and climate unpredictability. Ongoing violence has damaged institutions, restricting the **government's** capacity to carry out climate policies and disaster response plans. **Humanitarian** crises, like as food insecurity and **displacement**, take resources away from long-term adaptation strategies. Additionally, weak governance and fragmented institutions impede environmental regulation and resilience building. Unpredictable climate trends, such as unpredictable rainfall, lengthy droughts, and severe weather events, exacerbate vulnerability, particularly in rural and coastal areas. Addressing **climate change** without a strong political and economic base necessitates integrated measures that strike a balance between **humanitarian** help, **development**, and sustainability (Table 4).

Table 4: Shows the impact of **climate change** efforts in Yemen.

Key Challenge	Impact on Climate Change Efforts
Ongoing Conflict	Infrastructure destruction, displacement, limited access to project sites
Humanitarian Crisis	Competition for resources, focus on basic survival rather than long-term climate solutions
Lack of Data & Information	Inability to assess climate risks, difficulty in planning adaptation strategies
Limited Funding	Insufficient resources for large-scale climate initiatives, donor prioritization of short-term humanitarian relief
Institutional Weakness	Lack of governance capacity, corruption, weak policy implementation
Rapid Climate Change	Unpredictable weather patterns, making long-term adaptation difficult

Key Insights & Link to Statistical Findings

1. Funding is the Most Pressing Challenge

The statistics (**82% citing a lack of funds**) suggest that financial restrictions are the most pressing concern. This is supported by a broader analysis, which shows that rivalry with **humanitarian** needs and misaligned donor objectives hinder climate-specific funding. The scarcity of resources prohibits groups from executing large-scale climate projects, as most financing is allocated toward immediate **humanitarian** disasters rather than long-term climate adaptation activities.

2. Technical Expertise & Institutional Weakness Are Secondary but Critical Barriers

The **9%** citing limited technical expertise highlights the need for capacity building. Weak institutional frameworks, governance issues, and corruption further exacerbate this challenge, making it difficult to formulate and implement effective climate policies. The lack of trained personnel and institutional capacity limits the ability of organizations to develop and execute adaptation strategies, resulting in inefficient resource management and reduced impact.

3. Conflict and Humanitarian Crisis Amplify Funding and Implementation Challenges

The increased fighting causes infrastructure damage and restricts access, making even well-funded initiatives difficult to implement. Instability and security concerns impede project implementation, slowing climate adaption efforts. Furthermore, the **humanitarian** crisis drives organizations to prioritize immediate survival over long-term climate resilience, devoting attention and resources away from climate-focused activities and toward emergency relief efforts.

4. Lack of Data Undermines Strategic Planning

Without reliable climate data, it is difficult to assess risks and design effective adaptation strategies. The absence of comprehensive studies and accurate field data makes it challenging to prioritize interventions and allocate resources effectively. Conflict and instability further limit data collection efforts, leaving

organizations without the necessary information to develop evidence-based climate policies and adaptation measures.

Strategic Recommendations to Overcome These Challenges

Despite these barriers, organizations can enhance their impact through **strategic interventions**:

1. Innovative Funding Mechanisms

To reduce reliance on **humanitarian** aid, organizations should advocate for climate-focused **international** funding and seek alternative financing sources. Exploring public-private partnerships can also provide sustainable financial support for climate adaptation initiatives. Diversifying funding streams will help ensure long-term project viability and reduce dependency on short-term relief funds.

2. Capacity Building & Knowledge Sharing

Investing in technical training for local experts and institutions is crucial for strengthening climate adaptation efforts. Enhancing climate data collection through partnerships with universities and global monitoring agencies will provide accurate information for decision-making. Building local capacity ensures that communities and organizations can implement effective, evidence-based strategies to address **climate change**.

3. Policy & Governance Strengthening

Collaborating with international agencies can improve institutional frameworks for climate governance, ensuring more effective policy implementation. Addressing corruption through transparency measures will enhance trust and ensure better resource allocation. Strengthening governance structures will create a more supportive environment for long-term climate resilience initiatives.

4. Integrated Humanitarian & Climate Strategies

Embedding climate adaptation into **humanitarian** aid programs will help bridge the gap between emergency response and long-term sustainability. Promoting community-based adaptation by empowering local populations with knowledge

and resources ensures that climate strategies are locally driven and sustainable. Integrating these efforts will enhance resilience while addressing immediate humanitarian needs.

8. Resources and Collaborations to Strengthen Yemeni Local Organizations' Ability to Combat Climate Change

Enhancing Climate Change Response in Yemen Through Tools and Partnerships

Yemeni groups working on climate change adaptation can gain more clout by combining technical tools, strategic partnerships, and financial innovations. A diversified strategy is necessary to increase resilience because of the nation's high susceptibility to climate-related calamities. Decision-making and adaptation efforts can be strengthened by having access to geospatial data, climate prediction models, and renewable energy technology. Collaborations with global organizations, academic institutions, and regional stakeholders offer vital knowledge, resources, and information to improve climate resilience. Long-term environmental solutions can also be supported by financial innovations like public-private partnerships (PPPs) and the Green Climate Fund (GCF). Organizations in Yemen can overcome current obstacles and create long-term climate adaption plans by utilizing these resources and encouraging cooperation among many sectors.

Statistical Analysis of Tools and Partnerships for Addressing Climate Change in Yemen

The answers to the questionnaire emphasize how important partnerships and tools are to strengthening Yemen's efforts at climate adaption. The majority of participants (60%) agreed that their organization needed certain relationships and tools to increase its capability, however 40% said that these resources were not available. This shows that in order to effectively address climate concerns, there is a high requirement for funding instruments, technical assistance, and strategic partnerships. The percentage of questionnaire replies is displayed in Table 5 and Fig. 14.

Table 5: The response on strengthening **Yemen's** climate adaptation efforts.

Response	Frequency	Percentage (%)
Yes	6	60%
No	4	40%

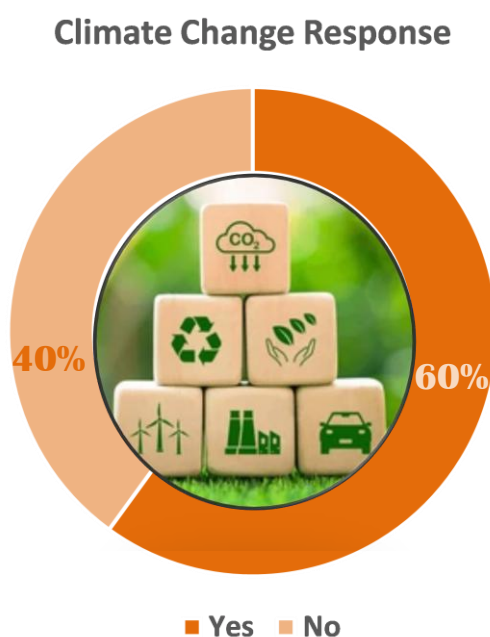


Fig. 14: The proportion of responses on **Yemen's** climate adaptation efforts.
(Source: **the author**).

Critical Reflections and Observations

1. Majority Support for Tools & Partnerships

60% of respondents believe that specific tools or partnerships would enhance their organization's capacity to address **climate change** in **Yemen**, highlighting the recognized need for external support, collaboration, and technical resources to improve climate adaptation efforts.

2. Significant Minority Expresses No Need

40% of respondents do not believe tools or partnerships are necessary, which could indicate satisfaction with existing resources or a lack of awareness about potential external support mechanisms.

3. Potential Reasons for Seeking Partnerships

Given the aforementioned challenges—insufficient funding, a lack of technical expertise, and ineffective governance—partnerships may provide opportunities for capacity building, information sharing, and financial support. Climate modeling technologies, **geospatial analysis software** (such as **ArcGIS**), and international alliances could all help with climate resilience planning significantly.

