

ENVIRONMENTAL PATHWAYS FOR RECONCILIATION IN YEMEN

CONSULTATION REPORT 2024

WEATHERING RISK
PEACE PILLAR



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The *Environmental Pathways for Reconciliation in Yemen* project is implemented by the European Institute of Peace with support from the German Federal Foreign Office and is part of the Weathering Risk Peace Pillar led by adelphi.



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Published April 2024
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Photos: Nazeh Al-Hrefy (EIP, 2023)
Layout: Claudia Zimmerman

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EXECUTIVE SUMMARY

This report presents the results of an extensive consultation as part of EIP's project, *Environmental Pathways for Reconciliation in Yemen*, which aims to support locally led and sustainable peace by using the environment as an entry point and key element of peacemaking. The project builds upon the findings of an initial consultation with 15,870 individuals facilitated through EIP in 2020–2021. It found that the environment ranks among the highest priorities of the local population when asked about urgent needs in the context of the search for peace and reconciliation,¹ and demonstrated that environmental concerns offer an unexplored entry point for common peacemaking and reconciliation efforts in Yemen.

The consultation informing this report examined this environmental dimension of local grievances and conflict further by exploring Yemenis' perceptions of environmental issues, their impact on peace and security, and the existing or potential environmental peacemaking solutions. It consisted of a survey conducted with a wide array of "ordinary" citizens whose views are often overlooked in political and peace efforts, as well as semi-structured focus group discussions and key informant interviews with influential individuals. Conducted during February and October of 2023, **this extensive consultation reached a total of 2,463 people across the nine governorates of Aden, Taiz, Marib, Al-Mahra, Al-Hodeidah, Shabwah, Sana'a, Al-Dhale'e, and Hajjah.**

This report reveals the multiple dimensions of environmental risks that Yemen is grappling with and their impact on its social fabric, human security, and conflict. The results also provided insights into the gaps and potential entry points when addressing these risks, including, with respect to peace and reconciliation.

Key findings

Overall, the results of this Environmental Peacemaking Consultation conducted in nine Yemeni governorates during 2023, exposed, first, an urgency to implement conflict resolution and prevention approaches sensitive to the perspectives, needs and priorities of Yemenis in the context of multifaceted environmental-related security risks and the national conflict, and, second, unprecedented peacemaking opportunities of conflict-sensitive natural resources management, environmental protection, and climate change adaptation efforts. The overwhelming popular support for an environmentally informed approach to conflict resolution expressed throughout the consultation, calls for enhanced efforts to better understand and address environment-related security risks in Yemen, including their impact on livelihoods, community cohesion, and the untapped opportunities to leverage them for peacemaking, especially with regard to cooperation and collaboration. More specifically, the four key findings of the report include:

1. EIP (2021). *Pathways for Reconciliation in Yemen*. Available at: <https://www.eip.org/publication/pathways-for-reconciliation-in-yemen/>

1 | *Climate and environment are multifaceted concepts with varying definitions locally, but overall awareness of climate impacts in Yemen is high.*

Close to 70% of survey respondents acknowledged that climate change impacts their family and community lives significantly or moderately, while more than 80% reported some degree of concern about it. This perception is prominent even among groups who consider themselves less knowledgeable about climate change, such as people working in the fishing sector. Notable disparities appear in the self-reported degree of climate change knowledge, concern, and awareness of its impacts along socio-demographic lines, including gender, level of education, and livelihood. Men reported slightly higher degrees of knowledge and consideration than women, while respondents with a higher level of education considered themselves more knowledgeable than those with lower qualifications. Responses also display varying degrees of consideration among different governorates, with Taiz and Marib emerging as areas experiencing widespread concern.

2 | *The impacts of climate change and environmental degradation are felt across the country, affecting the livelihoods and security of the most vulnerable population.*

As over 80% of survey respondents considered the natural environment essential or important to secure their income, it is worrisome that **92% perceived a reduction in the availability of and access to natural resources in the past years**, notably in water, gas, and oil. Other environmental risks add to this, including different forms of pollution and extreme weather phenomena. Urban areas such as Aden, Taiz, and Sana'a are particularly affected by air, land, and water pollution. Meanwhile, Marib, Al-Hodeidah, Hajjah, and Shabwah, emerge as hotspots for extreme weather events and high temperatures, and Shabwah and Al-Mahra feature frequent reports of a reduction in land fertility and biodiversity. **These environmental challenges generate significant risks for Yemen's population, with almost eight out of ten respondents perceiving a moderate to significant impact on their daily lives.** Diminished access to essential goods, where scarcity intersects with rising prices, emerges as the most notable consequence, with vulnerable population groups such as internally displaced people (IDPs), farmers and fishers reporting the greatest impact.

3 | *Tensions and disputes relating to environmental factors are prevalent, mainly over availability and access to water and energy resources.*

Over 50% of survey respondents indicated that they have experienced or heard of tensions or conflicts in their district in relation to environmental issues, and one in four respondents reported adverse impacts due to such conflicts escalating into violence. Natural resource scarcity, access, and distribution are widely recognised as a conflict driver throughout the survey sample to the point that **close to 70% of respondents reported tensions and disputes over water resources within their communities**, followed by energy resources such as oil and gas. Competition for natural resources was reported most often in Aden, while Taiz, Marib, and Al-Dhale'e emerged as hotspot governorates for violent conflicts in relation to environmental factors and natural resources. Human practices and governance-related aspects that include access, control, and the exploitation of natural resources are identified as primary drivers contributing to conflict. Other socio-economic factors, especially demographic pressure through population increase, immigration, and displacement, contribute to tensions due to increased competition for natural resources.

4 | *Local voices indicate a clear imperative to address environmental risks and related conflicts more comprehensively, including as part of peace efforts.*

85% of the Yemenis consulted considered it essential to address climate change in the short-term, and over 60% expressed their support for integrating environmental considerations into conflict resolution in Yemen. Local authorities are attributed a pivotal role in addressing environment-related issues but largely remain opaque and unreachable to the local population. Over 67% of Yemenis consulted reported being unaware of formal environmental policies or laws in their governorate, and more than half of respondents felt unable to approach local authorities on questions, concerns or disputes relating to the environment. Al-Dhale'e and Shabwah emerge as the governorates most affected by this disconnect, with over 70% of respondents noting a lack of knowledge about whom to approach to raise environment-related issues and not feeling enabled to do so. **Filling this institutional gap, local community initiatives and customary leaders emerge for their important role in tackling environment-related challenges and disputes.** These findings highlight the need for awareness-raising on environmental governance and its benefits if approached with a coordinated lens across all governorates, the strength of local and customary actors in conflict resolution over environmental issues, and the need to integrate environmental factors in the search for sustainable peace and reconciliation.

Given the severity of the environmental and climate crisis in Yemen and the impact of the national conflict in governance and provision of basic services, it is no surprise that local institutions are weak and almost non-existent in some places, accessibility to those that exist is identified as limited, and local customary and community actors fill the role for dispute resolution. In this context, rather than a demand for improved environmental governance as a precursor to sustainable peace, the issues identified in this report provide an opportunity to build an approach to environmental peacemaking that engages the agency of those most directly affected by the conflict and the environmental crises. The report provides a basis to inform action that helps build, rather than wait for, accountable governance structures. The core of that structure lies in three areas:

1. *Engagement with the environmental concerns of the affected population,*
2. *Encouragement and facilitation of their participation in identifying plausible strategies to address the environmental and climate risks in relation to the ongoing conflict, and*
3. *Around these processes, build effective institutions that can both implement and be held accountable.*

INTRODUCTION

Since its unification, Yemen has endured many conflicts that have fragmented its society, strained the economy, and caused extreme humanitarian suffering. Since its escalation in 2015, the armed conflict has only grown more violent, and in the past years, has been coupled with an unprecedented humanitarian and environmental crisis, exposing the country to a complex nexus of conflict-related, environmental, and humanitarian risks.



1.1

CLIMATE, ENVIRONMENTAL AND CONFLICT CONTEXT IN YEMEN

Yemen has long faced mounting structural, economic, social, and security challenges. Following uprisings in 2011, as part of the Arab Spring, a takeover of the Houthi movement (formally Ansar Allah), that politically and militarily opposed the Internationally Recognised Government of Yemen (IRG), contributed to a faltering political transition. Emerging tensions have escalated from a political impasse into full-scale hostilities, involving many Yemeni and external parties. Repeated peace efforts halted violence intermittently but did not achieve a settlement of the conflict. A recent rapprochement between Saudi Arabia and the Houthis opened new pathways for political resolution. However, without tackling the conflict's root causes — including the environmental factors driving Yemen's multifaceted crisis — a sustainable and inclusive resolution of the conflict remains out of sight.

The protracted conflict has contributed to large-scale environmental degradation and the deterioration of Yemen's natural resources. Destructive military activity, including attacks on oil and gas infrastructure and the planting of mines, are coupled with a shortfall in public management and unsustainable livelihood practices, all driven by the political, economic, and humanitarian crises.

With over 70% of the country's population directly or indirectly relying on income from the agricultural sector,² the environmental impact on livelihoods is significant. Currently, an estimated 21.6 million people depend on some form of humanitarian assistance.³ Lacking basic services, many people resort to unsustainable practices such as deforestation, a shift to water-intensive cash crops, and well-drilling.⁴

Climate change is compounding Yemen's complex crisis. In recent years, the country has repeatedly experienced drought, floods and storms, pest infestations, sudden disease outbreaks, erratic rainfall patterns, and rising sea levels. Last year, natural disasters displaced close to 320,000 people from their homes.⁵ Since 1971, temperatures in the country have been increasing by an average of 0.42°C per decade and are set to rise further by 1.2–3.3°C over the course of the next four decades, with related challenges likely to accumulate.⁶

These trends undermine livelihoods, drive competition for natural resources, increase displacement, and hence contribute to hostilities and insecurity. Even before the outbreak of the war, the competition for access to water and land had already led to local tensions. In 2010,

2. Thamer, M., Ali, A. and Al Aghbari, I. (2023). Agriculture and Yemen's Economy. Carnegie Endowment for International Peace. Available at: <https://carnegieendowment.org/sada/89763>

3. UNFPA Yemen (2024). UNFPA Response in Yemen Situation Report – Oct-Dec 2023. Available at: <https://yemen.unfpa.org/en/publications/situational-report-04-october-december-2023>

4. Abdullah, K. (2021). With fuel scarce, Yemen's forests are the next casualty of war. Reuters. Available at: <https://www.reuters.com/business/environment/wider-image-with-fuel-scarce-yemens-forests-are-next-casualty-war-2021-08-11/>; FAO (2018). Water management in fragile systems: building resilience to shocks and protracted crises in the Middle East and North Africa. Available at: <https://www.fao.org/3/i9730en/I9730EN.pdf>; YFCA (2023). Climate Change Impacts on Yemen and Adaptation Strategies. Available at: <https://reliefweb.int/report/yemen/climate-change-impacts-yemen-and-adaptation-strategies>

5. UNFPA Yemen (2024). UNFPA Response in Yemen Situation Report – Oct-Dec 2023. Available at: <https://yemen.unfpa.org/en/publications/situational-report-04-october-december-2023>

6. De Coning, C. *et al.* (2023). Yemen: Climate, Peace and Security Fact Sheet. NUPI/SIPRI. Available at: <https://www.nupi.no/en/news/climate-peace-and-security-fact-sheet-yemen>

it was estimated that 70–80% of rural conflicts in Yemen were related to water.⁷ Urbanisation and internal displacement are putting an additional strain on natural resources in these areas and contribute to grievances.⁸

Fragmented governance, strained resources and a lack of technical expertise are just a few of the challenges impeding efforts to adapt to climate change and build resilience against its risks, adding significant pressure to the entrenched social, political and security crises. By fostering trust and resilience, resource and environmentally driven conflicts can be prevented and resolved, contributing to sustainable peace. In the previous consultation conducted by EIP in 2020–2021, respondents from eight out of nine governorates selected “restoring and protecting the environment” as their first or second highest, short-term priority, sometimes even above “ending the main war”.⁹ This shows that addressing environmental challenges cannot be delayed until the conflict is resolved, given the high potential for tension and grievance that they entail.

However, environmental issues have rarely been considered during attempts to foster peace on a national level, which so far have failed to reflect a long-term vision that considers the key interests of not only the main parties to the conflict, but also the needs and priorities of the civilian population. This has led to a failure to address systemic issues that undermine a sustainable resolution of the conflict, including its environmental repercussions. While Yemen’s civil society and communities have been concerned with mediation and conflict resolution in relation to natural resources and other environmental matters for decades, any integrated approaches have remained largely confined to the local level. The need to build resilience to climate change and environmental degradation, as well as addressing the environmental drivers of conflict within conflict resolution efforts in Yemen is increasingly recognised.¹⁰ Nevertheless, a multitrack and integrated peacemaking approach that is sensitive to the environmental root causes of conflict and the increasingly urgent climate change factors, remains vastly unexplored at the national level.

7. Glass, N. (2010). The Water Crisis in Yemen: Causes, Consequences, and Solutions. *Global Majority E-Journal*, Vol. 1, No. 1 (June 2010), pp. 17-30. Available at: https://www.american.edu/cas/economics/ejournal/upload/glass_accessible.pdf
- Hettle, N. (2016). Water Wars in Yemen. The Ohio State University: Middle East Studies Center, College of Arts and Sciences. Available at: <https://mesc.osu.edu/news/water-wars-yemen>
8. Lackner, H. (2021). Climate Change and Conflict in Hadhramawt and Al Mahra. Berlin: Berghof Foundation. Available at: <https://berghof-foundation.org/library/climate-change-and-conflict-in-hadhramawt>; YFCA (2023). Climate Change Impacts on Yemen and Adaptation Strategies. Available at: <https://reliefweb.int/report/yemen/climate-change-impacts-yemen-and-adaptation-strategies>
9. EIP (2021). Pathways for Reconciliation in Yemen. Available at: <https://www.eip.org/publication/pathways-for-reconciliation-in-yemen/>
10. For example, Sana’a Center (2023). Yemen International Forum 2023. Pathways to a Just, Inclusive, and Sustainable Peace. Available at: <https://sanaacenter.org/publications/main-publications/21026>

1.2

ENVIRONMENTAL GOVERNANCE IN YEMEN

It is important to highlight that Yemen has an extensive legal and institutional framework governing the environment. Institutionally, the main body tasked with climate-related issues is the Ministry of Water and the Environment, which is organised into several units, including a Climate Change Unit, the National Water Resources Authority, and the Environmental Protection Authority, among others. The Ministry of Agriculture and Irrigation and Fish Wealth complements this institutional framework, taking a central role in overseeing resource use, particularly water, within Yemen's agricultural sector.

A set of policies and strategies has been developed that address climate and environmental concerns. This includes a National Adaptation Programme of Action from 2009,¹¹ the 2015 Intended Nationally Determined Contributions under the UNFCCC framework to reduce emissions,¹² and a National Biodiversity Strategy and Action Plan from 2005¹³ that was updated in 2017¹⁴. Moreover, an array of national laws exist to regulate biodiversity conservation (law 26, 1995), urban planning and use of land for agriculture and the protection of natural resources (law 20, 1995), overfishing and aquatic resources (Presidential Decree on law 43, 1997), marine pollution (law 11, 1993 and law 43, 1997), the use of pesticides and fertilisers (law 25, 1999

and law 20, 1999), waste management (law 39, 1999), and water (law 33, 2002). In addition, customary rules and traditional practices over water rights exist locally but vary by demographic and tribal agreements set in place. This includes customs such as “the main wadi is a public right”.¹⁵

However, policy development and enforcement have been largely on hold since the escalation of the conflict. The hurdles to enhanced governance of environment- and climate change-related matters are many, including the strained institutional capacity and infrastructure, a lack of economic resources, and gaps in inter-institutional coordination. These limitations concern both environmental and security policy, not to mention joint mechanisms that tackle their interfaces. Given that most existing policies date back at least a decade, developments concerning the country's environmental, socio-political, economic, and security situation since the escalation of the conflict, remain largely overlooked. Moreover, reliable, current, and specific climate data is insufficient to inform effective policymaking. As the conflict continues, much of the remaining institutional capacity is directed towards addressing immediate humanitarian needs, with long-term action to mitigate and adapt to the impacts of climate change and environmental degradation fading into the background.¹⁶

11. Republic of Yemen (2009). National Adaptation Programme of Action. Available at: https://www.adaptation-undp.org/sites/default/files/resources/yemen_napa.pdf

12. Republic of Yemen (2015). Intended Nationally Determined Contribution (INDC) under the UNFCCC. Available at: <https://www4.unfccc.int/sites/submissions/INDC/Published%20Documents/Yemen/1/Yemen%20INDC%2021%20Nov.%202015.pdf>

13. Republic of Yemen (2005). National Biodiversity Strategy and Action Plan. Available at: <https://www.cbd.int/doc/world/ye/ye-nbsap-01-en.pdf>

14. Republic of Yemen (2017). National Biodiversity Strategy and Action Plan II. Available at: <https://www.cbd.int/doc/world/ye/ye-nbsap-v2-en.pdf>

15. The customary rule “the main wadi is a public right” describes the understanding that the valley (wadi) resources are shared between everyone, i.e. treated as a public right. See also Muharram, I., Alsharjabi, K. and Mutahar, A. (2019). Traditional Rights of Irrigation Water in Some Yemeni Wadis. *Int. J. Soc. Sci. Humanit. Res.*, 7, pp.538-545.