4. Need for Further Assessment

It is critical to determine whether technology tools, financial partnerships, or policy collaborations are the most desirable types of partnerships and tools for organizations seeking to personalize solutions.

Proposed Solutions

Important Resources and Technologies for Adapting to Climate Change

While **satellite imagery** and **remote sensing** aid in tracking changes in vegetation, water levels, and disaster impact assessments, geospatial and climate monitoring tools like **Geographic Information Systems (GIS)** allow for the precise identification of climate-affected areas, facilitating better planning and intervention. Climate prediction models also aid in the development of **early warning systems** and the forecasting of extreme weather events. Regarding renewable energy and sustainable technology, smart agriculture technologies like precision irrigation and climate-resilient crop practices increase food security, while solar and wind energy solutions alleviate power outages and lessen reliance on fossil fuels. Water scarcity is also mitigated by **water management systems**, which include innovations like desalination and rainwater collecting. Additionally, digital and community engagement tools are essential.

Community-based monitoring encourages local populations to report environmental risks and changes, while mobile applications facilitate data collecting, climate awareness campaigns, and **early warning** notifications.

Strategic Partnerships for Climate Resilience

Enhancing adaptive capability and sustainability requires strategic collaborations for climate resilience. While global environmental **NGOs** (**WWF**, **Red Cross**, **Oxfam**) provide assistance in conservation, disaster response, and community resilience-building, partnerships with international organizations, such as **United Nations agencies** (**UNDP**, **UNEP**, **FAO**, and **World Bank**), offer technical expertise, funding, and policy guidance. By collaborating with the ministries of agriculture, water, and environment to formulate policies and with **local government** agencies and environmental offices to carry out adaptation programs tailored to individual communities, **government** and institutional collaboration bolsters national efforts. Engaging the private sector speeds up climate action; agri-tech and water management companies provide sustainable solutions for food and water security, while renewable energy companies encourage the uptake of clean energy in rural areas. Through studies and innovation, **academic** and **research collaborations** with **universities** and **climate research institutes** improve data-driven planning for climate adaption. Additionally, **public-private partnerships (PPPs)** propel long-term investments in environmental sustainability, while financial innovations and climate funds, including the **Green Climate Fund (GCF)** and carbon credits, aid in securing funding for resilience initiatives.

9. Institutional collaboration with Yemeni climate experts and agencies

Addressing **Yemen's** environmental issues requires climate partnership, especially when it comes to adaptation and resilience-building initiatives. Gaining knowledge on the scope of collaborations between organizations and climate specialists can help identify **Yemen's** climate response's advantages and disadvantages. The degree of cooperation between groups, the success of current alliances, and the possibility of

increased cooperation are all examined in this analysis. For a more successful climate policy in **Yemen**, this report identifies possibilities to enhance technical ability, boost resource mobilization, and promote multi-sectoral engagement by analyzing data patterns and reactions.

Analysis & Interpretation

Questionnaire response: **Yes:** 6 responses (54.5%) **No:** 5 responses (45.5%).

There is a considerable degree of cooperation in climate-related projects, as evidenced by the slim majority (54.5%) of organizations that work with climate agencies or specialists. Nonetheless, 45.5% do not take part in these collaborations, suggesting possible deficiencies in technical know-how, networking, or resource awareness. Increasing cooperation with climate experts could improve access to climate adaption solutions, promote knowledge sharing, and increase project efficacy—all of which are critical for tackling **Yemen's** environmental issues.

The responses indicate that several organizations in **Yemen** actively collaborate with climate agencies, experts, and institutions at local, regional, and international levels. The partnerships highlighted include:

- **United Nations Agencies (UNDP, UNEP, WFP, FAO, World Bank):** These partnerships provide technical expertise, funding, and policy support for climate adaptation projects.
- **Government Institutions (Ministry of Agriculture, Water, Environment, and Health):** Collaboration with these ministries focuses on policy development, water resource management, and climate-smart agriculture.
- **Research Institutions & Universities:** Organizations benefit from data analysis, scientific research, and climate modeling to enhance adaptation strategies.
- **Private Sector & NGOs:** Partnerships with renewable energy companies and environmental **NGOs** enable the development of innovative climate solutions such as sustainable agriculture and **early warning systems**.

Key Observations:

1. **Moderate Engagement in Climate Collaboration:** While some organizations demonstrate strong engagement, the extent of participation varies. Some organizations primarily rely on expert consultations and reports, while others have structured collaborations with **UN** agencies and international bodies.
2. **Diverse Approaches to Climate Adaptation:** Organizations employ a range of tools, from **GIS** mapping and **satellite monitoring** to green financing and private-sector engagement. However, the effectiveness of these tools and strategies depends on institutional capacity and funding availability.
3. **Gaps in Awareness and Technical Capacity:** While many organizations recognize the importance of partnerships, there is room for increased collaboration, particularly in integrating advanced climate technologies and securing sustainable funding.
4. **Potential for Strengthening Coordination:** Existing partnerships indicate significant efforts, but a more unified national climate adaptation framework could enhance impact and reduce duplication of efforts among various organizations.

The data suggests that while many organizations in **Yemen** recognize the value of partnerships and tools in addressing **climate change**, collaboration levels and implementation capacities vary. Expanding partnerships, increasing access to technical expertise, and leveraging financial innovations will be crucial in strengthening **Yemen's** climate resilience efforts.

10. To What Extent Does Nexus Effectively Tackle Climate-Related Issues in Yemen?

The **Nexus approach**, which combines **development**, **peacebuilding**, and **humanitarian aid**, is becoming more and more acknowledged as a strategy for dealing with **Yemen's** climate-related issues. Evaluating **Nexus's** performance in addressing the nation's resource constraint, environmental degradation, and susceptibility to

catastrophic weather events is crucial. In order to strengthen climate resilience and sustainable development initiatives, this section evaluates reactions regarding the approach's perceived performance, emphasizing important trends and opportunities for progress.

Analysis & Interpretation

Questionnaire response: **Very well:** 3 responses (30%), **Moderate:** 4 responses (40%), **Poor:** 3 responses (30%) (Table 6).

Table 6: Statistical analysis of the **Nexus** approach in **Yemen**.

Response Category	Number of Responses	Percentage (%)
Moderately well	4	40%
Very well	3	30%
Poorly	3	30%
Total	10	100%

Interpretation:

- 1. Mixed Perceptions of Success:** While **70%** of respondents believe the **Nexus approach** is at least moderately successful in addressing climate-related challenges, only **30%** consider it very successful. This suggests a recognition of its effectiveness but also highlights room for improvement.
- 2. Significant Concerns:** With **30%** of respondents rating the approach as “**poorly**” effective, there is a notable portion of stakeholders who believe the **Nexus approach** is falling short, possibly due to implementation gaps, coordination challenges, or resource limitations.
- 3. Potential for Improvement:** The relatively low percentage of respondents rating the approach as “**very well**” (**30%**) indicates that while the **Nexus**

approach has promise, it may need refinement in execution, stronger partnerships, or increased funding to maximize impact (**Fig. 15**)

Integrating Nexus Strategies for Climate Resilience

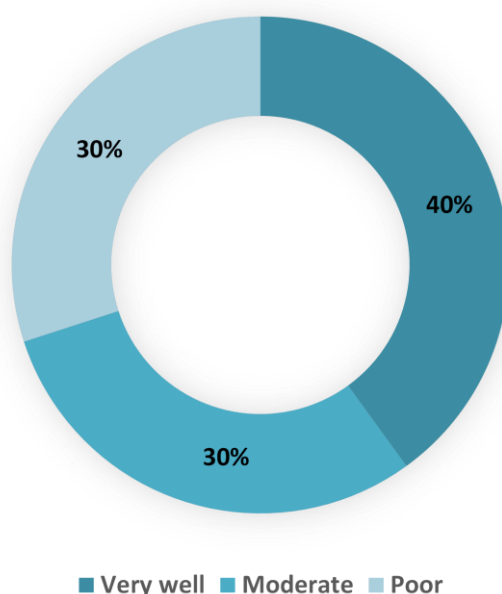


Fig. 15: A graph shows the percentage of **Nexus** strategies for climate resilience in **Yemen**. (Source: **the author**).

Assessing the Nexus Approach's Performance in Resolving **Yemen's** Climate Issues

The **Nexus** strategy, which combines **development**, **peacebuilding**, and **humanitarian** help, may offer **Yemen** long-term answers to its climate-related problems. However, evaluating its effectiveness necessitates examining both the enablers and the barriers to its application.

The Major Benefits of the Nexus Approach

1. International Recognition
2. Multilateral Partnerships

3. Sustainability Focus
4. Innovative Initiatives
5. Knowledge Sharing

The **Nexus** concept is gaining international recognition as a powerful paradigm for solving linked issues like violence, poverty, and **climate change**. Strong collaborations between global and local organizations facilitate its implementation and increase resource sharing. By incorporating climate adaptation into **humanitarian** and **development** initiatives, the strategy promotes long-term resilience. Several unique programs have effectively combined disaster response and sustainable **development**, assuring long-term impact. In addition, insights from previous experiences are constantly used to refine best practices and enhance execution.

Challenges Limiting Success

1. Ongoing Conflict
2. Funding Shortfalls
3. Institutional Weaknesses.
4. Coordination Gaps
5. Data Limitations

Political instability and security concerns cause ongoing conflict, which hinders program implementation. Funding deficiencies make long-term planning and sustainability difficult since financial resources are limited and inconsistent. Institutional problems within **government** agencies impede the successful implementation of **Nexus**-based projects. Coordination gaps among stakeholders result in fragmented efforts, decreasing the effectiveness of climate actions. Furthermore, data restrictions make it impossible to adequately estimate **Nexus** projects' impact on climate resilience.

Path Forward: Enhancing the Nexus Approach

To improve the effectiveness of **Nexus** in tackling climate-related issues, several strategic measures should be taken:

- **Develop Clear Performance Indicators** – Establish measurable benchmarks to track progress.
- **Enhance Data Collection & Monitoring** – Regular assessments should provide insights for adaptive planning.
- **Strengthen Multi-Sectoral Coordination** – Improved collaboration among humanitarian, development, and environmental stakeholders will enhance impact.
- **Increase Funding & Resource Allocation** – Securing sustainable financing is critical for long-term success.
- **Engage Local Communities** – Ensuring participation from affected populations can improve program relevance and effectiveness.

The **Nexus** strategy provides a viable framework for solving **Yemen's** climate concerns; but its influence is limited by financial and structural limitations. While it is regarded as modestly effective, more success will necessitate stronger collaboration, increased money, and enhanced coordination. Improving resource allocation and involving local stakeholders more effectively will be critical to optimizing the long-term effects on climate resilience.

11. Assess the Impact of Climate Change Adaptation Activities.

Measuring the effects of **climate change** adaptation operations is critical for determining efficacy, refining tactics, and obtaining funding for future projects. However, many **Yemeni** organizations struggle to create effective monitoring and evaluation processes. This report investigates how organizations quantify their adaptation efforts, highlighting existing gaps and the need for better assessment frameworks.

Statistical Analysis of Climate Change Adaptation Impact Measurement

Out of the **10** respondents, only **2 (20%)** indicated that their organization measures the impact of **climate change** adaptation activities, while **8 (80%)** do not. This suggests a significant gap in monitoring and evaluation efforts, which may limit the ability to assess the effectiveness of climate adaptation strategies. Strengthening impact measurement could help organizations refine their approaches, secure funding, and enhance long-term resilience (**Table 7, Fig. 16**).

Table 7: Impact Measurement of Climate Adaptation Activities.

Response	Number of Responses	Percentage (%)
Yes	2	20%
No	8	80%
Total	10	100%

Impact Measurement of Climate Adaptation Activities

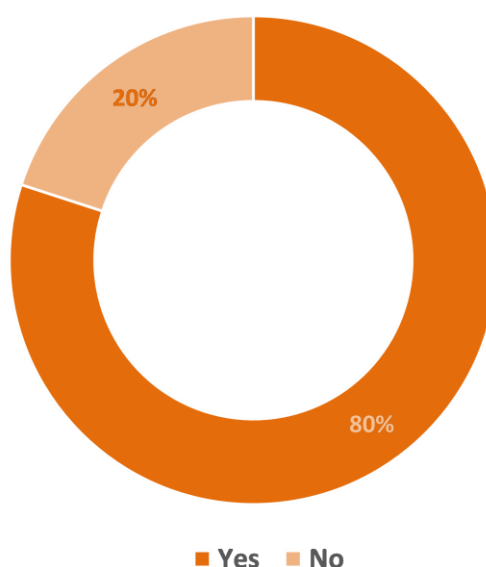


Fig. 16: Stakeholder Responses on **Climate** Adaptation Efforts in **Yemen**.
(Source: **the author**).

Evaluating Climate Change Adaptation: Insights from Local Organizations

Organizations that measure the impact of **climate change** adaptation activities use various indicators to assess effectiveness and sustainability. Common methods include reports, questionnaires, and meetings to track progress.

For example, some local organizations such as **Correction Foundation for Human Development** utilizes key performance indicators within the **Nexus approach**, focusing on:

1. **Food Security** – Evaluating improvements in food availability and sustainable income sources.
2. **Climate Adaptation** – Assessing the implementation of smart agriculture techniques and sustainable water management.
3. **Sustainability** – Measuring the long-term impact of renewable energy adoption and water conservation initiatives.
4. **Education and Training** – Tracking capacity-building efforts, particularly for youth and women.
5. **Peacebuilding** – Monitoring reductions in conflicts over natural resources due to improved management.
6. **Collaboration and Partnerships** – Analyzing the effectiveness of cooperation with local and international stakeholders.

In summary of the preceding session, the statistics show that, while some organizations actively measure the impact of their **climate** adaption efforts, the majority do not have organized monitoring frameworks. Those who do analyze impact prioritize food security, resource sustainability, and capacity development. Improving effect measurement through standardized frameworks and data gathering approaches could boost accountability and improve **climate** adaptation initiatives in [Yemen](#).

12. Evaluating the Long-term Climate Resilience of Communities Assisted by Programs

Community Needs Analysis: Periodic field studies identify climate-related needs such as water management and agriculture, while questionnaires and interviews measure community awareness of climate challenges.

Climate Adaptation Indicators: Food security, agricultural diversification, smart irrigation systems, and environmental protection are assessed alongside the use of **geographic information systems (GIS)** and climate forecasting models to map risks and develop effective response strategies.

Environmental and Social Impact Evaluations: Periodic reviews determine the sustainability of climate adaptation strategies, while social and environmental studies ensure long-term benefits.

Community Participation in Assessments: Workshops and community meetings gather feedback on programs, while training initiatives equip communities to monitor environmental changes.

Institutional Adaptation: Evaluating the capacity of local institutions, including municipalities and local authorities, to support climate adaptation efforts.

Financial Impact Analysis: Assessing the financial viability and long-term sustainability of climate adaptation projects.

2. Indicators Used for Long-Term Adaptation Capacity

Knowledge and Awareness: Measuring community awareness of **climate change** impacts and their ability to relate these changes to daily life.

Sustainable Practices: Assessing the community's reliance on sustainable agricultural practices, water management, and livelihood diversification.

Infrastructure and Resilience: Evaluating infrastructure quality, including irrigation systems, sanitation, and flood protection.

Community Organization and Innovation Capacity: Assessing the strength of community organizations and their ability to make collective decisions, as well as measuring their capacity to develop innovative solutions to climate challenges.

3. Evaluation Methods

Opinion Surveys: Regular surveys to monitor shifts in community opinions and practices.