16. Barry, S., McMurray, S. and Schmelzer, N. (2024). Integrating Climate Security into Policies: Roadmap for Yemen. Berlin: adelphi. Available at: <https://climate-diplomacy.org/magazine/conflict/integrating-climate-security-policy-frameworks-roadmap-yemen>

1.3

METHODOLOGY OVERVIEW

The consultation employed a comprehensive mixed-method approach, integrating quantitative and qualitative tools, including a survey, focus group discussions (FGDs) and key informant interviews (KIIs). The variety of tools guarantees that the perspectives of individuals from different communities are included to provide a more nuanced view of Yemeni society at large. Par-

ticipants were selected to represent different societal groups, ranging from ordinary citizens and marginalised groups—typically underrepresented in political processes and considered particularly vulnerable to climate impacts—to more influential individuals on the community, district, or governorate level. The total number of individual participants was 2,463.

→ **Survey:**

Most respondents (2,283 people) were consulted through a survey consisting of 25 questions, which was rolled out through enumerators on the streets and in public spaces. Survey participants were selected randomly to represent “ordinary” citizens and inhabitants; however, certain parameters were considered to ensure the sample’s representativeness. These included a sample of at least 35% women, as well as allowing for a diversity of age groups and education levels.

→ **Focus group discussions:**

136 individuals were consulted in small groups of 4–8 people to allow for more in-depth discussions. The groups were comprised of selected individuals representing groups that are particularly vulnerable to the impact of climate change (e.g. internally displaced people (IDPs), women, older adults, fishers, and farmers), as well as those holding positions of higher influence in their communities.

→ **Key informant interviews:**

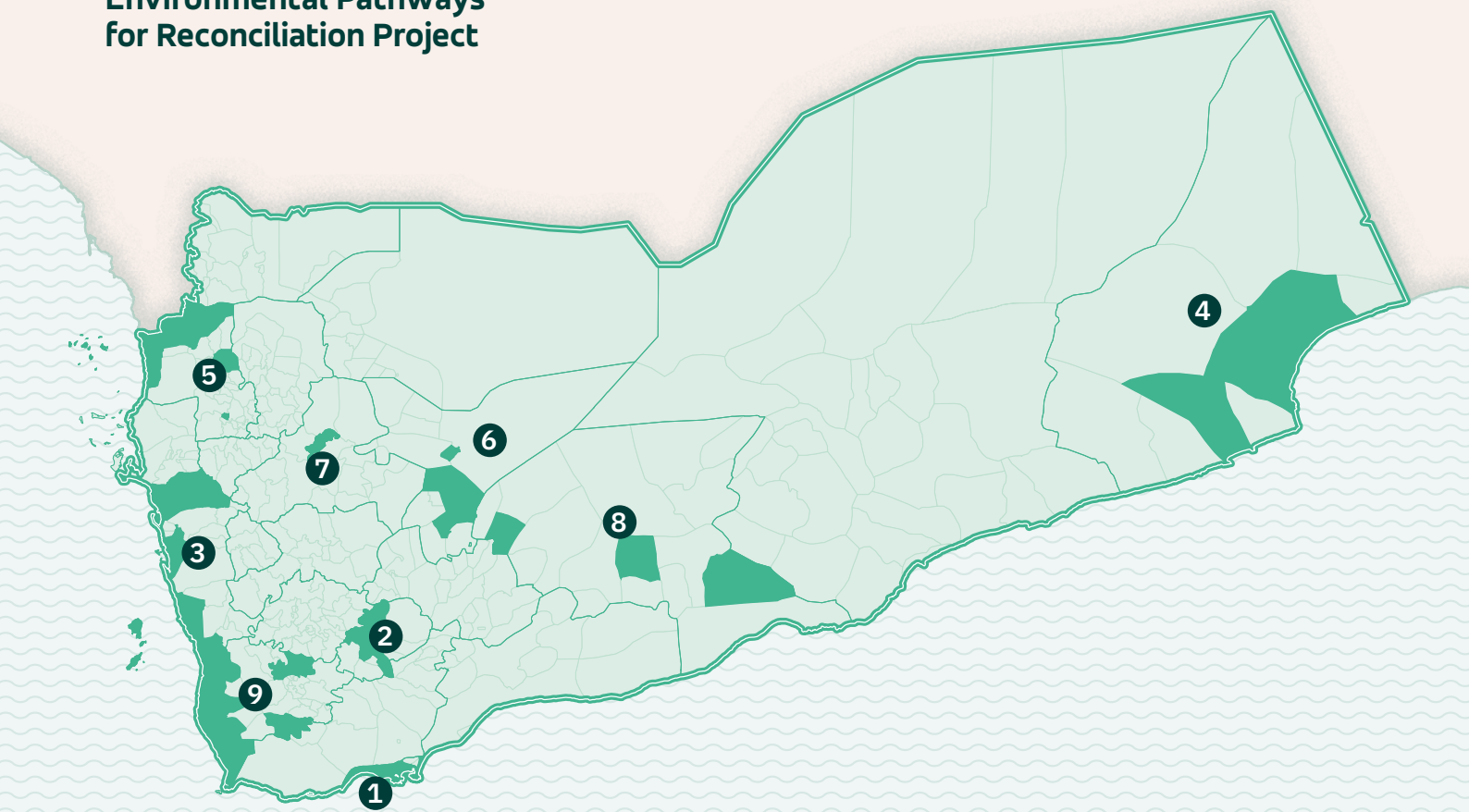
44 interviews were held with experts and decision-makers at different levels to complement the data, and to collect perspectives from higher-level representatives on the topics discussed.¹⁷

17. See [Annex 1](#) for further details on the applied methodology and [Annex 2](#) for the complete survey sample.

The consultation was conducted across 36 districts in the nine governorates of Ma'rib, Al-Hodeidah, Taiz, Aden, Al-Maharah, Shabwah, Sana'a, Al-Dhale'e, and Hajjah, capturing a wide range of the country's diverse geography and socio-political setup. The selection aimed to provide a balanced representation of governorates from the north and south, including traditional, political, and commercial hubs, as well as historically marginalised areas.

Figure 1

Engagement map of the Environmental Pathways for Reconciliation Project



- 1 Aden**
Al-Buraiqeh
Al-Mansura
Al-Tawahi
Khur Maksar
Serah
- 2 Al-Dhale'e**
Al-Dhale'e
Damt
Qu'Atabah
- 3 Al-Hodeidah**
Al-Dhahi
Al-Durayhimi
Al-Khawakhah
Al-Tuhayta
Bajil
- 4 Al Maharah**
Al-Ghaydah
Qishn
- 5 Hajjah**
Abs
Bakil Al-Mir
Hajjah
Harad
Kushar
Midi
- 6 Ma'rib**
Al-Jubah
Harib
Ma'rib City
- 7 Sana'a**
Bani Al-Harith
Ma'een
Sana'a City
- 8 Shabwah**
Ataq
Bayhan
Mayfa'ah
- 9 Taiz**
Al-Makha
Al-Mudhaffar
Al-Ta'iziyah
Al-Shamaytayn
Salh
Dhubab



The consultation included two components:

1. ***Challenges related to environmental and climate-security risks,*** which asked respondents to share their level of awareness and knowledge of environmental matters, including conflict risks related to natural resources management, environmental degradation, and the impacts of climate change.
2. ***Needs and potential environmental peacemaking solutions,*** which invited respondents to reflect on the importance of responding to climate change, integrating environmental considerations with respect to peace and political efforts, and identifying solutions and actors to address climate and environment-related security risks through peacemaking.

1.4

REPORT STRUCTURE

This report is organised into four sections. The first part explores Yemeni perspectives on the environment and climate change by looking at local framings, knowledge, and concern about climate change, as well as the concrete environmental challenges that the country faces. Section two provides an assessment of the links between environmental factors, conflict and

instability established at the local level. The third part examines locally perceived gaps and priorities in responding to environmental risks and addressing related conflicts. Finally, part four concludes with key lessons learned and suggested priorities, while looking forward to extending exploration and unfolding the potential of environmental peacemaking in Yemen further.



Photo 1: Unaddressed plastic pollution on grazing lands near Taiz City. Naze Al-Hrefy (EIP, 2023).

LOCAL PERCEPTIONS OF ENVIRONMENT AND CLIMATE CHANGE

The impact of climate change is already a reality in Yemen. Given the security dimensions of climate set out above, this section seeks to capture how the Yemeni population perceives environmental dynamics as they relate to human practices and the impacts of climate change, that are undermining livelihoods and aggravating tensions. Understanding these local perspectives helps ensure that peacemaking and peacebuilding approaches are sensitive to the needs and rights of Yemenis.

This chapter starts by exploring local definitions of the environment and climate change, as well as the level of knowledge and concern about climate impacts. The second part delves into the environmental and climate-related challenges and risks that Yemen's population sees itself confronted with, as well as the perceived impact on their daily lives and livelihoods.

2.1

UNDERSTANDING, PERCEPTION AND AWARENESS

From the qualitative data, there appears to be a **comprehensive and nuanced understanding of the environment and its role in Yemen's social and economic fabric**. Most definitions in urban areas conceptualise the environment as the collective surroundings, including humans, flora, fauna, natural resources, and landscapes and their interactions. In rural areas, there was a stronger focus on environmental issues such as erosion, pollution, and climate change. Unique lenses emerged from focus group discussions with different social communities. For example, women consulted in dedicated focus groups demonstrated an integrated view, considering the relationship between natural, industrial, and social aspects, as well as distinguishing between human-caused and natural disasters. Decision-makers participating in focus groups defined the environment comprehensively as the surroundings crucial for fundamental needs, pointing to a natural resource-focused approach. Meanwhile, people with disabilities stressed the

importance of preserving and creating a suitable environment for everyone, while also pointing to the importance of effective governance.

The respondents' understanding of climate change largely related to **human practices as drivers of climate change** and considered impacts such as fluctuating rainfalls and increased frequency of extreme weather events, including droughts, cyclones and floodings. Most respondents attributed the causes of climate change to the increased carbon emissions from large factories and the use of fossil fuels to operate them, including in industrialised countries. Some participants described climate change as it related to specified impacts on their group. Participants from the fishing sector, for instance, drew attention to changes in water movements and the seasons, as well as extreme weather conditions in coastal areas. Many participants also indicated that the war has caused or exacerbated climate impacts.

2.1.1 | Knowledge about climate change

When asked about their knowledge of climate change, **most respondents reported moderate knowledge, with differences appearing across demographic groups**. Only one in ten respondents reported they did not possess any knowledge on the matter. The degree of self-reported knowledge about climate change seems to correlate with levels of education and employment. Individuals with higher education levels, particularly those employed in the health, finance, manufacturing, and construction sectors, reported greater knowledge than the unemployed

or those working in the agricultural and fishing sectors (*Figure 2*). Less educated and illiterate respondents disclosed the lowest levels of understanding of concepts relating to climate change (*Figure 3*).

Similarly, women expressed a lower self-reported understanding of the topic than male respondents (*Figure 4*). While almost 90% of male respondents considered that they had at least basic knowledge of climate change, the percentage for women was about 80%.

Figure 2

Climate change knowledge by employment sector

Regardless of the sector, most Yemenis reported moderate knowledge of climate change. Greater knowledge was reported by those working in health and social work, and less knowledge was reported by those in primary livelihoods such as agriculture and fishing, as well as the unemployed.

n = 2,200

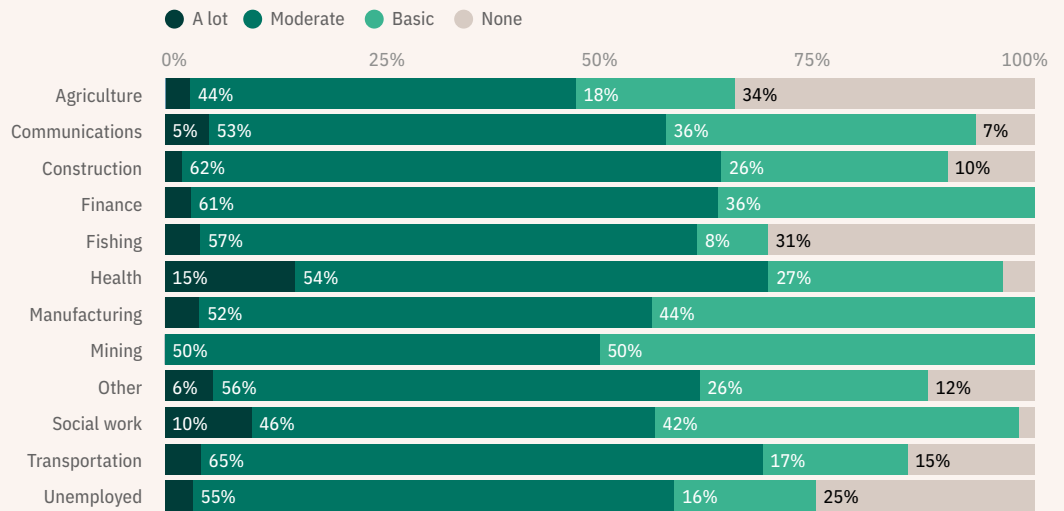


Figure 3

Climate change knowledge by education

Educated respondents reported a greater understanding of climate change terminology and concepts than less educated and illiterate respondents.

n = 2,272

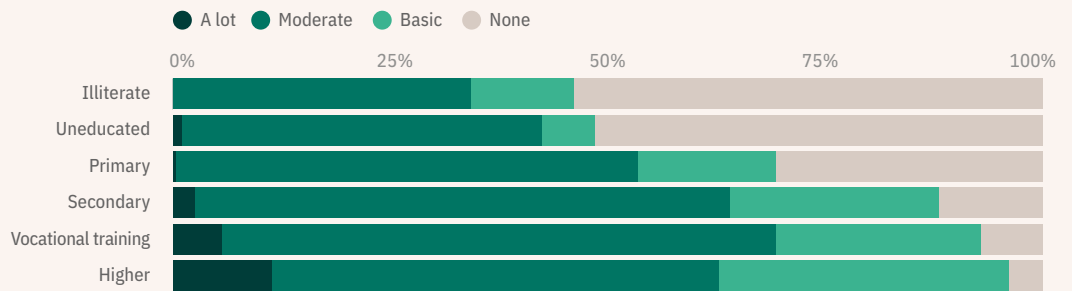
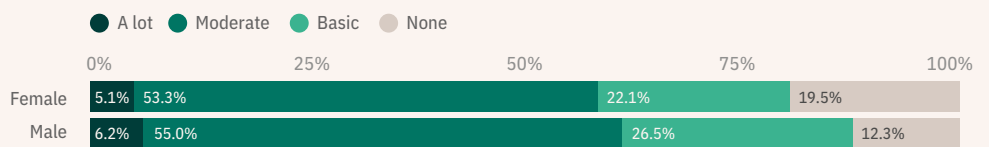


Figure 4

Climate change knowledge, disaggregated by gender

n = 2,251



2.1.2 | Awareness and concern about climate change

While not all respondents considered themselves very knowledgeable on climate change, answers pointed to a high degree of awareness of climate impacts on everyday lives. Most respondents recognised the impact of climate change on their personal, family and community life, with close to 30% describing it as significant and 39% as moderate (Figure 5). Respondents from the fishing industry reported particularly

high levels of impact, followed by workers in the social, health, and education sectors. Surprisingly, agricultural workers reported lower levels of impact, with only one in five indicating that their families and communities are very affected (Figure 6). This finding is in line with the lower levels of knowledge of climate change as reported by respondents in the primary sector.