Interviews and Group Discussions: In-depth interviews with community leaders, farmers, women, and youth.

Practice Monitoring: Observing agricultural practices and natural resource management efforts.

Secondary Data Analysis: Analyzing climate and agricultural data to identify trends and changes.

Impact Evaluation: Conducting overall impact assessments to measure the effectiveness of programs in enhancing community resilience.

4. Challenges in Assessing Adaptation Capacity

Limited Data: The availability of data, especially in rural communities, is often scarce, making comprehensive evaluations challenging.

Rapid Changes in Conditions: Political instability and **climate change** effects cause rapid shifts in living conditions, necessitating continuous updates to assessment methods.

Limited Capacity of Communities: Some communities face challenges in participating in the assessment process due to illiteracy or resource constraints.

5. The Importance of Community Participation

Design and Self-Assessment: Communities participate in designing assessment tools and indicators, enabling them to self-assess their progress.

Knowledge Exchange: Workshops and training sessions facilitate the exchange of knowledge and experiences among community members.

6. Practical Examples of Adaptation Projects

Water Management Projects: Implementation of smart irrigation systems and drought-resistant farming techniques, along with assessing their impact on crop productivity and the economic capacity of farmers.

Sustainable Agriculture: The use of climate-resilient farming methods to improve food security and agricultural production.

Disaster Preparedness: Evaluating communities' readiness to cope with climate-related disasters.

Using a mix of these approaches and indicators, organizations can successfully assess and improve **Yemeni** communities' climate adaption capabilities. This strategy aids in identifying gaps, prioritizing actions, and developing long-term resilience to **climate change**. However, issues such as inadequate data and quick changes in community conditions must be addressed in order to increase the accuracy and comprehensiveness of assessments.

Table 8: Assessment methods and indicators.

Assessment Area	Methods	Indicators
Community Needs Analysis	Field studies, questionnaires, and interviews	Community understanding of climate challenges and needs
Climate Adaptation Indicators	Use of GIS, climate models, smart irrigation	Improved food security, water management, biodiversity conservation
Environmental & Social Impact	Periodic reviews, social and environmental assessments	Long-term sustainability, social and environmental impact
Community Participation	Workshops, training, and community meetings	Feedback on program effectiveness and local decision-making
Institutional Adaptation	Evaluation of local authorities and institutions	Capacity of local institutions to support climate adaptation programs
Financial Impact	Financial feasibility studies	Long-term funding sustainability, operating costs
Challenges in Assessment	Limited data, rapid changes, limited community capacity	Accurate measurement of adaptation capacity in challenging environments

13. The Procedures for Evaluating the Nexus of Climate Resilience, Development, and Peacebuilding

Assessing the **Nexus** of **climate** resilience, **development**, and **peacebuilding** is essential for guaranteeing long-term and conflict-sensitive adaptation solutions. While some organizations have built processes to assess these relationships, others face difficulties in incorporating comprehensive assessment systems. This review addresses how organizations quantify these interlinkages, identifies gaps, and makes recommendations for enhancing evaluation methods to improve long-term resilience and development results.

Analysis of Climate Resilience, Development, and Peacebuilding Assessment Mechanisms

The responses indicate varying levels of integration of assessment mechanisms for **climate** resilience, **development**, and **peacebuilding** across different organizations. The data can be categorized into three groups: organizations that assess the intersection fully (**Yes**), those that do not assess it at all (**No**), and those that have partial mechanisms in place (**Partially**) ([Table 9](#) & [Fig. 17](#)).

Table 9: Depicts the assessment mechanisms.

Response Category	Count	Percentage
Yes (Assessment in place)	5	50%
No (No assessment mechanisms)	4	40%
Partially (Limited assessment mechanisms)	1	10%



Fig. 17: climate resilience, development, and peacebuilding assessment mechanisms in Yemen.
(Source: the author).

Major Findings

1. **Half of the respondents (50%) confirm that mechanisms exist** to assess the intersection of **climate** resilience, **development**, and **peacebuilding**. This indicates a growing recognition of the interconnections between these sectors.
2. **40% of organizations have no assessment mechanisms in place**, suggesting that many programs operate independently without structured evaluation of their combined impact.
3. **Only one organization (10%) reports a partial mechanism**, indicating an effort to integrate assessment but with gaps in implementation or methodology.

Considerations and Future Directions

- **Strengthen Integration:** Organizations without assessment mechanisms should consider adopting structured frameworks to analyze how **climate** resilience, **development**, and **peacebuilding** interact.
- **Standardized Indicators:** Establishing common assessment indicators across organizations can improve comparability and enhance policy coordination.

- **Capacity Building:** Training and knowledge-sharing initiatives can help organizations develop effective mechanisms to measure the interconnected impact of their programs.
- **Funding and Support:** International donors and stakeholders should provide financial and technical support to organizations struggling to integrate assessment mechanisms.

The next step: Addressing these gaps allows organizations to take a more holistic approach to resilience building, resulting in more successful **climate** adaptation and conflict-sensitive **development** initiatives.

14. Intersection of Climate Change and Nexus HDP Challenges in Yemen

Climate change is reshaping the **humanitarian, development, and peacebuilding** environment in **Yemen**. Its impacts extend beyond environmental degradation to include resource availability, societal stability, and economic resilience. While some regard **climate change** as a chance for environmental cooperation and **peacebuilding**, others see it as a cause of resource-based conflicts and **humanitarian** catastrophes.

By presenting the following question, participants' responses reflect diverse perspectives on the issue: **In your opinion, how does climate change interact with humanitarian, development, and peacebuilding concerns in Yemen?**

The responses were as follows:

1. **Enhances environmental cooperation**, which supports peacebuilding and development
2. **Has no direct impact**, as challenges depend on political and social factors
3. Ignites competition for resources such as water and land, which increases conflicts
4. **Increases natural disasters** such as droughts and floods, which exacerbates humanitarian crises.

15. Political and/or programmatic advice for climate change within the context of the triple nexus approach in Yemen

In response to the growing challenges posed by **climate change**, there is a need for comprehensive policy and programmatic solutions to enhance climate adaptation and resilience ([Table 10](#)). This is particularly true in [Yemen](#), where **climate change** intersects with **humanitarian**, **development**, and **peacebuilding** concerns. Addressing these challenges requires a collaborative approach, and policy recommendations can help shape strategies for long-term sustainability. The following summarizes the key policy and programmatic recommendations offered by participants to better address **climate change** within the framework of the **Nexus approach** in [Yemen](#).

Finally, [Yemen](#) can significantly increase its **climate** resilience by implementing these policy and programmatic recommendations under the **Nexus model**. These initiatives will not only address current **climate** concerns, but will also assure long-term sustainability by boosting local capacity building, inter-sectoral collaboration, and the use of both **local** and **international collaborations**. [Yemen](#) may better manage the complex intersection of **climate change**, **humanitarian** needs, and **development** goals by emphasizing community engagement, long-term finance, and incorporating climate adaptation into national **development** plans ([Table 10](#)).

Table 10: Policy and programmatic recommendations summary.