Figure 5
Self-reported climate change impact on daily life

Almost 30% of respondents observed significant impacts of climate change, and close to 40% felt moderately affected.

n = 2,272

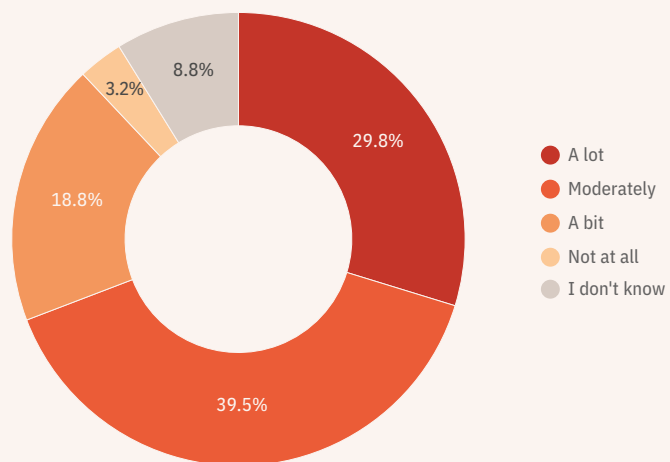
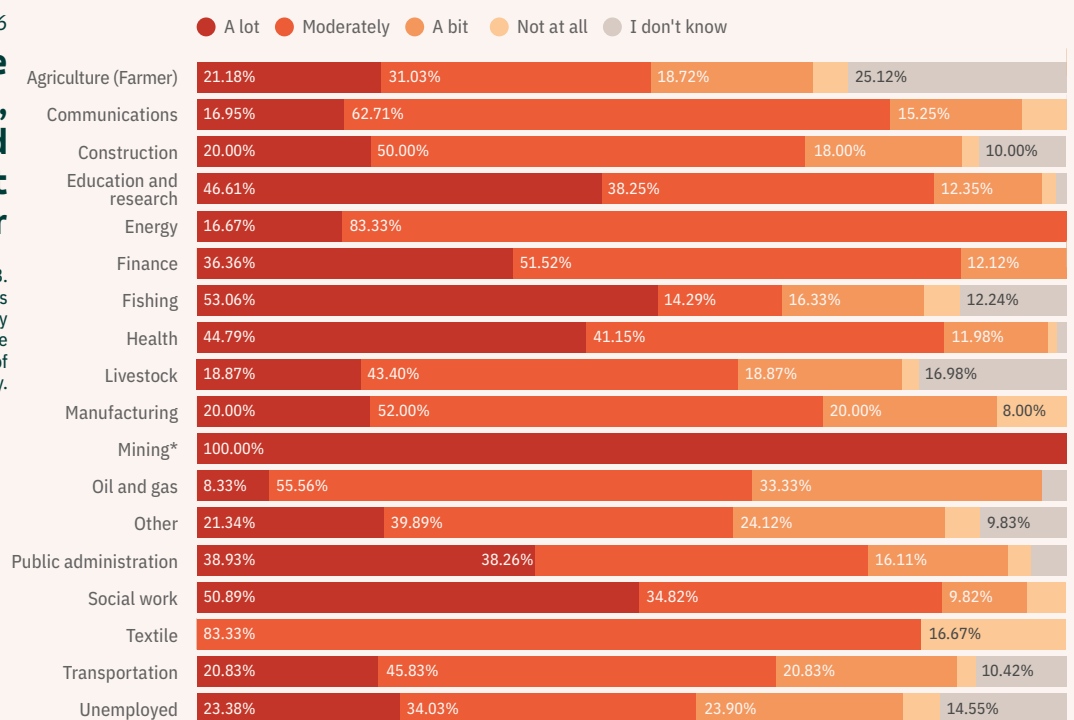


Figure 6
Climate change impact on daily life, disaggregated by employment sector

n = 2,198.

Mining sector: The share of respondents from the mining sector in the survey consultation lay below 1% and is hence disregarded in the disaggregation of results by occupational category.



Almost 83% of Yemenis consulted had some degree of concern about climate effects on themselves and their families, with one in four reporting high concern. The level of concern emerged as highest among social groups that are particularly exposed or vulnerable to climate change impacts. For example, in the fishing sector, 45% of respondents reported being very concerned about the impact of climate change on themselves, family, and friends (Figure 7). Similarly, respondents who identified

themselves as heads of their family—most often men—expressed a higher degree of concern than other family members, with 35% reporting high or moderate concern in comparison to 27% for other family members.

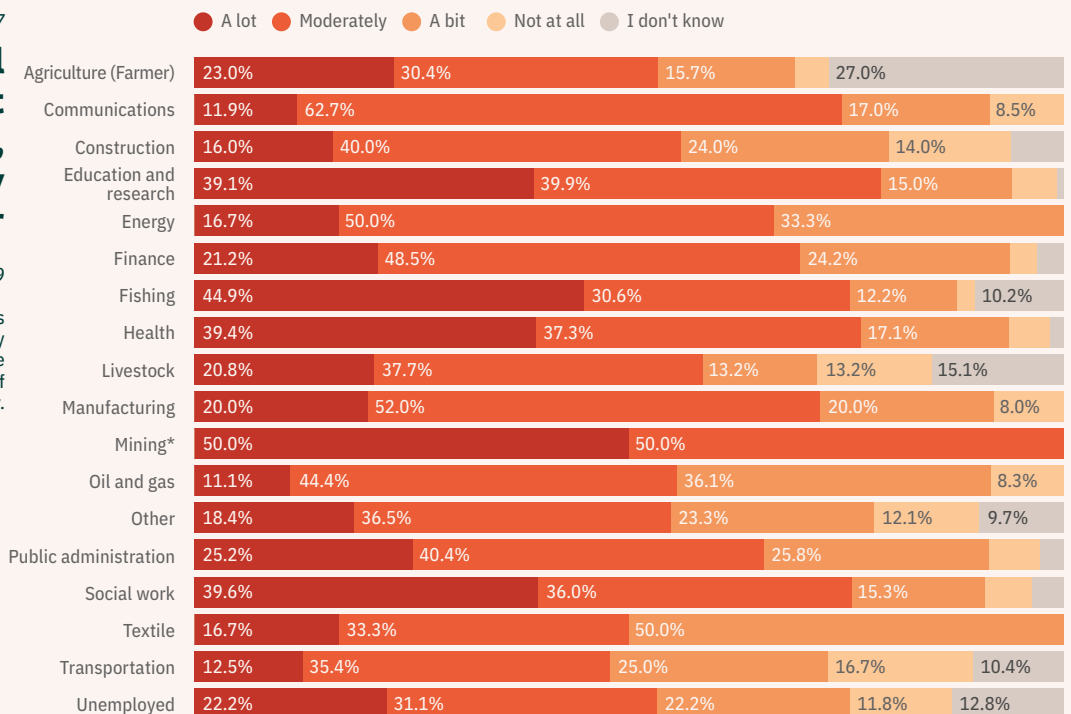
The variation in perceptions and knowledge in different social groups points to the need to use an intersectional lens when building resilience to climate issues and implementing peacemaking approaches.

Self-reported level of concern about climate change, disaggregated by employment sector

Figure 7

n = 2,199

Mining sector: The share of respondents from the mining sector in the survey consultation lay below 1% and is hence disregarded in the disaggregation of results by occupational category.



2.1.3 | Governorate-level results

While respondents across the country reported that climate change significantly affects their everyday lives, geographic variations appear regarding the level of climate change awareness (Figure 8). When asked about how frequently they think about climate change, respondents in Taiz and Marib showcased the highest consideration, with over one-quarter of respondents indicating

that they think about climate change every day. Conversely, Sana'a and Hajjah indicated the lowest frequencies, with 23.7% (Hajjah) and 21.8% (Sana'a) of respondents never thinking about it.

Respondents in governorates who thought about climate change the most often, consistently demonstrated a heightened acknowledgement

of its impact on daily life within families and communities. Particularly noteworthy are Marib and Taiz emerging as the governorates with the highest acknowledgement of the impact of climate change (Figure 9).

Exploring specific districts reveals diverse perspectives on the influence of climate change on daily lives, with a notable percentage of respondents indicating a high degree of concern in the districts of Harib (48.9%) and Al-Jubah (51.9%) in Marib, as well as Salh (61.7%) and Al-Makha (59.1%) in Taiz.

Figure 8
How often people think about climate change, disaggregated by governorate

n = 2,275

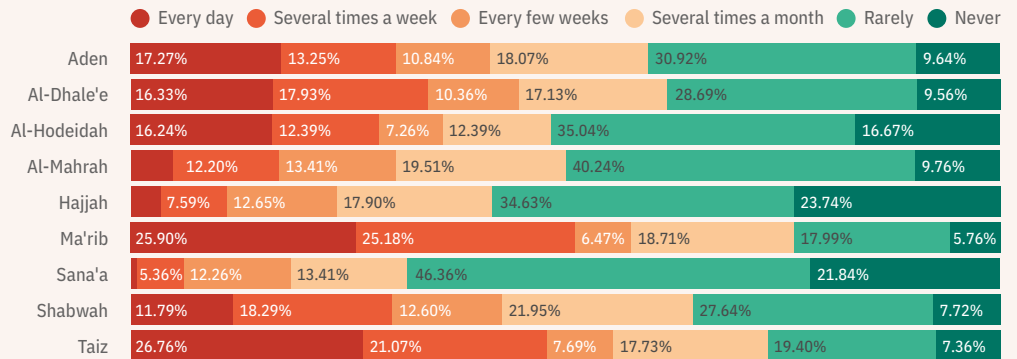
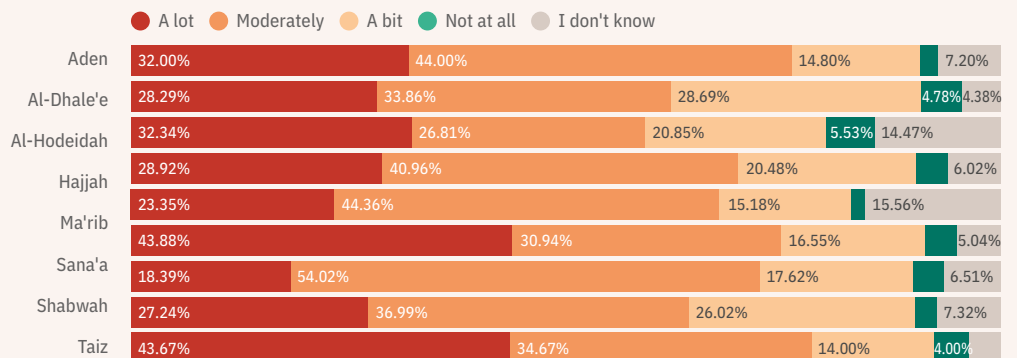


Figure 9
Self-reported level of climate change impact on family and community life, disaggregated by governorate

n = 2,279



Key takeaways

The results presented in this section indicate that Yemen's population generally shows a high degree of understanding of climate change and an awareness of its impact. The quantitative data indicates that the vast majority—close to 70%—of respondents understand climate change as a factor that impacts their family and community lives at least to a moderate degree, and over 80% are concerned about it. Even groups who consider themselves less knowledgeable about climate change, such as people working in the fishing sector, report high climate change impacts. The survey results highlight notable disparities in the self-reported degree of climate change knowledge, concern, and awareness of its impacts, revealing variations influenced by demographic factors such as gender, level of education, and livelihood. Responses also display varying degrees of concern among different governorates, with Taiz and Marib emerging as areas where popular concern is highest, with less concern reported in Sana'a and Hajjah.

2.2

DIMENSIONS OF CLIMATE IMPACTS AND ENVIRONMENTAL CHALLENGES

The high levels of concern about climate change call for a more profound investigation of the climate- and environment-related risks affecting Yemen’s population, to inform integrated peace approaches. This section explores the types of environmental challenges experienced by the population in the selected governorates and reflects on their impact on lives and livelihoods.

2.2.1 | Natural resource availability and livelihoods

The natural environment, resource availability, and access to them are crucial for sustaining livelihoods in Yemen. A total of 83% of survey respondents considered the natural environment essential or important to securing their income (Figure 10). This perception is shared across genders, with men (58%) reporting only a slightly higher dependence on the natural environment to sustain their livelihoods than women (57%). Employees from the primary sector, who are in more direct contact with natural resources, considered access to these resources essential. The role of these resources was also weighted higher among IDPs, where almost 70% perceived natu-

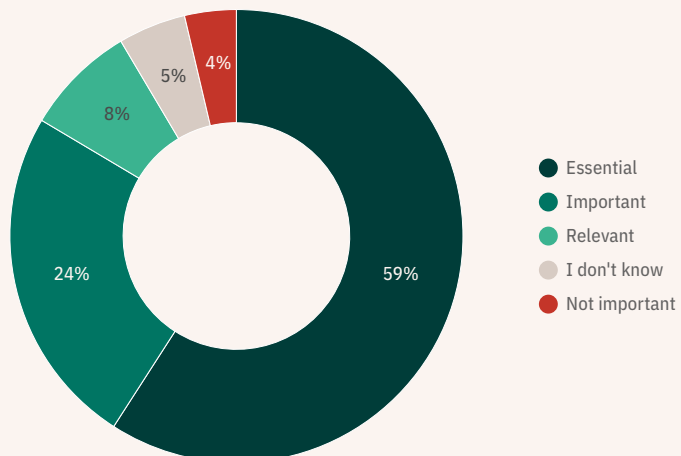
ral resources as essential to their livelihoods, in comparison to 60% of the host community.

At the same time, an **overwhelming majority (92%), of respondents feel that access to and availability of natural resources has changed in the past years.** This was particularly pronounced among seasonal migrants and IDPs, of which 100% and 92% respectively, reported a change in resource availability. Similarly, highly educated (secondary education or higher) respondents reported higher instances of no change in availability or access in contrast to respondents with lower education levels.

Figure 10
Perceived importance of natural resources to sustain livelihoods

A total of 83% consider that natural resources are essential or important for their livelihoods.

n = 2,277



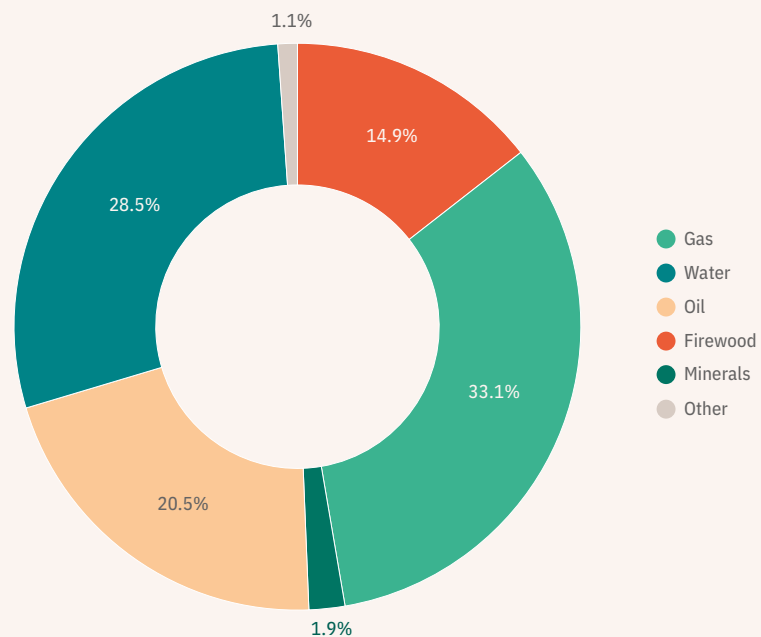
Water, gas and oil emerge as the resources under the highest pressure, with gas most often selected as having experienced reductions (33%), followed by water (28.5%) and oil (20.5%) (Figure 11). Almost one in five respondents indicated having experienced water shortages in their areas during the past year. Participants in

focus group discussions reported that significant water use for agriculture, combined with a deterioration in water quality, has become a major challenge. As demand increases, availability declines. In urban and rural areas, this has translated into expensive water units, further limiting the access to water for vulnerable populations.

Figure 11
Perceived reduction of availability in gas, water, oil, firewood and mineral resources, aggregated data

Out of a total of 2,275 survey participants who responded to this question, 33% reported reduced availability of gas, 28.5% of water, and 20.5% of oil resources.

n = 2,275



2.2.2 | Cross-cutting environmental challenges

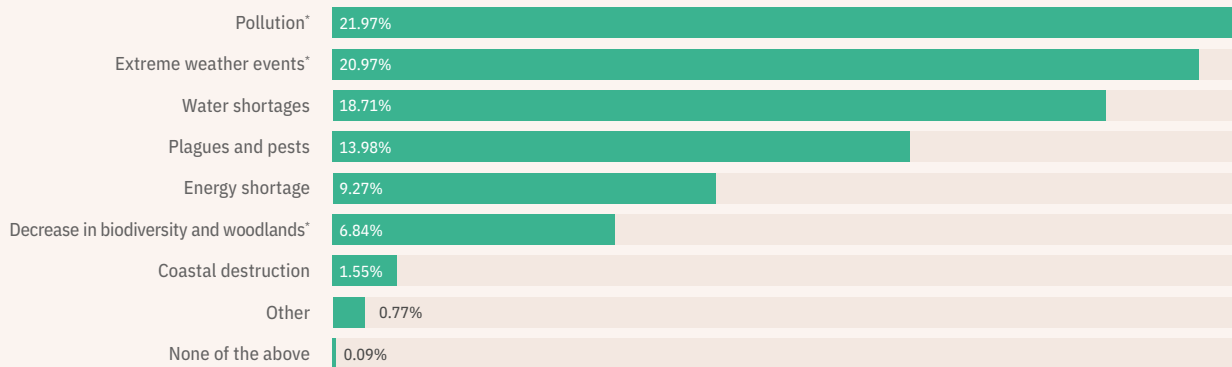
Next to the dwindling availability of resources and its effects on livelihoods, **multifaceted environmental risks are rooted in unaddressed pollution and the increased frequency and intensity of extreme weather events.** Based on the survey data, the most prevalent environmental issue is pollution (air, water, and land), with major consequences for both urban and rural communities. One in five respondents reported experiencing

some form of pollution in their area during the past year. Air pollution is perceived to be slightly more prevalent locally (8.2%), followed by land (7.9%) and water pollution (5.9%). Furthermore, residents in the nine governorates noted a range of extreme weather events, including extreme temperatures (11.6%), drought (4.3%), floodings (3.2%), as well as storms and cyclones in coastal areas.

Figure 12

Perceived environmental issues experienced at the district level in the last year, aggregated data

Respondents: 2,280. Total responses = 11,535



Pollution: Air (8,16%), Land (7,88%), Water (5,92%). Extreme weather events: Extreme temperatures (11,59%), Drought (4,3%), Flooding (3,23%), Storms and Cyclones (1,84%). Decrease in Biodiversity and Woodlands: Decrease in Biodiversity (5,44%), loss of woodlands (1,4%).

A look at the qualitative data shows the nuances between different socio-economic groups. While female respondents and those under the age of 30 across all governorates, highlighted the deterioration of infrastructure and residential buildings, farmers stressed the challenges from pests and diseases, extreme events, floods, and droughts on agricultural land and crops. Fishers pointed out sea pollution and overfishing as stressors that are depleting fishing yields. An interview respondent mentioned an example of dead fish appearing in large quantities on the coast of Al-Mahra for unknown reasons. Illegal fishing and fish dredging by neighbouring countries, a consequence of environmental neglect due to the war, pose a significant threat to food security and the income sources of coastal populations. The war's preoccupation with more immediate concerns has led to a neglect of environmental issues, allowing illegal practices that impact marine ecosystems and livelihoods to flourish.

Armed conflict has exacerbated these environmental risks, contributing to the spread of pollution from plastic and remnants of war, the destruction of infrastructure, contamination of land and sea, and the neglect of ecological reserves. The now-addressed ecological threat of an oil spill from the *FSO Safer* in the Red Sea,¹⁸ and the ecological reserves in Al-Mahra,¹⁹ illustrate the environmental consequences and potential cost of inaction related to political impasse. In the focus groups and interviews, young participants and decision-makers expressed concern about the environmental problems stemming from oil tanker spills and pipelines, remarking on their potential impact on agriculture, fisheries, and health, and highlighting the impact that it can have on increasing rates of diseases like cancer among coastal populations. In the face of these challenges, farmers lack the economic resources needed to adopt modern agricultural technologies to enhance resilience. The ongoing conflict limits access to essential services and further contributes to environmental degradation, illustrating the complex interplay of factors impacting local communities.

18. UN News (2023). Yemen: UN concludes removal of one million barrels of oil from decaying tanker. Available at: <https://news.un.org/en/story/2023/08/1139687>

19. Lackner, H. (2021). Climate Change and Conflict in Hadhramawt and Al Mahra. Berlin: Berghof Foundation. Available at: <https://berghof-foundation.org/library/climate-change-and-conflict-in-hadhramawt>



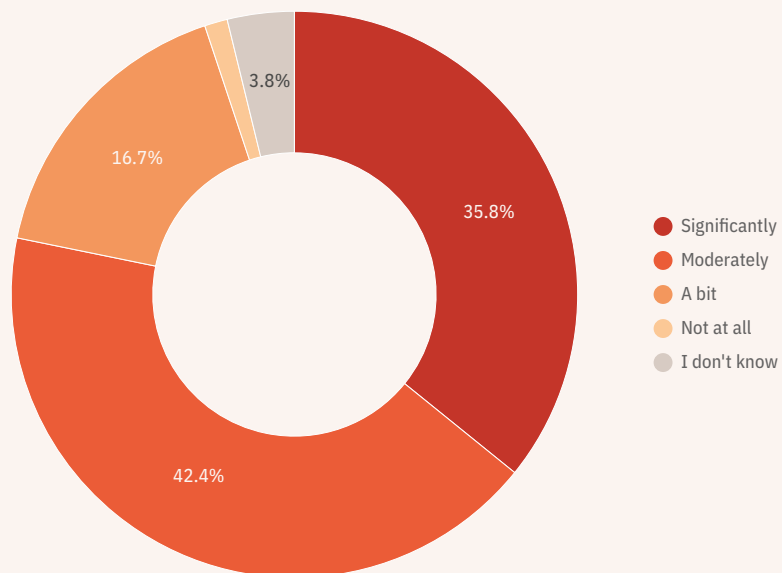
Photo 2: In the coastal area of Wadi Al-Malik, 30 km south of the city of Mocha, weak environmental governance is evident in the coastal degradation and undermined flora. Nazeh Al-Hrefy (EIP, 2023).

Photo 3: In the ancient city of Mocha, archaeological buildings are destroyed and lack the necessary protection for their conservation. Nazeh Al-Hrefy (EIP, 2023).

The impact of climate change, environmental degradation, and resource scarcity is felt by Yemen's population. Almost 80% of respondents indicated that their daily lives are significantly or moderately affected by these environmental issues (Figure 13), mostly due to diminished access to essential goods and services, that are massively impacted by inflation. Increasing food prices and insufficient availability of essential goods are prominent risks perceived by respondents across Yemen. Significantly, **97% of survey**

respondents noted increased prices of essential goods, and over half reported insufficiency of safe food for them and their families. Continuous conflict, escalating food costs, diminished employment prospects, depleted productive assets, and declining wages, all contribute to food insecurity in Yemen. Despite ongoing humanitarian assistance, it is estimated that food insecurity is a concern for more than half of the population.²⁰

Figure 13
Perceived impact of environmental issues on daily life
n = 2,275



In the context of the ongoing conflict, the country also grapples with health challenges intimately linked to these environmental risks. The poor state of the environment impacts public health, with **six out of ten respondents perceiving a deterioration in their physical or mental health, or that of their family members, due to environmental factors.** Often neglected amidst the myriad challenges facing Yemen, during the consultation, poor mental health appeared as another prominent issue, particularly observ-

able in areas where there are also alarming rates of water and energy shortages as well as insufficient or unsafe food. For instance, in Al Tai'iziyah, one of the districts most impacted by the conflict, poor mental health rates rose to 96%, while energy and water shortages were reported at 100%. This finding is consistent with the results of the previous consultation, which pointed out the need to address individual and collective post-war mental health and trauma in the context of reconciliation.²¹

20. WFP (2024). WFP Yemen Food Security Update, February 2024. Available at: <https://reliefweb.int/report/yemen/wfp-yemen-food-security-update-february-2024>
FAOSTAT (2024). Yemen. Available at: <https://www.fao.org/faostat/en/#country/249>

21. EIP (2021). Pathways for Reconciliation in Yemen. Available at: <https://www.eip.org/pathways-for-reconciliation-in-yemen-full-page-v2/>

Vulnerable and marginalised groups bear disproportionate burdens from these environmental issues. For example, IDPs report being more significantly impacted than respondents from host communities. While 87% of IDPs consulted, reported experiencing a moderate to significant impact on their daily lives, the percentage of host communities reporting this, lay at 76%. Concerns raised by activists and civil society organisations underscore the increase in population centres near natural water streams; something that can alter the course of torrential rain, leading to infrastructure destruction, loss of agricultural land and displacement of IDP camps. IDPs are severely impacted as they often have no choice but to settle in lowlands or near volatile waterways. Qualitative insights from the consultation also indicated ongoing reluctance from host communities to share natural resources with IDPs, leading to persistent tensions and conflicts exacerbated by resource scarcity.

Individuals whose livelihoods largely depend on natural resources constitute another group which is particularly impacted by environmental

degradation. This group includes arable and live-stock farmers, and workers in the energy and health sectors (*Figure 14*). In regions such as Al-Dhale'e, Ma'rib, and Al-Hodeidah, more than half of the respondents reported either the loss of, or severe interruptions to, their primary source of income due to environmental issues. During the focus group discussions, farmers reported negative consequences from plant diseases, floods, and droughts, and fishers were particularly affected by hurricanes, storms, and sea pollution. A young respondent from Al-Mahra shared how climate change is already affecting agricultural production, threatening farmers' livelihoods and the urban population's food security due to the shortage of agricultural products in cities and their surging prices. Similarly, an interviewee highlighted how using unregulated pesticides and chemical fertilisers has also caused crop failure and the spread of diseases to consumers. Fishers reported fishing operations coming to a halt, livelihoods being interrupted, boats being damaged, fishing nets being lost, and, tragically, people being lost at sea.

Perceived environmental impacts on daily life, disaggregated by employment sector

Figure 14

n = 2,214

Mining sector: The share of respondents from the mining sectors in the survey consultation lay below 1% and is hence disregarded in the disaggregation of results by occupational category.

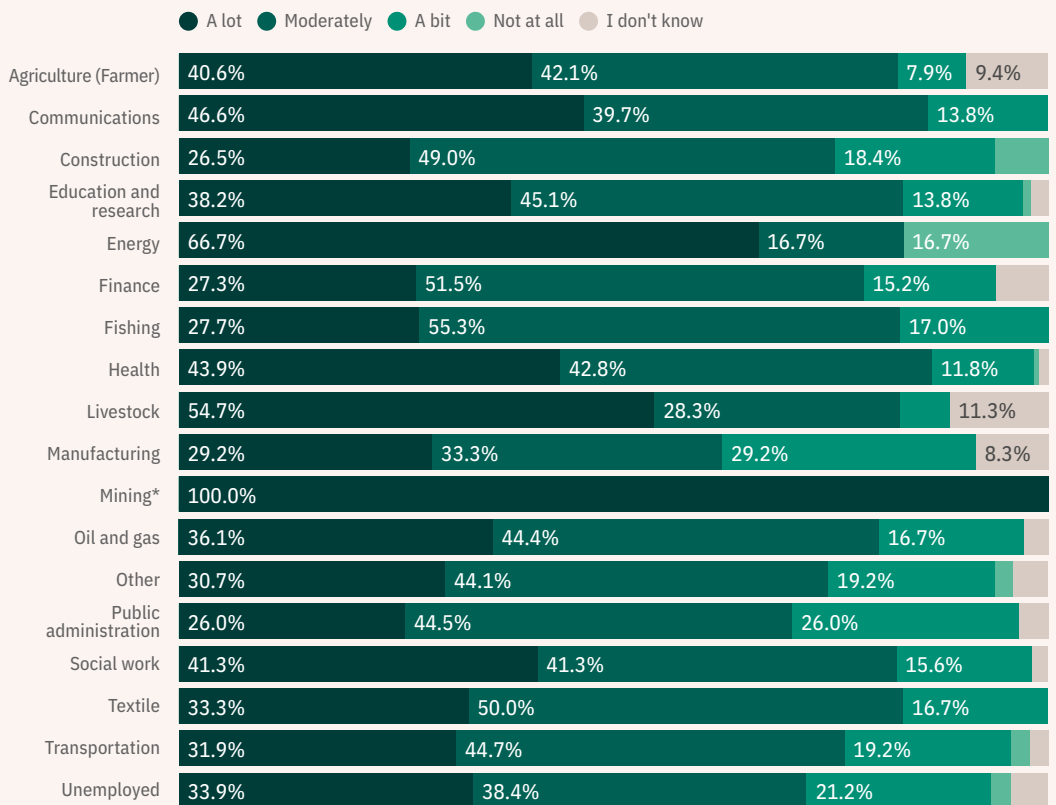


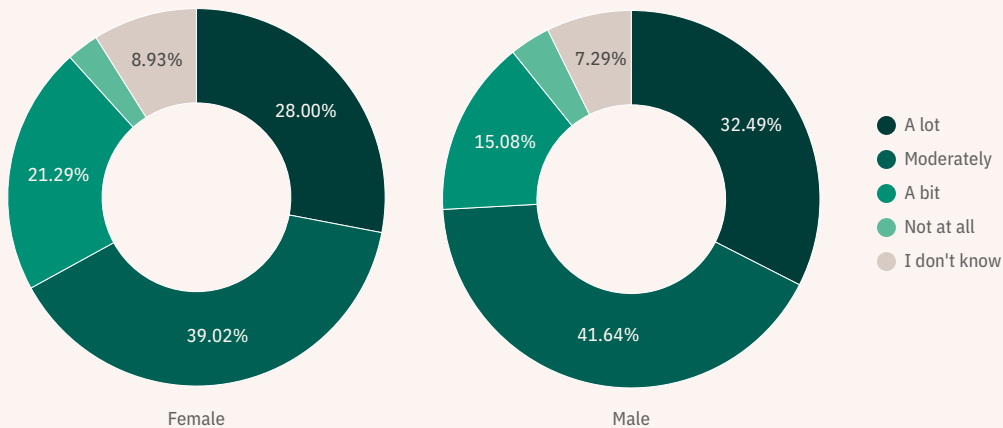


Photo 4: Fisher from Mocha on the coast of Taiz governorate. Naze Al-Hrefy (EIP, 2023).

Concerning gender differences, male respondents reported slightly higher impacts of environmental issues on their daily lives than females. 74% of men indicated that they are significantly or moderately impacted, as opposed to 67% of women (Figure 15). However, qualitative conversations placed an emphasis on the vulnerabilities of women, as well as other socio-economic groups such as children, the elderly, and people with

chronic illnesses, to climate-related risks. For instance, a respondent from Aden highlighted the impact that the persistent droughts have had on women and young girls, forcing them to walk to remote areas to fetch drinking water for domestic use. This increases their vulnerability to road accidents, sexual and gender-based violence, exposure to landmines, and other physical risks.

Figure 15
Perceived climate change impacts on daily life, disaggregated by gender
 n = 1,762



2.2.3 | Governorate-level results

While the highlighted environmental risks were reported across the country, **a view at the governorate and district level reveals some locally specific trends.** Urban areas across the country highlighted issues linked to pollution (including air, land, and water pollution). **Sana'a** stands out, with 33.9% of respondents reporting exposure to pollution during the past year, including elevated rates for land (15.7%), air (9.4%), and water (8.8%) pollution. **Aden** follows closely, with a significant 28.1% of respondents reporting pollution, ranking as the second highest governorate for land pollution rates at 10.85%. **Taiz** also faces notable pollution levels at 27%, particularly with air and water pollution. Focus group respondents from these cities report an accumulation of garbage piles in the streets

and the deterioration of sewage networks. Certain districts, including Damt (Al-Dhale'e, 40%), Bani Al-Harith (Sana'a, 38.5%) and Al-Mansura (Aden, 34.2%), reported particularly alarming pollution rates.

Meanwhile, in other governorates such as **Marib, Al-Hodeidah, Hajjah, and Shabwah, extreme weather events** emerge as the most reported environmental issue. Moreover, **Shabwah and Al-Mahra** stick out with the highest reported rates of **a reduction in land fertility, woodlands, and biodiversity**, with 24% and 18% of respondents, respectively, reporting that they have experienced it during the past year. *Table 1* provides a detailed overview of the environmental risks that dominate in each governorate.