Recommendation	Policy Recommendation	Programmatic Recommendation
Coordination Across Sectors	Strengthen coordination between relevant ministries (e.g., Water, Agriculture, Environment)	Implement integrated projects combining water management, agriculture, and environmental improvements in rural areas
Sustainable Financing for Climate Projects	Establish dedicated financing mechanisms to support climate adaptation	Target small and medium enterprises with soft loans for climate adaptation projects, like sustainable agriculture
Building Local Capacities	Support training and awareness initiatives at the community level	Offer training in drought-resistant agriculture methods and smart irrigation systems
Integration into National Development Plans	Incorporate climate adaptation into national development strategies	Develop adaptive agricultural and water management strategies based on future climate predictions
Strengthening International and Local Partnerships	Expand partnerships with international organizations to attract funding and technology	Collaborate with private sectors and NGOs for integrated solutions in water, renewable energy, and sustainable agriculture
Local Level Adaptation Strategies	Develop local strategies for climate adaptation and allocate resources	Prepare local action plans to improve infrastructure resilience and capacity to address climate challenges
Improved Climate Data and Monitoring	Enhance data collection and monitoring systems for climate change	Use GIS and remote sensing technologies for real-time monitoring of climate impacts
Strengthening Natural Resource Policies	Establish policies for sustainable management of natural resources like water and land	Implement projects for soil protection and sand stabilization in vulnerable areas

Trends in Climate Change and Its Intersection with Humanitarian, Development, and Peacebuilding Concerns in Yemen

Yemen is facing escalating climate-related issues, such as rising temperatures, extended droughts, and extreme weather events, which worsen current **humanitarian** disasters. **Climate** change's confluence with food insecurity, displacement, and resource constraint exacerbates vulnerabilities, hampering **development** and **peacebuilding** efforts. Weak governance and persistent violence impede the country's ability to adopt climate adaption methods, necessitating integrated efforts across **humanitarian** aid, sustainable **development**, and conflict resolution to ensure long-term stability and resilience. The following summarize the key trends and challenges at the intersection of **climate change**, **humanitarian** needs, **development** initiatives, and **peacebuilding** efforts in **Yemen**, highlighting the urgent need for coordinated and sustainable interventions (**Table 11**).

1. **Increasing Severity of Climate Events:** **Yemen** is experiencing more frequent and intense climate-related disasters, including droughts, floods, and extreme heat. These events exacerbate existing **humanitarian** crises, reduce agricultural productivity, and undermine the ability of communities to rebuild, making resilience efforts even more urgent.
2. **Water Scarcity:** **Yemen's** already limited water resources are further strained by **climate change**, with rising temperatures and reduced rainfall leading to a more significant water scarcity problem. The country's reliance on water-intensive agriculture exacerbates the strain, with groundwater resources depleting rapidly.
3. **Agricultural Vulnerability:** Agriculture, which is a key source of livelihood for the majority of **Yemen's** population, is increasingly vulnerable to changing climate conditions. Reduced rainfall and rising temperatures disrupt crop production, particularly in rural areas, and force farmers to adopt unsustainable coping strategies.
4. **Intersectoral Coordination Gaps:** Although the **Nexus approach** (**Humanitarian, Development, and Peacebuilding**) promotes integrated

interventions, **Yemen** lacks effective coordination across sectors. This results in fragmented approaches, especially regarding **climate change**, where **development**, **humanitarian**, and **peacebuilding** efforts often work in isolation rather than reinforcing one another.

5. **Migration and Displacement:** Climate-induced migration is becoming more common, with people forced to move due to both conflict and environmental degradation (e.g., droughts). These displaced populations are further burdened by **humanitarian** needs, complicating **peacebuilding** and **development** efforts.
6. **Increasing International Support:** International attention on **Yemen's** climate challenges is growing, with global and local organizations focusing more on climate adaptation and resilience-building programs. This includes financial and technical support for climate-smart agriculture, renewable energy solutions, and disaster risk reduction.

Strengths of Addressing Climate Change within the Nexus Approach

1. **Integrated Solutions:** The **Nexus approach**, which integrates **humanitarian**, **development**, and **peacebuilding** efforts, enables holistic solutions. This integrated framework allows **climate** adaptation projects to address immediate needs while simultaneously fostering long-term resilience and peace.
2. **Community-Centered:** The emphasis on community participation and local capacity-building in addressing **climate change** ensures that solutions are relevant and sustainable. Local ownership helps ensure that the affected communities are empowered to adapt to the changing climate.
3. **Focus on Sustainable Practices:** The **Nexus approach** promotes sustainable practices such as climate-resilient agriculture, water conservation, and renewable energy. These initiatives help build resilience in vulnerable communities while addressing the immediate impacts of **climate change**.

4. **International and Local Collaboration:** The approach encourages collaboration among local institutions, international organizations, and the private sector, enabling the mobilization of resources and expertise to tackle complex **climate** and **development** challenges.

Weaknesses in Addressing Climate Change within the Nexus Approach

1. **Lack of Effective Coordination:** While the **Nexus approach** calls for integration across sectors, in practice, there is often insufficient coordination between **humanitarian, development, and peacebuilding** sectors in **Yemen**. This leads to fragmented efforts, reducing the overall effectiveness of **climate change** adaptation.
2. **Limited Resources and Funding:** **Yemen** faces significant financial constraints, and while there is growing international support, the funding available for large-scale climate adaptation projects is still limited. This hampers the ability to implement widespread change, especially in rural or conflict-affected areas.
3. **Capacity Gaps at the Local Level:** Local institutions and communities often lack the technical expertise and resources to fully implement climate adaptation strategies. While the **Nexus approach** promotes capacity-building, the pace at which local skills are developed can be slow, especially in conflict zones.
4. **Political and Security Instability:** The ongoing conflict in **Yemen** limits the scope and effectiveness of climate adaptation efforts. Political instability undermines long-term planning and complicates the implementation of peacebuilding and development projects, making it harder to achieve climate resilience in the country.
5. **Data and Monitoring Challenges:** There is a lack of comprehensive data on **climate change** impacts and adaptation progress in **Yemen**. Without reliable monitoring systems, it becomes difficult to track progress, evaluate interventions, and adjust strategies effectively.

Table 11: Shows the trends, strengths, and weaknesses in addressing **climate change** within the **Nexus Approach**.

Trends	Strengths	Weaknesses
Increasing severity of climate events (droughts, floods)	Integrated solutions addressing humanitarian, development, and peacebuilding needs	Lack of effective coordination between sectors
Water scarcity exacerbated by climate change	Focus on community-centered, sustainable practices	Limited resources and funding for large-scale projects
Vulnerability of agriculture to climate change	Local ownership and capacity-building	Capacity gaps at the local level
Intersectoral coordination gaps	Encourages international and local collaboration	Political and security instability complicates efforts
Migration and displacement due to climate stress	Supports long-term resilience-building	Lack of reliable data and monitoring systems
Growing international support for climate adaptation	Promotes renewable energy and climate-smart agriculture	Slow pace of local capacity development

Building a Resilient Future: Integrating Climate Adaptation into Yemen's Nexus Approach

Yemen faces a unique and complex intersection of **climate change**, **development**, and **peacebuilding** challenges. With increasing environmental threats such as droughts, water scarcity, and extreme weather events, the need for a **comprehensive and coordinated response** has never been greater. By integrating climate adaptation strategies into the **Nexus approach**, **Yemen** can develop more effective and sustainable solutions that address both immediate **humanitarian** needs and long-term resilience.

The interconnected nature of **climate change**, **conflict**, and **development** requires a shift towards holistic strategies that bring together local communities, policymakers, and international organizations. While there are promising efforts in place, challenges such as funding gaps, weak coordination, and limited data collection still hinder progress. Strengthening collaboration across sectors, investing in **climate-smart solutions**, and ensuring local participation are crucial steps toward building a future where **Yemen's** communities can adapt, thrive, and rebuild sustainably.

Addressing **climate change** within the **Nexus** framework is not just about **mitigating risks**—it's about empowering communities, fostering stability, and creating long-term **development** opportunities. The road ahead is challenging, but with strategic planning, strong partnerships, and innovative approaches, **Yemen** can turn these challenges into opportunities for a more resilient and sustainable future.

Key Findings on the Nexus Approach in Yemen

1. Sectoral Distribution in Yemen

Organizations prioritize **humanitarian** relief (**31%**), followed by **development** projects (**30%**). **Peacebuilding** initiatives account for **26%**, highlighting persisting issues in conflict resolution and governance. The remaining **13%** fall into the "**other**" category, which includes cross-sector projects that include numerous areas of engagement.