Table 1

Top three reported environmental issues experienced during the past year, disaggregated by governorate

	PRIMARY ENVIRONMENTAL PROBLEM	SECONDARY ENVIRONMENTAL PROBLEM	TERTIARY ENVIRONMENTAL PROBLEM
Aden	Pollution 28.14%	Water shortages/access 19.76%	Extreme weather 17.6%
Taiz	Pollution 27.06%	Water shortages/access 20.63%	Extreme weather 14.93%
Marib	Pollution 25.64%	Extreme weather 23.41%	Water shortages/access 16.16%
Al-Mahra	Pollution 19.67%	Water shortages/access 18.62%	Decreases in biodiversity, woodlands and land fertility 18.08%
Al-Hodeidah	Extreme weather 22.18%	Pollution 20.16%	Water shortages/access 14.76%
Sana'a	Pollution 33.93%	Extreme weather 21.01%	Plagues and pests 16.61%
Al-Dhale'e	Pollution 22.94%	Water shortages/access 21.87%	Decreases in biodiversity, woodlands and land fertility 17.39%
Shabwah	Extreme weather 25.49%	Decreases in biodiversity, woodlands and land fertility 23.69%	Plagues and pests 16.67%
Hajjah	Extreme weather 25.77%	Water shortages/access 20.13%	Plagues and pests 15.76%



Photo 5: As a result of the ongoing siege of Taiz that began in 2015, the accumulation of garbage in the streets and decaying refuse in the waterways of Taiz city, it became a breeding ground for mosquitos, leading to outbreaks of cholera. Nazez Al-Hrefy (EIP, 2023)

Photo 6: Waste management in Marib. Sewage water is collected from Marib city and released in a dedicated dumping area regulated by the government. Nazez Al-Hrefy (EIP, 2023).

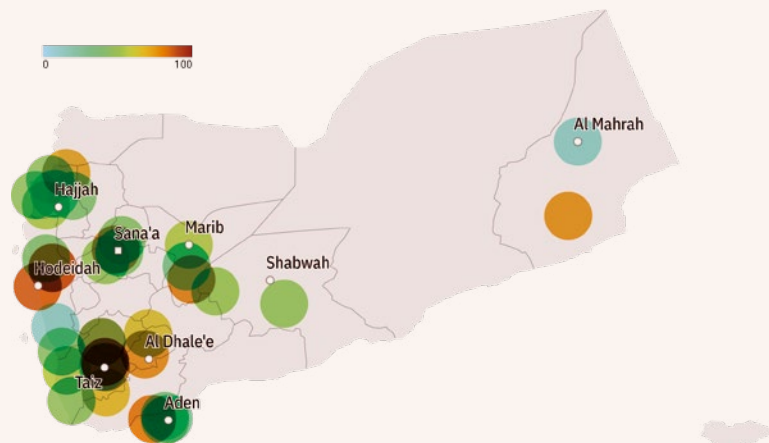
At the district level, several districts within the Hajjah governorate emerge as hotspots for the environmental risks mentioned above. The Bakil Al-Mir district reported some of the highest incidences of extreme weather events (32%), decreases in biodiversity, woodlands, and land fertility (30%) and water shortages (30%). Residents in Kushar, another district in the Hajjah governorate, also flagged high rates, with 37% reporting water shortages and 35.5% referring to extreme weather events, alongside a reported decrease in biodiversity, woodlands, and land fertility (26%). Finally, Hajjah city also appears as a district facing a significant combination of extreme weather events (36%), pollution (28%) as well as plagues and pests (19%).

Local variations also appear in relation to the impact that these environmental challenges leave at the community level. In Al-Dhale'e, for example, a substantial 72% report insufficient or unsafe food, underscoring the multifaceted challenges faced by the population in this governorate. Taiz exhibits a similar pattern, with almost all respondents (99%) from the governorate reporting increased prices for essential goods and 63% facing insufficient or unsafe food (Figure 16).

The environmental risks identified across Yemeni governorates and their districts reveal a need for a tailored approach that responds to locally specific risks and to build resilience.

Figure 16
Perceived lack of food or unsafe food at the household level, disaggregated by district

n = 1,236



Key takeaways

This section uncovered the multiple environmental challenges and related risks for livelihoods, health, and safety that Yemen's population is confronted with. The most pressing issue emerging from the consultations is the availability of natural resources, their quality, and access to them. Notably, water, gas and oil are in shorter supply, with nearly half of respondents reporting shortages. This corresponds with a high reliance on natural resources for sustaining local livelihoods, which over 80% of respondents consider as essential or important to secure their income. Other environmental risks, such as pollution and extreme weather, add to this, with urban areas such as Aden, Taiz, and Sana'a particularly affected by air, land, and water pollution. Additional local hotspots emerge with a view to other environmental problems, including extreme weather phenomena and reductions in land fertility and biodiversity. These environmental challenges suggest significant risks for Yemen's population, with eight out of ten respondents perceiving a moderate to significant impact on their daily lives. Diminished access to essential goods, where scarcity meets with rising prices, emerges as the most notable impact, with corresponding consequences of food security. Those relying on natural resources as their main source of livelihood or as a survival mechanism, like IDPs and farmers, reported the highest impacts, rendering them the most significant self-reported vulnerable groups.

PERSPECTIVES ON CLIMATE CHANGE, PEACE, AND CONFLICT

In view of the adverse effects of climate change and environmental degradation on communities across the country, to leave these issues unaddressed, would risk further tension and conflict, particularly at the local level. This section presents insights into the Yemeni perspective on the interdependence of climate, peace, and security. We begin by exploring cross-cutting security challenges and perceptions of their link to environmental factors, before delving into the local perspective and experience of tensions and conflicts relating to environmental factors and their governance.



3.1

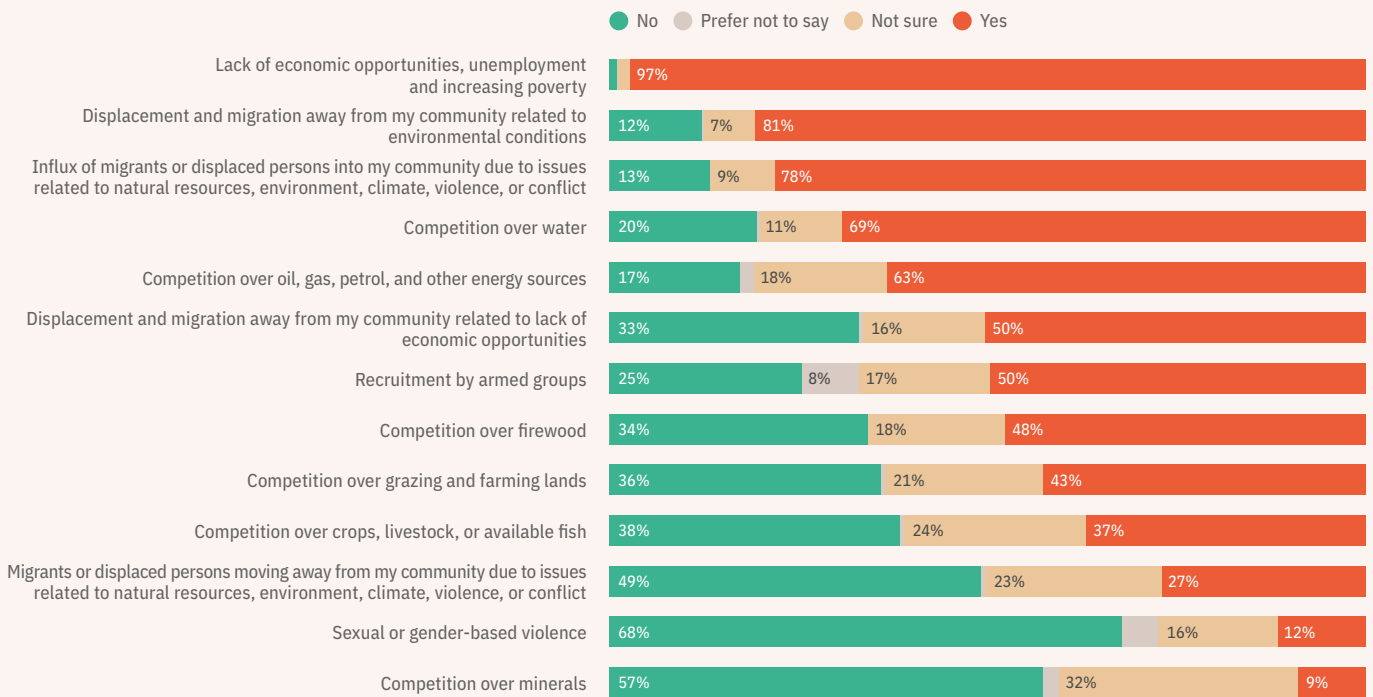
CROSS-CUTTING SECURITY CHALLENGES

The adverse effects of the political, governance and humanitarian crises are widespread, and contribute to the prevalence of economic and security challenges. Across the nine governorates, lack of economic opportunities, unemployment, and poverty, were reported as the most severe problems and acknowledged by 97% of the respondents. Additionally, issues of displacement and competition for natural resources (mainly water and energy sources) are perceived at the community level in all governorates (Figure 17).

The impact of environmental degradation and climate change on the agricultural and fishing sectors seems to further undermine economic opportunities. Interviewees reported that agricultural land, a main source of livelihood, is contaminated with landmines, unexploded ordinances, and remnants of war, which hinder farming as a viable livelihood. Such environmental impacts have indirectly increased the number of IDPs as they go in search of alternative livelihoods. This leads to unsustainable exploitation of natural resources as a survival mechanism, boosting mobilisation and recruitment by armed groups.

Figure 17

Perceived issues at the community level across nine target governorates, aggregated data



Most Yemenis identify environmental risks as drivers of displacement in their communities.

About 80% of respondents reported experiencing or observing displacement and migration away from their communities as directly linked to environmental factors, with a pronounced concentration in Al-Mahrah (91.5%) and Marib (93.6%). In focus group discussions, the deterioration of

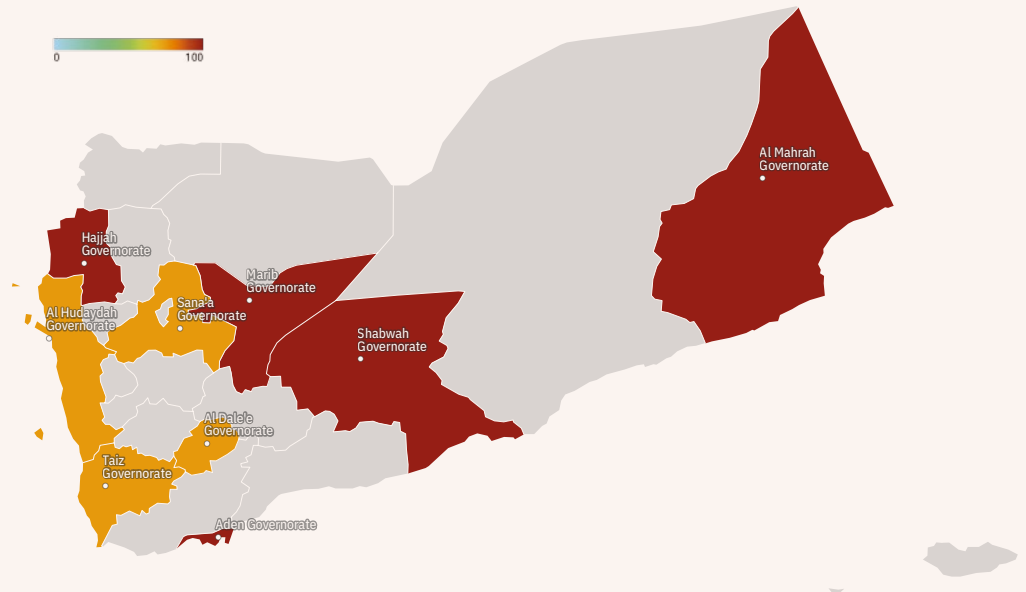
water resources was mentioned as a driver of such displacement, causing further stress over natural resources and services between IDPs and host communities. Specific communities, such as the displaced residents of Al-Durayhimi (Hodeidah), face further stress since they are not able to return to their areas of origin after mines were planted close to residential areas.

Perceived relationship of emigration to environmental issues

Many Yemenis reported that emigration and displacement were significantly linked to environmental problems such as pollution or lack of natural resources to sustain livelihoods, particularly water.

Figure 18

n = 1,834



Displacement also emerges as a factor contributing to competition for natural resources and services.

This topic received particular attention from women throughout the consultation, who emphasised the strain on services due to the large influx of IDPs. In focus group discussions, decision-makers acknowledged that displacement is a driver for more intense competition for services and natural resources in areas of stability. Throughout the survey sample, about one in ten respondents replied that they perceive a strain posed on natural resources through population increase and identified it as a factor contributing to conflicts and tensions.

ment is a driver for more intense competition for services and natural resources in areas of stability. Throughout the survey sample, about one in ten respondents replied that they perceive a strain posed on natural resources through population increase and identified it as a factor contributing to conflicts and tensions.

Perceived strain on natural resources due to increased population in host communities

Hajjah (16.1%), Al-Mahra (14.3%), and Sana'a (15.9%) emerge as areas particularly affected by this opinion within communities.

Figure 19

n = 616

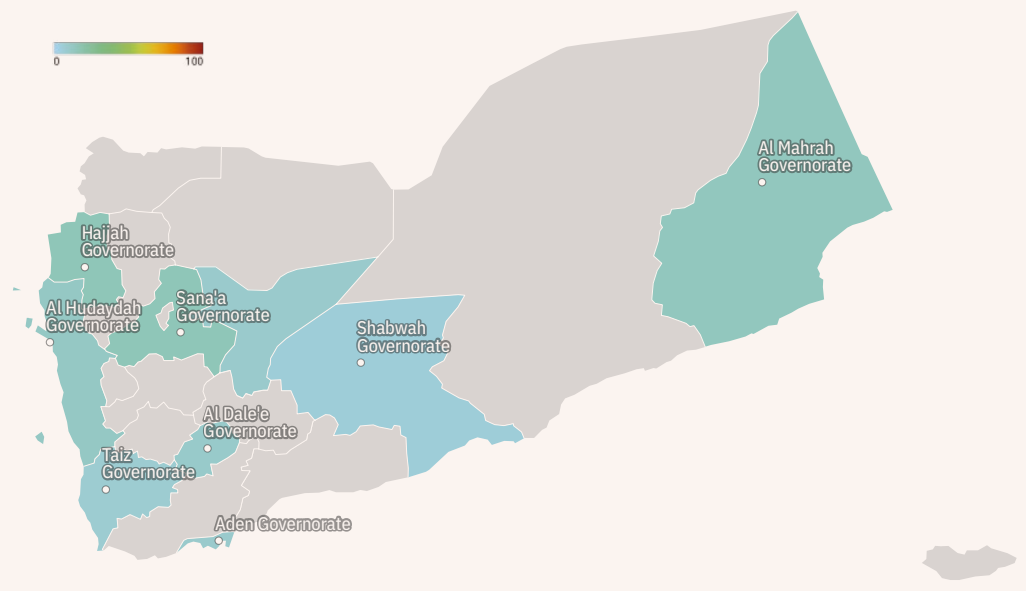




Photo 7: Vendor in the market in Taiz.
Nazeh Al-Hrefy (EIP, 2023).

3.2

ENVIRONMENTAL DRIVERS OF TENSIONS AND CONFLICTS

Environmental issues are widely perceived to increase vulnerability, aggravating existing tensions and leading to conflict and violence across the country. The unsustainable governance of natural resources is a significant driver of tension across the nine consulted governorates. **More than half (52.6%) of the respondents described encountering or hearing about conflicts or tensions in their district due to environmental**

factors (Figure 20). The reported occurrence of such conflicts is especially pronounced in the governorates of Taiz (70%), Ma'rib (66%), and Al-Dhale'e (64%) (Figure 21). Notable instances were reported in the districts of Al Ta'iziyah (96%), Al-Shamaytayn (92%) and Al-Mudhaffar (74%) in Taiz, Al-Khawkhah (93%) in Hodeidah, Harib (82%) in Marib, and Sana'a City (73%).

Figure 20
Perceived tensions or conflicts related to environmental or natural resource issues at the community level, aggregated data
 n = 2,270

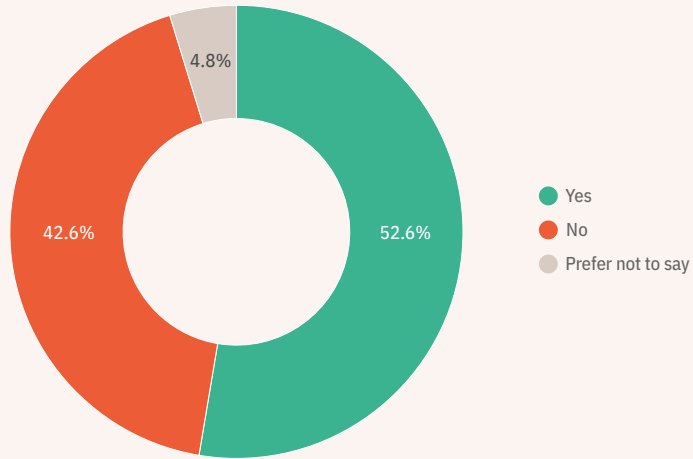
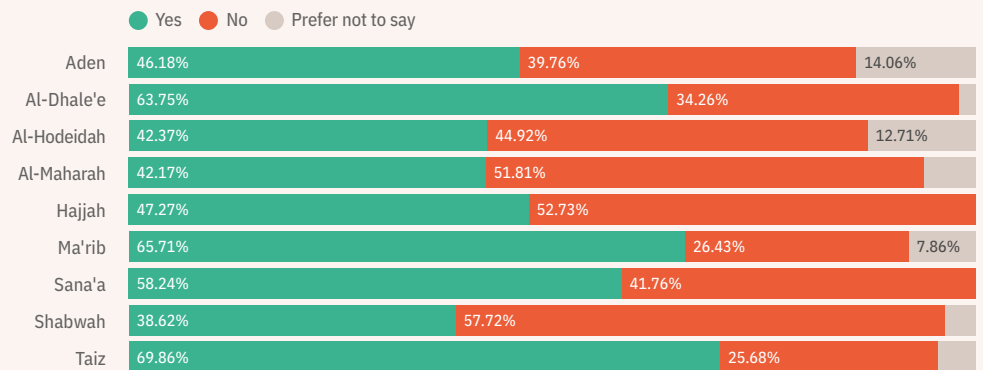


Figure 21
Perceived conflicts in relation to the environment and natural resources, disaggregated by governorate

Taiz, Marib, and Al-Dhale'e emerge as areas where such conflicts are particularly recognized.

n = 2,270



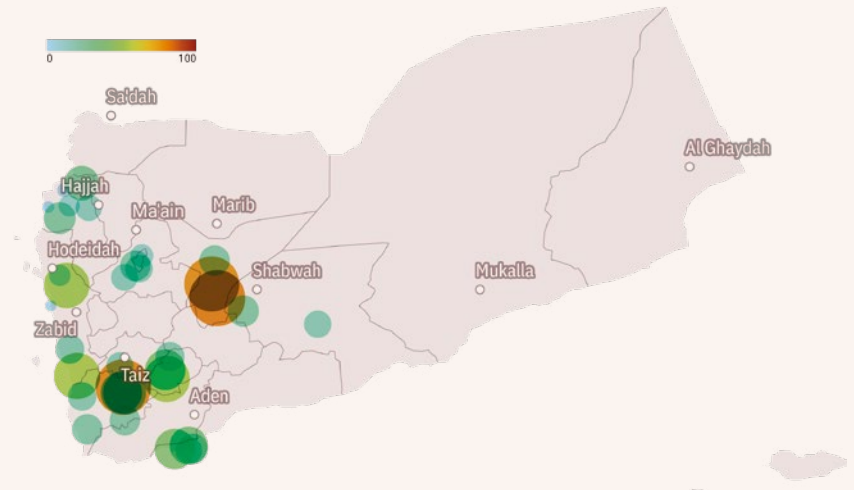
One in four respondents (25.6%) indicated being negatively affected by such conflicts becoming violent. The governorates of Ma'rib and Taiz emerged as hotspots, especially the Harib, Al-Jubah, and Al Ta'iziyah districts, where notably high rates of violent conflicts linked to environmental factors (80%, 76%, and 78%,

respectively) were reported. Displaced people and migrants participating in the survey are among the groups whose communities experience the most disputes linked to environmental issues. Similarly, these events were more often reported by the unemployed, illiterate, and those with primary education.

Figure 22
Perceived conflict over environmental issues that turned violent, disaggregated by district

Marib and Taiz emerge as the two governorates with more cases of perceived violent conflicts related to environmental factors.

n = 1,175

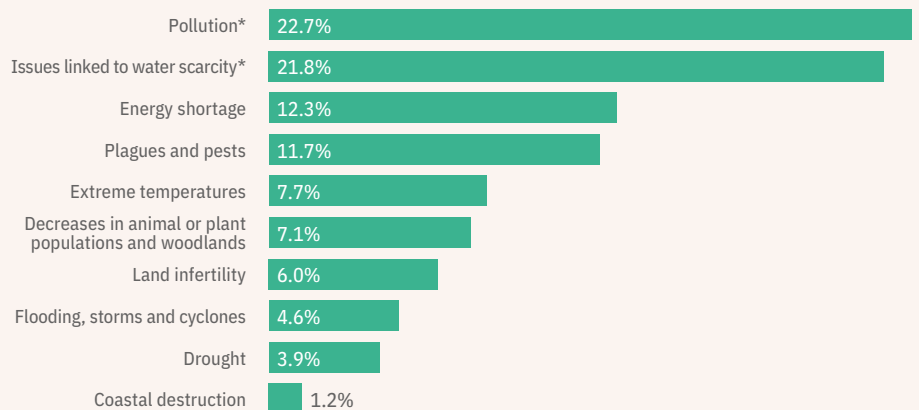


The relationship between environmental and climate risks, and conflict, manifests through different pathways. Pollution and issues linked to water scarcity are the main environmental issues that respondents perceived as leading to conflict and tensions, representing almost half of the total responses (Figure 23). When the impact of water, land, and air, pollution is combined, it emerges as a significant environmental driver of tensions or conflicts, contributing over

22% of the responses. Notably, responses also pointed to energy shortage as a significant factor, with more than 12% of respondents linking it to tensions. This aligns with the qualitative insights from focus groups, who emphasised that weak governance, associated with elite monopolisation of natural resources, has increased grievances for many vulnerable groups and ignited tensions over natural resources across the country.

Figure 23
Perception of environmental issues in relation to tension and conflict across nine target governorates, aggregated data

Respondents: 1,217



Pollution includes: water pollution (6,92%), air pollution (6,98%) and land pollution (8,83%). Issues linked to water scarcity, involve lack of access to water (13,8%) and lack of rainfall/water shortages (7,95%). Flooding corresponds to 3,09% and storms and cyclones 1,49%. Decreases in animal or plant population 5,48% and loss of woodlands 1,66%.

Qualitative insights across all nine governorates, highlight disputes and conflicts over the exploitation of natural resources, including land and water. Fishers in Taiz and Hodeidah, for instance, reported conflicts linked to the practice of overfishing attributed to scarce natural resources and marine pollution—framing it as a competition for power and wealth. Similarly, conflicts over water resources were reported in Marib, Taiz, Aden and Hodeidah, including an armed conflict between the villages of Qarabeh and Marzuh in Taiz, revolving around the ownership of a water well. The conflict persisted for almost four years and led to numerous cases of displacement, injury, and death. Another cited example of such a conflict, concerned tensions between the two villages of Al-Salamah and Al-Qarashia in Hodeidah, over rainfall runoff, where influential residents from Al-Salamah were perceived to have altered the runoff path in their favour.

There is a growing acknowledgement of intensified competition for the most essential natural resources, particularly water and energy. Close to 70% of respondents reported competition in their communities for water resources, and numerous other resources. These included oil, gas, petrol, and other energy sources (63%), firewood (48%), farming and grazing lands (43%), crops, livestock, or fish (37%), as well as minerals (9%) (Figure 17). While this problem is omnipresent in the country, it is particularly pronounced in relation to water in urban areas, including Aden City, Taiz City and Sana'a City, especially the districts of Al Ta'iziyah and Salh (Taiz), as well as Khur Maksar and Serah (Aden). Similarly, competition for energy is mostly concentrated in Al Ta'iziyah (Taiz), and Al-Buraiqeh and Khur Maksar (Aden) districts. **Aden emerges as a hotspot governorate for competition over both water (93%) and energy (90%).**

Figure 24
Perceived competition for water in the nine target governorates, disaggregated by district
 n = 1,573

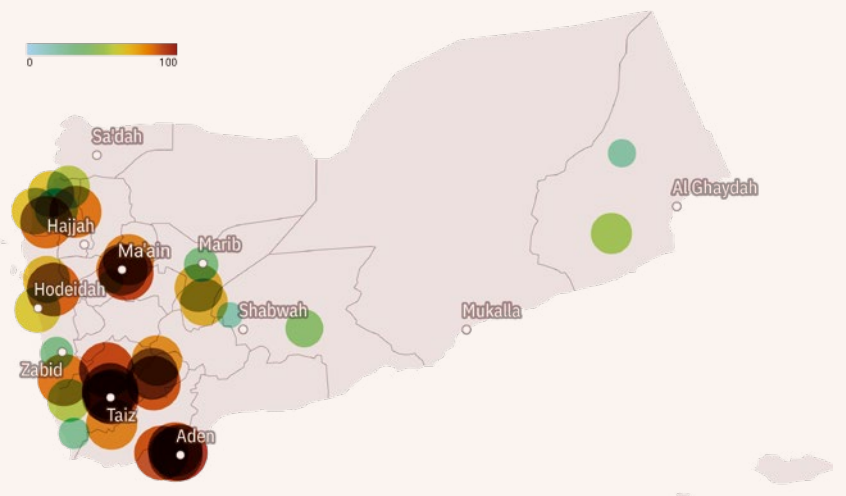
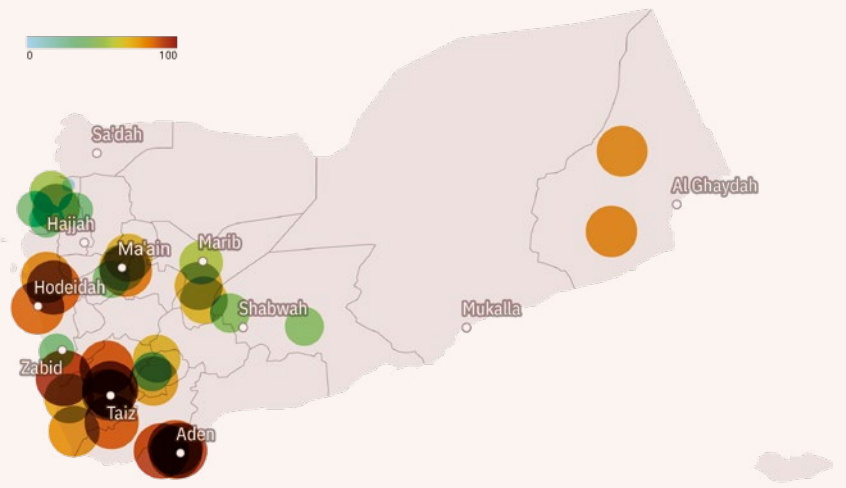


Figure 25
Perceived competition for energy resources in the nine target governorates, disaggregated by district
 n = 1,440

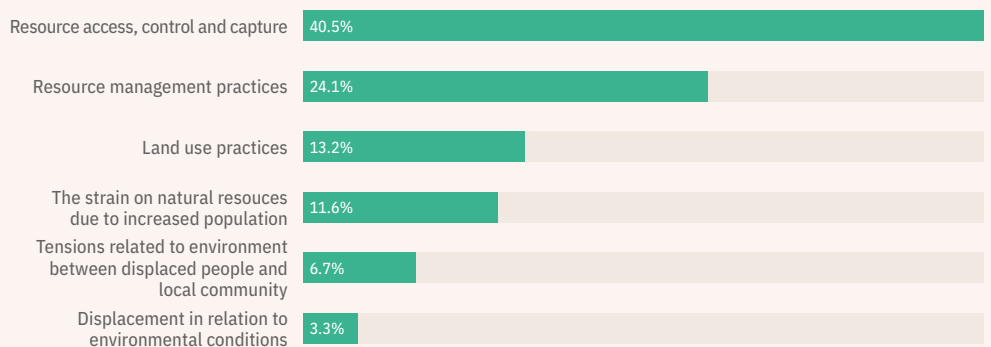


In line with the trends highlighted above, **tensions and conflicts over natural resources seem to be largely driven by governance and exploitation.** Access, control, and the capture of natural resources are perceived as the greatest drivers of conflict, as reported by over 40% of the respondents. This was followed by poor resource management practices, such as poor waste and water management, the use of fertilisers, overfishing, and poaching, which

represented 24% of identified practice-related drivers that might lead to disputes and conflicts. In addition, 13% of respondents mentioned poor land use practices as a driver of conflicts, mainly due to deforestation, farming and grazing, and construction. Lastly, many indicated conflict drivers related to population growth (11.6%), the arrival of displaced people in host communities (6.7%) and displacement due to environmental issues (3.3%) (Figure 26).

Figure 26
Perceived drivers of conflict-related management of natural resources and environment

Respondents: 1,214



Resource access, control and capture: Resource access (5,65%), Resource capture by elites (6,2%), Resource capture by others (9,9%), Resource control (11,9%), Resource sharing (6,89%). Resource Management Practices: Fertilizers (4,75%), Industrial activities (1,97%), Oil drilling (1,02%), Overfishing (1,8%), Poaching (1,28%), Waste management (8,47%) and Water management (4,79%). Land use practices: Construction (3,42%) Deforestation (5,62%), Farming and grazing (4,15%).

Photo 8: Al Jufainah camp for internally displaced people in Marib. Nazeah Al-Hrefy (EIP, 2023).



At the governorate level, the main hotspots where poor natural resources and environmental management were perceived to lead to conflict include Al-Mahra (41%), Ma'rib (27%), and Hajjah (27%). Issues relating to access, control, and capture were reported most frequently in Shabwah (55%), Al-Dhale'e (47%) and Sana'a (47%). At district level, Al-Mudhaffar (Taiz) stands out with 65% identifying resource access or control as drivers of conflict, closely followed by Al-Tuhayta (Hodeidah) and Ma'een (Sana'a) with roughly 61% each.

Resource management, land use practices, and the strain on natural resources due to increased population and resource management practices continue to be the main drivers of tension and

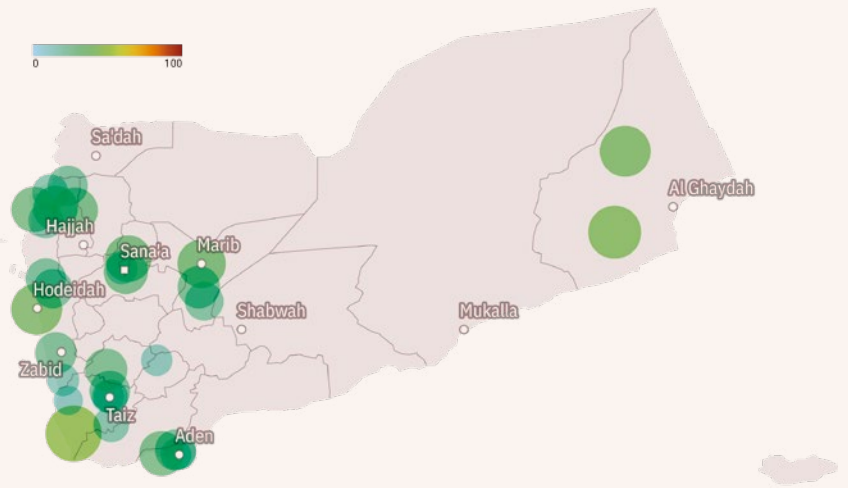
conflict. In focus groups, IDPs and migrants underscore tensions regarding environmental concerns and resource sharing, while host communities and internally displaced individuals focus on resource control and the strain on natural resources due to population growth. Notably, individuals employed in the private sector reported the highest response on resource access, control, and capture. It is noteworthy that the informally employed report the most significant perception of tensions regarding environmental matters between displaced people and local communities. While the informally employed and miners more frequently reported on practices related to resource management, workers in the textile and manufacturing sector emphasised resource-related practices.