2. Challenges Facing Humanitarian Organizations

Financial constraints (**82%**) remain the fundamental obstacle, with funding shortfalls impeding long-term initiatives and project continuation. Administrative and structural constraints, such as bureaucratic hurdles, insufficient institutional capacity, and transparency difficulties, further reduce operational efficiency. Accessibility issues, such as security concerns, limited infrastructure, and competition from foreign groups, impede help delivery. Furthermore, conflict-related limitations, such as armed conflict and social disturbances, heighten **humanitarian** needs and impede program implementation.

3. Coordination Among Nexus Sectors

Coordination efforts show mixed results, with **30%** of participants rating them as strong while another **30%** perceive them as weak, highlighting inconsistencies in integration. Effective collaboration remains essential to aligning **humanitarian**, **development**, and **peacebuilding** initiatives for lasting impact.

4. Climate Change Impact and Response

Water scarcity, harsh weather, desertification, and droughts are all significant **climatic** impacts that promote food insecurity and relocation. In response, **50%** of firms are actively addressing **climate change** through climate-smart agriculture, water management, and disaster mitigation. Furthermore, **78%** of respondents see **climate change** as a major cause of displacement and migratory trends.

5. Measuring Climate Adaptation Impact

Only **20%** of organizations measure the impact of climate adaptation, while **80%** lack structured monitoring frameworks. Key indicators for assessing progress include food security, water conservation, sustainable energy use, and the effectiveness of **peacebuilding** efforts.

6. Institutional Collaboration with Climate Agencies

While **54.5%** of organizations collaborate with climate agencies, **45.5%** lack such engagement, highlighting gaps in technical expertise and resource mobilization. Strengthening local, national, and international partnerships is essential for enhancing climate resilience initiatives.

Conclusion

1. Need for Stronger Integration of the Nexus Approach

Although organizations recognize the significance of integrating **humanitarian**, **development**, and **peacebuilding** initiatives, practical coordination is inconsistent. Building partnerships across these sectors is critical to achieving long-term resilience and stability.

2. Climate Change as a Growing Threat

Climate-related disasters are becoming more frequent and severe, escalating **Yemen's humanitarian** crisis. Water scarcity, droughts, and displacement necessitate immediate adaptation methods to avoid further deterioration of conditions.

3. Funding Gaps Hinder Long-Term Sustainability

Short-term funding cycles hinder the viability of **humanitarian** and **development** programs, necessitating results-based financing and novel funding structures, such as **climate** adaptation funds, to improve long-term resilience.

4. Weak Monitoring and Evaluation Systems

The lack of established impact assessment frameworks hinders organizations' capacity to track progress and adapt initiatives, whereas improving data-driven decision-making increases accountability and program success.

5. Community Engagement is Essential

Local participation in program design and implementation promotes more sustainable and culturally relevant solutions, whilst training and capacity-building projects should aim to empower communities for long-term adaptation.

Recommendations

1. Strengthen Coordination Between Humanitarian, Development, and Peacebuilding Sectors

Establishing joint coordination platforms to align interventions across the **Nexus approach** and enhancing data-sharing mechanisms are essential for improving efficiency and resource allocation.

2. Expand Funding Mechanisms and Sustainable Financing

Advocating for multi-year funding models that prioritize long-term **development** over short-term emergency relief, as well as encouraging **public-private partnerships (PPPs)** and **climate adaptation funds**, would help to attract investment in resilience projects.

3. Improve Climate Change Adaptation Strategies

Investing in climate-smart agriculture, water management, and disaster preparedness will assist to mitigate environmental hazards, while expanding **early warning systems** and **GIS-based monitoring** tools will improve climate vulnerability tracking.

4. Enhance Monitoring, Evaluation, and Learning (MEL) Systems

Creating standardized impact assessment frameworks to monitor climate adaption performance, as well as deploying real-time data collection tools like **GIS** and **AI analytics**, will enhance reporting and decision-making.

5. Strengthen Institutional and Community Capacity

Providing training and technical support to local groups for better governance and climate adaptation, as well as promoting women's and youth empowerment programs, will increase community-led resilience initiatives.

6. Promote Policy and Legislative Support for Climate Resilience

Advocating for climate adaptation policies and incorporating them into **national** development plans, as well as supporting environmental governance changes, will improve resource management and conflict resolution initiatives.

7. Enhance Collaboration with International and Local Climate Agencies

Expanding ties with **UNDP**, **UNEP**, **FAO**, and the **World Bank** to gain technical experience and finance, as well as improving academic and research connections, would help to enhance data-driven adaption plans.

Final Thought

Addressing **Yemen's** climate challenges through the **Nexus approach** requires **stronger sectoral coordination, increased funding, community-driven adaptation efforts, and improved monitoring systems**. By leveraging local and international partnerships and integrating climate resilience into **humanitarian** and **development** planning, **Yemen** can build a **more sustainable and adaptive future**.

PART V

Recommendations

Recommendations for Climate Change and Nexus Initiatives

I. Recommendations for Integrating Climate Change into Future Nexus Initiatives

Background

Climate change poses significant challenges to the interdependent systems of **water, energy, and food (WEF)**, necessitating an integrated approach to ensure sustainability and resilience. These recommendations aim to guide the incorporation of climate considerations into **Nexus** initiatives, ensuring they address both immediate and long-term challenges posed by climate variability and extreme events.

1. Adopt a Climate-Informed Nexus Approach:

Incorporate climate change projections, risks, and adaptation strategies into the **WEF Nexus** framework to address interdependencies. Ensure climate-resilient planning across sectors, with a focus on vulnerable systems.

2. Enhance Data-Driven Decision-Making:

Integrate climate models, remote sensing data, and geospatial tools into **Nexus** initiatives to improve forecasting and resource management. Utilize scenario-based analysis for long-term climate resilience.

3. Strengthen Governance and Collaboration:

Promote cross-sectoral coordination between stakeholders, including governments, private sectors, and local communities, to align climate

objectives with **Nexus** priorities. Develop regulatory frameworks that support integration.

4. Incorporate Ecosystem-Based Solutions:

Implement nature-based solutions like drought-resistant vegetation restoration and soil conservation to address water, energy, and food security challenges in arid regions.

5. Mainstream Climate Finance:

Access climate funds to finance **Nexus** projects, ensuring the alignment of investments with both development and climate adaptation goals. Encourage private sector participation through incentives for green infrastructure and technologies.

6. Capacity Building and Awareness:

Train stakeholders in climate-resilient **Nexus** practices and build awareness of **climate change** impacts at the community level to foster local engagement.

Way Forward

To effectively integrate **climate change** considerations into future **Nexus** initiatives, it is essential to prioritize a holistic, collaborative, and adaptive approach. By embedding climate resilience into water, energy, and food systems, **Yemen** can address immediate vulnerabilities while laying the groundwork for sustainable development. Key steps include fostering multi-sectoral partnerships to align priorities, leveraging innovative technologies and data systems for informed decision-making, and securing long-term investments through climate finance mechanisms. Building capacity at all levels and incorporating ecosystem-based solutions will ensure that **Nexus** initiatives are not only climate-resilient but also equitable and inclusive, empowering local communities to actively participate in addressing shared climate challenges.

II. Proposed Strategies and Action Plans to Strengthen Community Resilience

Background

Building community resilience to climate change is critical for reducing vulnerabilities, enhancing adaptive capacities, and ensuring sustainable development. The following strategies and action plans focus on empowering communities, improving infrastructure, and fostering innovative solutions to help communities better cope with climate-related challenges.

7. Enhance Early Warning Systems:

- ❖ Develop community-based **early warning systems** for extreme weather events, integrating advanced technologies and local knowledge.
- ❖ Provide training to communities on interpreting alerts and implementing preparedness measures.