Perceived resource management practices as leading to conflict, disaggregated by district

Resource management practices: Fertilisers, Industrial activities, Oil drilling, Overfishing, Poaching, Waste management, and Water management.

n = 2,183

Figure 27



Perception of issues relating to resource access, control, and capture as leading to conflict, disaggregated by district

Resource access, control and capture: Resource access, Resource capture by elites, Resource capture by others, Resource control, Resource sharing.

n = 2,161

Figure 28

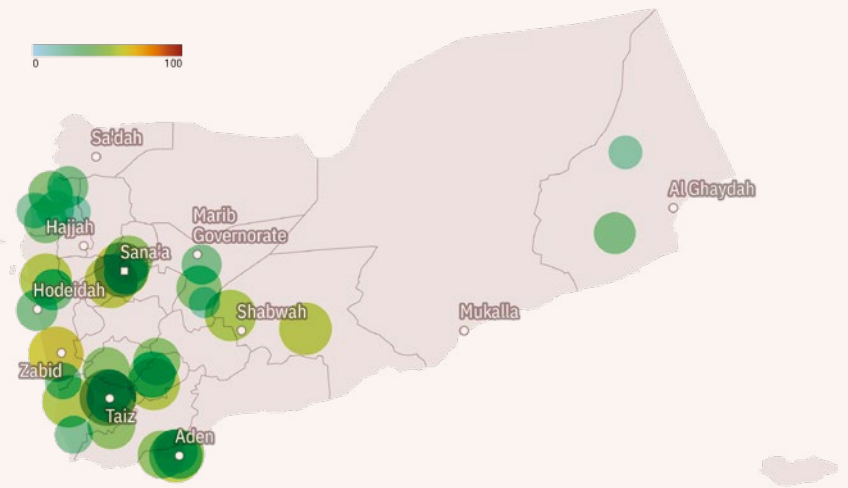




Photo 9: Market in Taiz. Nazeh Al-Hrefy (EIP, 2023).

Key takeaways

The results laid out in this section reveal the prevalence of disputes and tensions in relation to environmental factors. More than half of respondents indicated that they have experienced or heard of tensions or conflicts in their district in relation to environmental issues, and one in four respondents reported adverse impacts due to such conflicts escalating into violence. The findings underscore a growing acknowledgment of intensified competition surrounding natural resources, particularly water and energy, with close to 70% of Yemeni respondents reporting competition within their communities for water resources. This issue is particularly pronounced in Aden, while Taiz, Marib, and Al-Dhale'e emerge as hotspot governorates for acute conflicts in relation to environmental factors and natural resources. Notably, human activities such as access, control, and exploitation of natural resources are identified as primary drivers contributing to tensions and conflicts. Other socio-economic factors, particularly population increase and migratory patterns, contribute to enhanced competition for environmental resources and are identified as conflict drivers. Other socio-economic factors, especially demographic pressure through population increase, immigration, and displacement, contribute to tensions due to increased competition for natural resources.

ENTRY POINTS FOR ENVIRONMENTAL PEACEMAKING

The previous sections have shed light on the multifaceted risks arising from climate and environmental issues in Yemen, that profoundly impact the lives of its people. With natural resources dwindling and competition for them escalating, the country is experiencing ever increasing potential for tensions, conflicts, and violence.

Environmental peacemaking can provide legitimate entry points or elements for dialogue and cooperation, that will contribute to sustainable peace in the long run. A vision of sustainable peace in Yemen inevitably needs widespread agreement to a settlement that will improve the current situation. This will include identifying ways to provide a meaningful peace dividend to a critical mass of the population. There appear to be ample ways to leverage aspects around natural resource management and related tensions. This also applies to climate change-related concerns, that could be identified and considered in useful ways to develop solid bases to ensure widespread support for solutions to the ongoing conflict.

This section explores the potential of environmental peacemaking and reconciliation by delving into local perspectives and the priorities for addressing environment-related grievances, tensions, and security risks. The first part of this chapter explores the need to protect the environment and respond to climate change, while the second looks at initiatives and mechanisms designated to address community conflicts and disputes that can be linked to environmental issues.

4.1

RECONCILIATION WITH AN ENVIRONMENTAL PERSPECTIVE

Understanding the meaning of reconciliation at the local level in Yemen was a core objective of EIP’s previous consultation. It revealed nuanced and sophisticated notions of reconciliation ranging from ending the violence, to building trust in state institutions, to restitution. In the context of this consultation, the environment emerged as a priority in eight out of nine governorates, on a par with “ending the main war”. This indicated that the environment plays a fundamental role in the population’s sense of safety and security, and that its restoration and protection is an important and urgent demand. Reconciliation efforts that aim to meaningfully address local Yemeni perspectives therefore should consider environmental factors as integral elements.²²

The Environmental Peacemaking Consultation informing this report therefore put emphasis on

questions around the need to respond to climate change and protect the environment, especially in relation to peace efforts.

Most Yemenis agreed that responding to climate change and protecting the environment in Yemen in the short-term is essential, with 85% indicating it is important or very important (Figure 29). In Hajjah, one of the governorates that has been the most impacted by the war and where most of the population requires humanitarian assistance, consensus reached 63%. The districts of Kushar (Hajjah), Serah (Aden), and Harad (Hajjah) stand out with high levels of importance attributed to responding to climate change and protecting the environment. Conversely, Sana’a City is where the most votes (16%) were received against it.

Figure 29
Importance of responding to climate change risks and protecting the environment in Yemen in the short-term

A significant 84.4% perceive it as very important or important, and only 2.7% as not important.

n = 2,277

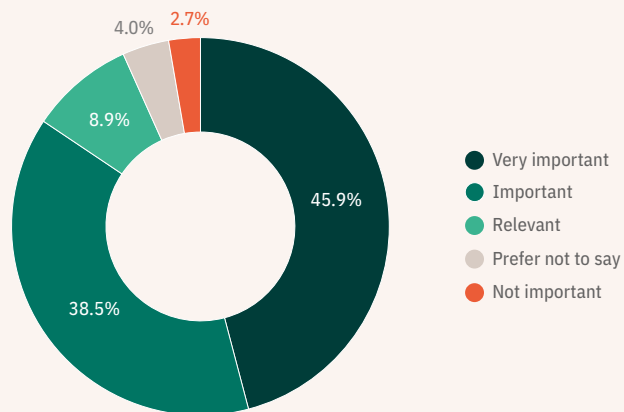
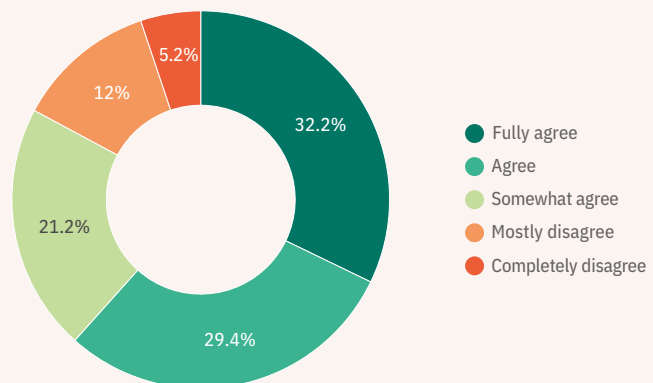


Figure 30
Perceived need to include environmental considerations in conflict resolution in Yemen

A majority of 61.6% agree that conflict resolution efforts should be sensitive to environmental risks.

n = 2,264



22. EIP (2021). Pathways for Reconciliation in Yemen. Available at: <https://www.eip.org/publication/pathways-for-reconciliation-in-yemen/>

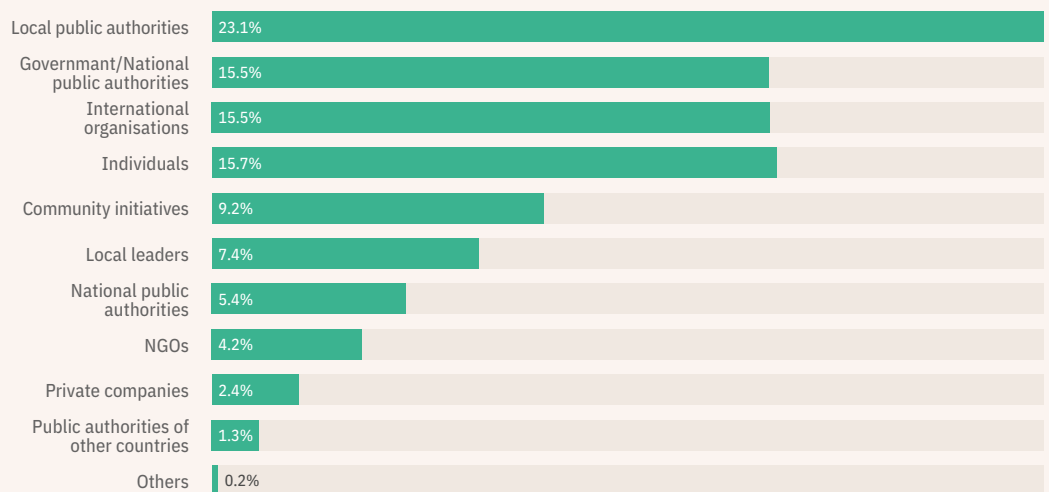
There is a recognised imperative to integrate environmental challenges into conflict resolution in Yemen. Almost 62% of the respondents asserted that environmental challenges should be addressed as part of peace negotiations, with over 32% considering it indispensable to achieving peace (Figure 30). Respondents in the governorates of Al-Hodeidah (44% fully agree) and Taiz (41% fully agree) showed the highest support for an integration of environmental considerations into conflict resolution, while in Al-Dhale'e (22%), Hajjah (27%) and Sana'a (20%), opposition rates were highest. Overall, only about 5% of respondents considered the inclusion of environmental challenges in the context of conflict resolution to be counterproductive.

The responsibility for addressing environmental and climate change issues as a contribution to peace was perceived as shared between individuals, communities and local and national authorities. Local and national level public authorities were attributed a pivotal role as primary agents, with 23.1% and 15.7% responses respectively, together with individuals (15.5%) and community initiatives (9.2%) (Figure 31). Some participants from the FGDs questioned the effectiveness of public agencies when addressing environmental challenges, and others highlighted their importance as key partners in driving change and addressing the challenges.

Perceived responsibility for addressing environmental and climate change issues

Respondents: 2,273
Responses: 5,461

Figure 31

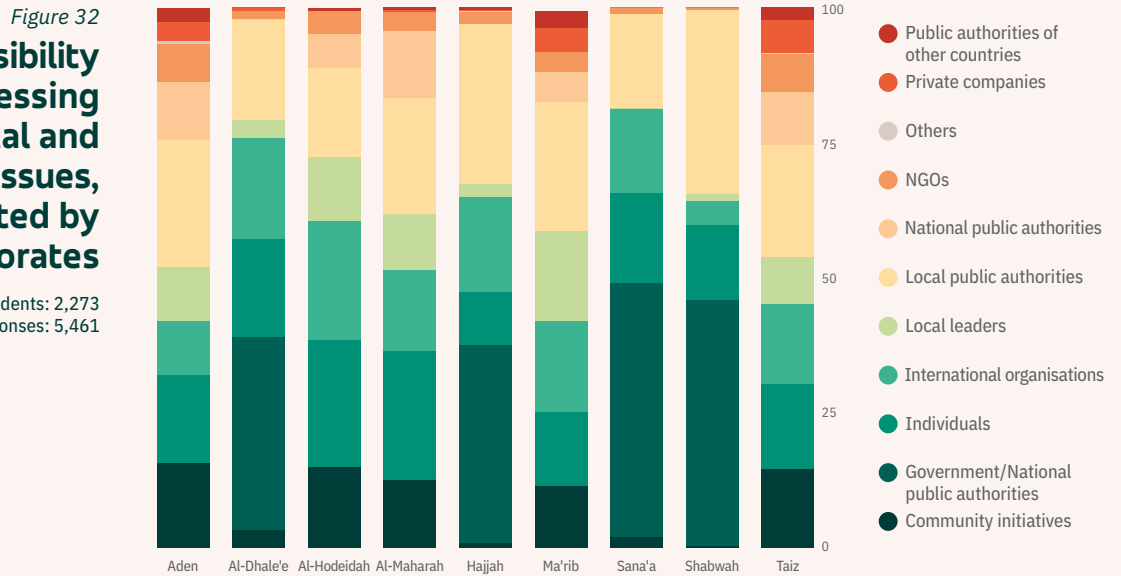


This overarching trend encountered notable exceptions at the governorate level (Figure 32). In the Shabwah, Sana'a, Hajjah and Al-Dhale'e governorates, a significant majority of respondents preferred the government or national public authorities as the primary agents for tackling environmental and climate change issues, with an average of 35.5% naming them as the most important actors with the most appropriate role to address environmental and climate-related issues. In Aden, Al-Hodeidah,

Al-Mahrah, Marib and Taiz, community initiatives were attributed a bigger role and viewed as complementary to the local authorities and individuals. Such results manifest the need for a nuanced perspective on the most effective entities in addressing environmental and climate security risks and, most importantly, denotes the potential for government institutions to leverage environmental action for peacemaking, which could in turn, contribute to the legitimisation of their role and buy-in to political settlements.

Perceived responsibility for addressing environmental and climate change issues, disaggregated by governorates

Respondents: 2,273
Responses: 5,461



Environmental peacemaking initiatives provide opportunities for mediation, fostering collaboration and reconciliation. Within the protracted conflict, Yemenis face heightened exposure to severe environmental hardships, including extreme temperatures and droughts. This leads to increased scarcity of natural resources, particularly water and energy, and increased competence regarding their control, access, and capture. The lack of trust in local authorities to resolve security risks has further diminished their

ability to address environmental and climate-related perils. While individuals and communities act by leading and participating in initiatives, this is not enough. The insights from this consultation reveal that integrating environmental lenses into reconciliation, peace processes and potential agreements, and strengthening the local governance of environmental issues and related disputes, are essential considerations for achieving sustainable peace.

Photo 10: Awwam, the great temple of Marib, dedicated to the moon god, Almaqah. Nazeq Al-Hrefy (EIP, 2023).



4.2

ADDRESSING ENVIRONMENTAL AND CLIMATE-RELATED DISPUTES AT THE LOCAL LEVEL

Despite the role attributed to local and national public authorities in addressing environmental challenges, the responses pointed to gaps in public management and responses to environmental risks. Over 67% of the Yemenis consulted, indicated that they are not aware of any formal environmental policies or laws in their governorate. Al-Hodeidah, Al-Dhale'e, Shabwah, Taiz, Al-Maharah and Aden showed the lowest rates, with more than 70% of people perceiving a lack of environmental policies and laws (*Figure 33*). Conversely, in Hajjah, Sana'a, and Marib, there seems to be a greater perception of formal environmental governance. The answers indicate that regardless of which faction is in control of a governorate or the intensity of armed conflict there, Yemeni citizens generally perceive that there is a lack of formal frameworks to govern environmental matters.

On this topic, the consultation highlighted a gap between public entities and Yemen's broader population, with 61% of respondents affirming that they do not know who to approach in their district or governorate when it comes to

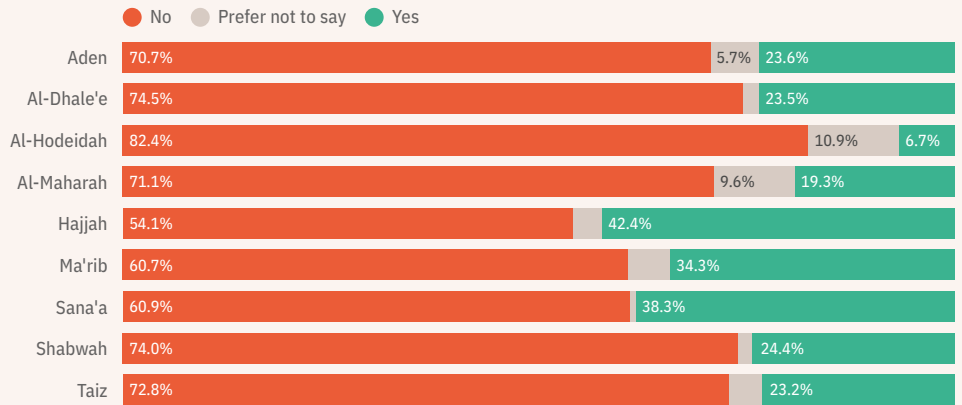
environmental concerns or issues. This issue was particularly evident in the Al-Dhale'e and Shabwah governorates, where over 70% of respondents noted a lack of knowledge regarding who to approach to raise any environment-related issues that they might be facing (*Figure 34*).

Even where an entity or person to address issues with may have been identified, results point to a gap in representation and accessibility. More than half of the respondents did not feel enabled to approach local authorities on questions, concerns or disputes relating to the environment. In common with the overall lack of knowledge about available authorities or bodies that could address identified issues, this feeling of not being positioned to address relevant authorities was particularly prominent in Al-Dhale'e (73.3%) and Shabwah (70.3%) (*Figure 35*). These findings reveal substantial gaps in efforts to mitigate the ecological fallout resulting from regional disputes, that require a more comprehensive and environmentally sensitive approach and enhanced enforcement of existing policies and laws.