8. Promote Climate-Resilient Livelihoods:

- ❖ Support diversification of income sources (e.g., agroforestry, aquaculture) to reduce reliance on climate-sensitive sectors.
- ❖ Provide access to microfinance and climate insurance for smallholder farmers and vulnerable groups.

9. Improve Water Resource Management:

- ❖ Implement rainwater harvesting systems and promote efficient irrigation technologies.
- ❖ Restore and protect watersheds to ensure sustainable water supply during droughts.

10. Strengthen Infrastructure:

- ❖ Invest in climate-resilient infrastructure such as flood defenses, energy-efficient buildings, and decentralized renewable energy systems.
- ❖ Prioritize infrastructure projects in high-risk areas identified through **climate risk assessments**.

11. Foster Community Engagement and Leadership:

- ❖ Empower local communities through participatory planning and decision-making processes.
- ❖ Establish local committees to oversee climate resilience projects and maintain accountability.

12. Support Education and Knowledge Sharing:

- ❖ Integrate **climate change** education into school curriculums and community training programs.
- ❖ Create knowledge hubs to share best practices, innovations, and research on resilience-building strategies.

13. Leverage Digital and Technological Tools:

- ❖ Utilize **IoT, GIS**, and mobile applications to monitor climate impacts and disseminate critical information to communities in real time.
- ❖ Promote the use of smart agriculture tools for better resource optimization.

Way Forward

Integrating **climate change** into **Nexus** initiatives and strengthening community resilience requires a coordinated, multi-sectoral approach that prioritizes governance, technology, and community participation. These strategies provide a robust

framework for addressing vulnerabilities, enhancing adaptive capacities, and achieving sustainable development in the face of climate challenges.

III. Recommendations for Humanitarian, Development, and Peacebuilding Actors in Yemen

Introduction

Yemen faces compounding challenges from protracted conflict, economic instability, and climate change, which exacerbates vulnerabilities in food security, water access, and livelihoods. **Humanitarian, development, and peacebuilding** actors must integrate **climate change** considerations into their work to address these interconnected issues and foster long-term resilience. The following are specific and actionable recommendations tailored to **Yemen's** context.

1. Humanitarian Actors: Building Climate-Smart Emergency Responses

- ❖ **Integrate Climate Risks in Needs Assessments:** Include climate vulnerability mapping in humanitarian assessments to identify high-risk regions and prioritize assistance accordingly.
- ❖ **Promote Climate-Resilient Shelter Solutions:** Design shelters and camps to withstand extreme weather events such as floods and heatwaves, incorporating energy-efficient and sustainable materials.
- ❖ **Enhance Water Access:** Invest in solar-powered water systems, rainwater harvesting, and rehabilitation of damaged wells to address water scarcity and reduce reliance on fuel-dependent systems.
- ❖ **Strengthen Food Security Responses:** Distribute drought-resistant seeds and climate-adaptive agricultural inputs to displaced and vulnerable farmers, ensuring emergency food aid is complemented by long-term solutions.

- ❖ **Early Warning Systems:** Develop community-based early warning systems for climate-induced disasters, integrating local knowledge with advanced forecasting tools.

2. Development Actors: Fostering Climate-Resilient Growth

- ❖ **Invest in Green Infrastructure:** Rebuild roads, water networks, and energy systems with climate-resilient designs to mitigate damage from floods, droughts, and other extreme events.
- ❖ **Support Sustainable Livelihoods:** Promote income-generating activities that are climate-resilient, such as agroforestry, aquaculture, and renewable energy-based enterprises.
- ❖ **Rehabilitate Ecosystems:** Implement large-scale reforestation and mangrove restoration projects to combat desertification, protect water resources, and reduce the impact of climate hazards.
- ❖ **Capacity Building and Education:** Train local communities and **government** officials in climate change adaptation and mitigation strategies, ensuring knowledge transfer and local ownership.
- ❖ **Integrate Climate Considerations into Policy:** Support the **Yemeni** government in developing climate-informed national and local development plans that address **climate change** and conflict dynamics.

3. Peacebuilding Actors: Aligning Climate and Peace Objectives

- ❖ **Address Climate-Conflict Linkages:** Incorporate **climate change** as a critical factor in conflict analyses and peacebuilding strategies to reduce competition over scarce resources like water and arable land.
- ❖ **Promote Collaborative Resource Management:** Facilitate community dialogues to address disputes over shared resources, ensuring equitable access and reducing tensions.

- ❖ **Ensure Climate-Sensitive Reconstruction:** Incorporate climate adaptation measures in reconstruction efforts, especially in rural areas, to foster stability and trust.
- ❖ **Strengthen Social Cohesion via Climate Action:** Engage communities in joint climate projects like reforestation and flood defense to build social bonds and alleviate grievances.
- ❖ **Mobilize International Climate Support:** Leverage global climate financing to fund peacebuilding initiatives that address the link between **climate change** and conflict.

Way Forward

Integrating **climate change** considerations into humanitarian, development, and peacebuilding efforts in **Yemen** is essential to breaking the cycle of vulnerability and fostering long-term stability. By adopting these targeted actions, actors can address immediate needs while building a foundation for sustainable and climate-resilient recovery. Collaborative approaches that align climate, development, and peace objectives will ensure that **Yemen's** most vulnerable populations are equipped to face the dual challenges of conflict and **climate change**.

IV. Recommendation for Developing an Effective Monitoring and Evaluation Framework for Climate Change Adaptation and Mitigation in Yemen

Introduction:

To address **Yemen's** vulnerability to climate change, it is crucial to develop a robust, data-driven, and inclusive **Monitoring and Evaluation (M&E)** framework that ensures

the efficient tracking of adaptation and mitigation efforts. This framework should integrate key elements such as the use of technology, community engagement, and alignment with global best practices, while being context-specific to **Yemen's** socio-political and environmental challenges.

Key components of the framework include

1. Establish Multi-Tiered Context-Specific Indicators:

- ❖ Design national, regional, and sector-specific **KPIs** that reflect **Yemen's** climate vulnerabilities, such as water scarcity, agriculture, and coastal zone impacts.
- ❖ Include long-term impact-oriented metrics like improved resilience, water security, and **GHG** emission reductions.

2. Leverage Technology for Real-Time Monitoring:

- ❖ Utilize **remote sensing**, **GIS**, and **IoT** systems to monitor environmental parameters like land use changes, water quality, and soil moisture.
- ❖ Create centralized digital dashboards for visualizing data and improving decision-making.

3. Foster Participatory Processes and Multi-Stakeholder Collaboration:

- ❖ Engage local communities in data collection and validation to reflect on-the-ground realities.
- ❖ Facilitate collaboration among **government**, **NGOs**, **academia**, and the **private sector** to co-design and implement the **M&E** activities.

4. Develop Baselines and Adaptive Benchmarks:

- ❖ Conduct baseline studies to measure pre-intervention conditions and assess progress.
- ❖ Establish realistic and adaptive benchmarks based on emerging data and evolving climate scenarios.

5. Institutionalize M&E Systems and Secure Funding:

- ❖ Form a central authority responsible for climate **M&E**, with standardized protocols for data collection, analysis, and reporting.
- ❖ Ensure long-term funding through climate finance mechanisms and donor support to sustain **M&E** activities.

6. Align with Global Frameworks and Best Practices:

- ❖ Integrate the **M&E** framework with the **SDGs** and **UNFCCC** reporting mechanisms for global alignment.
- ❖ Adapt successful **M&E** models from other vulnerable regions to **Yemen's** specific needs and challenges.

7. Integrate M&E Findings into Policy and Decision-Making:

- ❖ Use **M&E** insights to guide evidence-based policy decisions and prioritize high-impact climate projects.
- ❖ Establish feedback mechanisms to adjust strategies based on real-time findings, ensuring that climate adaptation and mitigation efforts remain effective and responsive.

Way Forward

To successfully implement this **M&E** framework, **Yemen** must adopt a comprehensive, inclusive, and data-driven approach that integrates technology, community participation, and cross-sector collaboration. The framework should be designed to evolve with emerging climate trends, ensuring that it remains adaptive and responsive to both short-term and long-term challenges. Key next steps include securing funding from climate finance mechanisms, **developing** capacity at local and national levels, and ensuring strong coordination between stakeholders to foster effective implementation. Regular monitoring and feedback loops will allow for the continual refinement of policies and strategies, ensuring **Yemen's** climate resilience efforts are on track. This framework will not only help **Yemen** manage its climate adaptation and

mitigation efforts but also contribute to global climate goals, reinforcing **Yemen's** role in tackling **climate change**.

V. Strategic Recommendation for Developing an Integrated M&E Framework

Prioritize the development of a comprehensive, data-driven, inclusive, and well-resourced **Monitoring and Evaluation (M&E)** system that integrates the **Nexus** approach by addressing the critical interconnections between water, energy, and food security, while embedding **climate change** considerations into each of these sectors. This system should not only track **climate change** adaptation and mitigation efforts but also evaluate the synergies and trade-offs across sectors, ensuring a holistic and integrated approach. By doing so, it will inform evidence-based policies, foster cross-sectoral collaboration, and create a resilient and sustainable **development** framework for **Yemen**. The system should empower local communities, ensure equitable resource allocation, and help **Yemen** navigate its climate challenges, with a particular focus on vulnerable populations who are most affected by climate variability and extreme events. This approach will enhance **Yemen's** capacity to achieve long-term climate resilience while promoting synergies between sectors critical to **national development**.

APPENDIX – A

Part I: Questionnaire for Humanitarian Stakeholders:

Nexus Approach in Yemen

This questionnaire is intended to collect feedback from humanitarian stakeholders in order to improve the execution of the Humanitarian-Development-Peace (HDP) Nexus approach in Yemen. The questions are arranged into five areas that cover the core components of Nexus programming: humanitarian assistance, development, peacebuilding, coordination, and challenges/opportunities.



Section 1: General Information

1. **Name of Organization:**

2. **Type of Organization:**

- ☐ 1. International NGO
- ☐ 2. Local NGO
- ☐ 3. UN Agency
- ☐ 4. Governmental Body
- ☐ 5. Donor Agency
- ☐ 6. Other (please specify):

3. **Main Area(s) of Work:**

- ☐ 1. Humanitarian Assistance
- ☐ 2. Development
- ☐ 3. Peacebuilding
- ☐ 4. Other (please specify):

4. **Regions in Yemen Where Your Organization Operates:**
.....

Section 2: Humanitarian Assistance

1. What are the main humanitarian challenges your organization is addressing in Yemen?
.....

2. Are your humanitarian programs designed with a focus on resilience and sustainability? If yes, please provide examples.
-
-
3. Do you consider local community involvement when designing and implementing humanitarian projects?
- ☐ 1. Yes
- ☐ 2. No
- ☐ 3. Partially (please explain):

Section 3: Development Programming

1. Do your development initiatives include capacity-building for local actors?
- ☐ 1. Yes
- ☐ 2. No
- ☐ 3. Partially (please explain):
2. How are your development projects integrated with ongoing humanitarian efforts?
-
-

Section 4: Peacebuilding

1. Does your organization implement or support peacebuilding initiatives in Yemen? If yes, please provide examples (If possible).
-
-
2. How do your programs address local-level conflicts over resources (e.g., water, land)?
-
3. Are local communities and stakeholders (e.g., tribal leaders, civil society organizations) involved in your peacebuilding efforts?
- ☐ 1. Yes
- ☐ 2. No
- ☐ 3. Partially (please explain):

Section 5: Coordination and Nexus Integration

1. What is the level of coordination between the humanitarian, development and peacebuilding sectors in Yemen today?

☐ 1. Very well

☐ 2. Moderately well

☐ 3. Poorly

☐ 4. Not at all

☐ 5. Please explain your answer:

Section 6: Challenges and Opportunities

1. What are the primary challenges your organization faces in implementing Nexus-based approaches in Yemen?
.....
.....
2. What opportunities exist to enhance Nexus programming in Yemen?
.....
.....
3. How can donor funding mechanisms better support Nexus-oriented programs?
.....
.....
4. What additional resources or support would help your organization adopt or expand the Nexus approach?
.....
.....

Section 7: Monitoring and Evaluation

1. Does your organization have specific indicators to measure the impact of Nexus programming?

☐ 1. Yes

☐ 2. No

☐ 3. If yes, please list or describe the indicators:
2. How do you monitor the long-term impact of your humanitarian or development projects?
.....

-
3. Do you have any recommendations for improving the design or implementation of Nexus-based programs?
-
-

Part II: Climate Change Impacts and Nexus Approach in Yemen

This section focuses on understanding how climate change affects Nexus programming in Yemen and how organizations integrate climate resilience into humanitarian, development, and peacebuilding efforts.

Section 1: Climate Change and Its Impacts

1. What are the most significant climate change impacts your organization has observed in Yemen?
- ☐ 1. Increased drought
 - ☐ 2. Flooding and extreme weather events
 - ☐ 3. Desertification
 - ☐ 4. Water scarcity
 - ☐ 5. Other (please specify):
2. Are your programs directly addressing the impacts of climate change in Yemen?
- ☐ 1. Yes
 - ☐ 2. No
 - ☐ 3. If yes, please provide examples:
3. How has climate change influenced displacement or migration patterns in Yemen?
- ☐ 1. Significantly
 - ☐ 2. Moderately
 - ☐ 3. Minimally
 - ☐ 4. Not at all
 - ☐ 5. Please explain:

Section 2: Climate Adaptation in the Nexus Approach

1. Does your organization integrate climate adaptation strategies into humanitarian programming?
☐ 1. Yes
☐ 2. No
☐ 3. Partially (please explain):
2. Are peacebuilding efforts in your programs designed to mitigate climate-related conflicts (e.g., disputes over water, grazing land)?
☐ 1. Yes
☐ 2. No
☐ 3. Partially (please explain):
3. Do you work with local communities to build capacity for climate adaptation and resilience?
☐ 1. Yes
☐ 2. No
☐ 3. If yes, please describe your approach:

Section 3: Challenges and Opportunities in Addressing Climate Change

1. What are the main challenges your organization faces in addressing climate change in Yemen?
☐ 1. Lack of funding for climate-specific initiatives
☐ 2. Limited technical expertise
☐ 3. Difficulty integrating climate considerations into existing programs
☐ 4. Other (please specify):
2. Are there specific tools or partnerships that would enhance your organization's ability to address climate change in Yemen?
.....
.....

Section 4: Coordination on Climate and Nexus

1. Does your organization collaborate with climate-focused agencies or experts in Yemen?
☐ 1. Yes
☐ 2. No
☐ 3. If yes, please provide details:
2. How well do you think the Nexus approach in Yemen is currently addressing climate-related challenges?
☐ 1. Very well
☐ 2. Moderately well
☐ 3. Poorly
☐ 4. Not at all
☐ 5. Please explain:

Section 5: Monitoring and Evaluation of Climate Nexus Programs

1. Does your organization measure the impact of climate change adaptation activities?
☐ 1. Yes
☐ 2. No
☐ 3. If yes, please describe the indicators used:
2. How do you assess the long-term climate resilience of communities supported by your programs?
.....
.....
3. Are there mechanisms in place to evaluate the intersection of climate resilience, development, and peacebuilding in your work?
☐ 1. Yes
☐ 2. No
☐ 3. Partially (please explain):

Section 6: Open Feedback on Climate and Nexus Integration

1. In your opinion, how does climate change intersect with the humanitarian, development, and peacebuilding challenges in Yemen?
.....
.....
2. What policy or programmatic recommendations would you make to better address climate change within the Nexus framework in Yemen?
.....
.....

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