Perceived existence of formal environmental policies or laws disaggregated by governorate

Figure 33

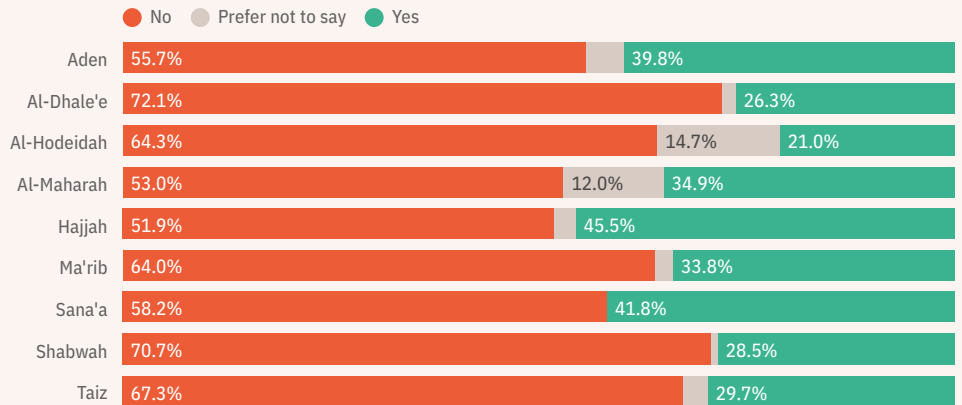
n = 2,277



Perception of entities available at a local level to approach about environmental issues, disaggregated by governorate

Figure 34

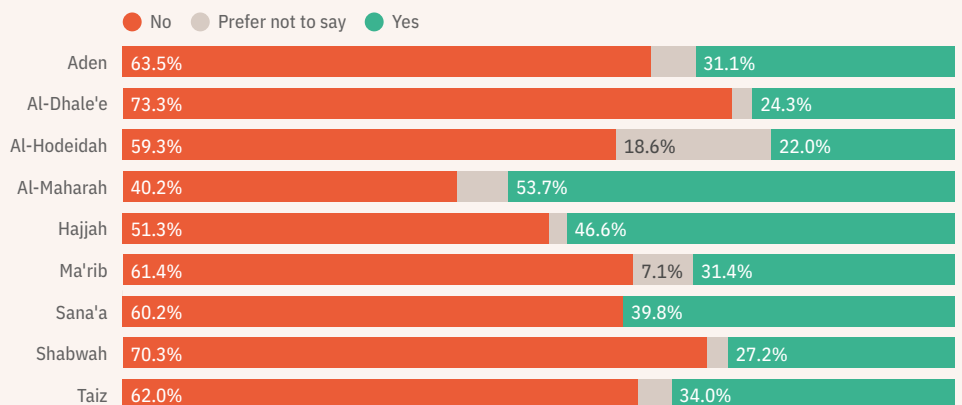
n = 1,785



Perception of approachability of local authorities at a local level regarding environmental issues, disaggregated by governorate

Figure 35

n = 1,785



Prior research indicates that the most often reported mechanisms employed to resolve disputes linked to environmental and natural resource issues, particularly land and water conflicts, are mediation at the community level and tribal structures.²³ For example, water conflicts are often resolved in local arbitration systems, since Yemeni citizens tend to favour tribal dispute resolution mechanisms and dismiss formal courts due to their disconnection from the local context, corruption, and slow processes.²⁴ In tribal areas, water conflicts were found to be dealt with first by tribal leaders and, if not, the conflict would be taken to the sheikh heading the tribe. Only when a dispute is not addressed at these levels, would it be referred to the courts. In nontribal areas, dedicated associations of water management are active in settling disputes over water resources.

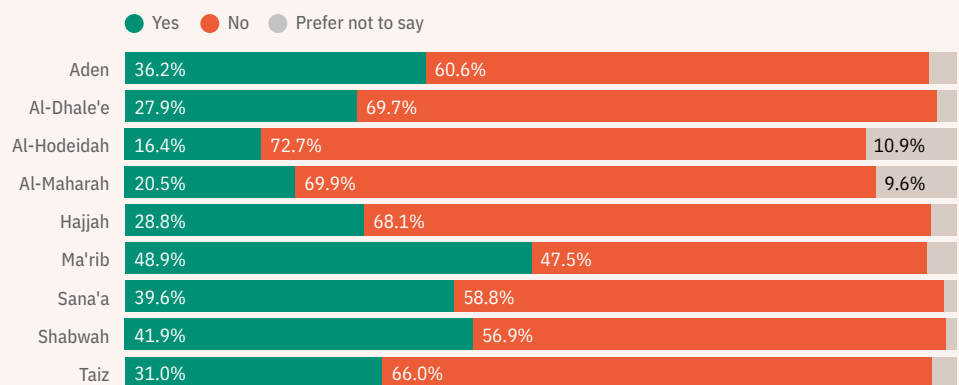
Considering the gaps identified in public governance, local-level initiatives appear to be an important instrument in tackling environment-

related disputes and grievances. Three out of ten respondents indicated that they were aware of initiatives in their districts aimed at resolving community conflicts or tensions related to environmental issues, indicating a high potential for locally informed environmental peacemaking. The percentage was particularly high in Marib, where 49% affirmed knowing of such initiatives in their area, followed by Shabwah (42%) and Sana'a (40%). The lowest awareness of environmental peacemaking initiatives was reported in Hodeidah (16%) and Al-Mahra (20.5%). Discussions in focus groups indicated significant participation across different groups in raising the awareness of actions for nature conservation and environmental degradation impacts, albeit without explicit peacemaking objectives. Some integrated initiatives mentioned, included creative projects, such as an *Art for Peace* in Al-Mahra, participation in supporting flood-affected families, as well as peacebuilding dialogues in Taiz, and the establishment of *Eco-youth* in Aden.

Figure 36

Perceived existence of initiatives resolving tensions or conflicts related to environment and climate change at the community level, disaggregated by governorates

n = 2,277



23. Weiss, M. (2015). A perfect storm: the causes and consequences of severe water scarcity, institutional breakdown and conflict in Yemen, *Water International*, 40:2, 251-272.

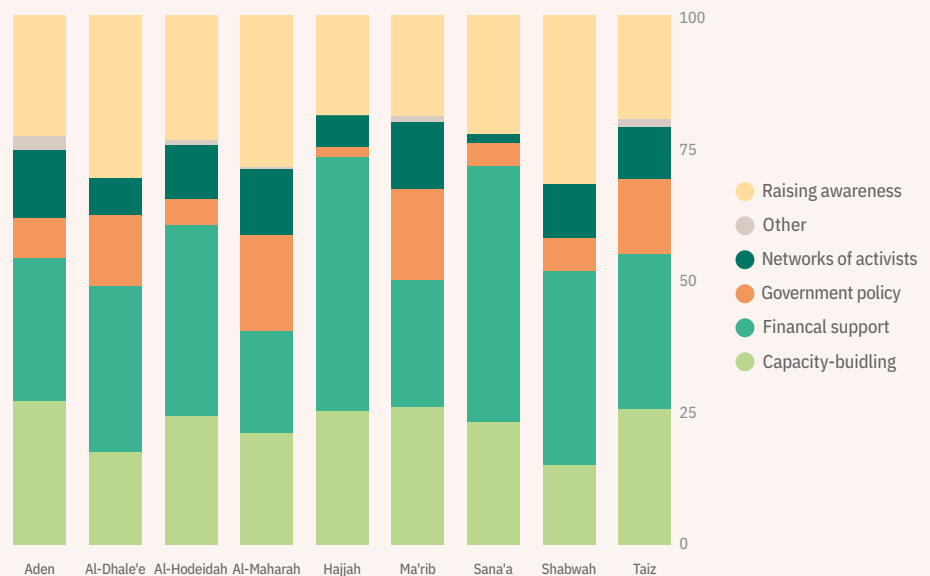
24. Ward, C. (2009). Water conflict in Yemen: the case for strengthening local resolution mechanisms. In Jagannathan, Mohamed and Kremer (Eds.). *Water in the Arab World. Management Perspectives and Innovations*, pp.233-267.

To better respond to climate and environmental challenges at a district level, respondents indicated that financial support, capacity-building, and raising awareness were deemed essential, even over strengthening policy frameworks.

While residents of Al-Dhale'e (31%) perceived that the most needed measure was raising awareness, habitants of Al-Hodeidah (36%), Hajjah (48%) and Sana'a (48%) prioritised the need for financial support (*Figure 37*).

Figure 37 Perceived needs to better respond to environmental and climate issues at the district level

Respondents: 2,279
Observations: 5,135



Key takeaways

The results indicate a clear imperative to address environmental risks and related conflicts more comprehensively, including as part of conflict resolution. 85% of the Yemenis consulted, considered it important to address climate change, and over 60% expressed their support for integrating environmental considerations into conflict resolution in Yemen. Local authorities are attributed a pivotal role in addressing environment-related issues, but largely remain opaque and unreachable to the local population. Over 67% of Yemenis consulted reported being unaware or lacking formal environmental policies or laws in their governorate, and more than half of respondents did not feel enabled to approach local authorities on questions, concerns or disputes relating to the environment. Al-Dhale'e and Shabwah emerge as the governorates most affected by this disconnect, with over 70% of respondents noting both a lack of knowledge about whom to approach to raise environment-related issues and not feeling enabled to do so. **Filling this institutional gap, local community initiatives and customary leaders emerge for their important role in tackling environment-related challenges and disputes.** These findings highlight the need for awareness-raising on environmental governance and its benefits if approached with a coordinated lens across all governorates, the strength of local and customary actors in conflict resolution over environmental issues, and the need to integrate environmental factors in the search for sustainable peace and reconciliation.

CONCLUSION



EIP's Environmental Peacemaking Consultation brought extensive detail to the understanding, perception, and awareness of environmental and climate risks in Yemen, and the related impact on daily lives, local disputes, and the national conflict. Most importantly, the consultation uncovered local gaps and priorities for resolving environmental risks and related disputes and identified potential entry points for peacemaking through an environmental lens.

The results showed that Yemenis are highly aware of climate change and are severely affected by its impacts, primarily due to the reduced availability and quality of essential natural resources, unaddressed pollution, and extreme weather events. Environmental concerns play a significant role in aggravating citizen's grievances related to a lack of basic services, displacement and threatened livelihoods, often stemming from weak governance and institutional capacity. With major environmental risks remaining largely unaddressed, tensions, disputes, and even conflicts over environmental matters at the community level are prominent across the country, mainly related to competition for water and gas, as well as issues relating to the access, capture, and unsustainable exploitation of natural resources.

There is an overwhelming agreement among the Yemenis consulted that responding to climate change and protecting the environment is essential, including the integration of such environmental considerations into conflict resolution and peace efforts. However, despite prevalent disputes over environmental risks and the growing recognition that considering these risks in peacemaking practice is essential, conflict resolution and reconciliation processes are not perceived as sensitive to the changing environment and climate. Yemenis do not feel enabled to approach local authorities to discuss environmental matters on their own behalf, nor in the context of the national conflict. The large support for an integrated approach emerging from the consultation, paired with the gaps identified in the governance and accessibility of local institutions, indicate a need to elevate civic participation in national policymaking and conflict resolution efforts.

In addressing climate, environmental and natural resource-related drivers of conflicts, environmental peacemaking, as an integrated conflict resolution and prevention approach, can contribute to achieving sustainable peace. In Yemen, such an approach would allow vulnerable groups to become engaged and foster community-led solutions actively and meaningfully on local environmental risks. And, at the same time, tackle the underlying social, economic, and political consequences of the national armed conflict.

The role of local and community-led action based on inclusion and meaningful participation cannot be understated. While omnipresent across the country, most environmental issues and disputes are found locally, together with other consequences of the armed conflict. Instead of reaching to national authorities, many Yemenis favour traditional leaders, communities, and individuals to resolve disputes related to environmental issues. This is despite the lack of necessary resources and capacity to follow up on such disputes to achieve peace dividends. This is influenced by the widespread perception that national authorities lack the capacity to enforce environmental regulations, foster sustainable resource management practices, and promote climate adaptation.

Local environmental peacemaking solutions that strengthen the inclusion, agency and leadership of local citizens and institutions in the resolution of environmental disputes, could also open avenues for trust-building and reconciliation at the national level, and contribute to fostering a constituency that supports a sustainable settlement process. The potential of local approaches is in line with the findings of the previous EIP consultation on reconciliation in Yemen, which highlighted that local context and needs must be properly understood and that local networks hold enormous potential for contributing to reconciliation and strengthening social cohesion, which could in turn promote essential buy-in to a national peace process.

Given the severity of the environmental and climate crisis in Yemen and the impact of the national conflict in governance and provision of basic services, it is no surprise that local institutions are weak and almost non-existent in some places, accessibility to those that exist is identified as limited, and local customary and community actors fill the role for dispute resolution. In this context, rather than a demand for improved environmental governance as a precursor to sustainable peace, the issues identified in this report provide an opportunity to build an approach to environmental peacemaking that engages the agency of those most directly affected by the conflict and the environmental crises. The report provides a basis to inform action that helps build, rather than wait for, accountable governance structures. The core of that structure lies in three areas:

- 1. *Engagement with the environmental concerns of the affected population,***
- 2. *Encouragement and facilitation of their participation in identifying plausible strategies to address the environmental and climate risks in relation to the ongoing conflict, and***
- 3. *Around these processes, build effective institutions that can both implement and be held accountable.***

Going forward, data collection, analysis, and sharing, are essential to ramp up such inclusive, environmentally informed approaches to peace in Yemen, as well as to support coordination across sectors. This report hopes to be an invitation for communities, practitioners, policymakers, and researchers to build upon its insights and expand the knowledge and practice on how environmental matters can be meaningfully integrated into peacemaking approaches with the shared goal to achieve inclusive and sustainable peace in Yemen.



Photo 11: Unaddressed accumulation of garbage in grazing lands near Taiz City. Nazeem Al-Hrefy (EIP, 2023).

ANNEXES



ANNEX 1

CONSULTATION METHODOLOGY

The methodology employed for the Environmental Peacemaking Consultation informing this report involved a comprehensive approach, utilising a mixed-methods design that combined quantitative and qualitative data collection techniques.

The primary aim was to assess Yemenis' awareness, perceptions, and experiences across different governorates on environment- and climate-related security issues.

Sampling Strategy

The sampling strategy aimed at achieving a representative and diverse sample of the Yemeni population. The questionnaire was administered across 36 districts in nine governorates, including Ma'rib, Al-Hodeidah, Taiz, Aden, Al-Maharah, Shabwah, Sana'a, Al-Dhale'e, and Hajjah. Participants were selected randomly on the streets to ensure a broad representation of society. The nine governorates were selected based on the following criteria:

- Severity and diversity of conflict dynamics
- Local polarisation and contentions linked to the presence of conflict parties
- Balanced representation of northern and southern governorates as well as local groups
- Availability of potential local partners and feasibility of carrying out consultative activities
- Lack of similar assessments on rights-based issues
- Trust deficits between local communities and local leaders

Within those governorates, districts were selected based on the density of the population and operational accessibility.

Data Collection Instruments

The primary data collection instrument was a structured questionnaire consisting of seven parts:

- A. Personal Information: Gathered demographic details such as age, education level.
- B. Awareness of Climate Change: Assessed participants' understanding of climate change and environmental concepts.
- C. Impacts on Livelihoods: Explored the perceived effects of climate change and environmental degradation on livelihoods, peace, and security.
- D. Conflict and Tensions: Investigated the connections between environmental challenges and conflict based on respondents' experiences.
- E. Engagement and Policy: Inquired about attitudes toward initiatives addressing environmental and climate security.
- F. Needs and Rights: Explored urgent needs and priorities related to the environment.
- G. Final Questions: Provided space for additional comments and follow-ups.

Survey Rounds

Two rounds of consultations were conducted, the first in February 2023 across 21 districts and the second in October 2023, covering the remaining 15 districts. This approach allowed for a comprehensive and temporally sensitive understanding of the participants' perspectives.

Data Types

The dataset consisted of three types of questions: (a) Open-ended questions, which were used in the first consultation round to add qualitative insights; (b) Single-selection questions, and (c) Multiple-choice questions.

Data Analysis

The initial focus of the analysis lay on quantifying and cross-referencing the answers to single- and multiple-choice questions. Open-ended responses were be considered with qualitative data from interviews and focus group discussions. Quantitative data was disaggregated by governorate, district, and socio-demographic categories.

Integration of Quantitative and Qualitative data

The quantitative data collected through the questionnaire was complemented through semi-structured focus group discussions and key informant interviews. The analysis aims for a comprehensive report integrating insights from the questionnaire, focus group discussions, and interviews. This comprehensive methodology ensures a robust and nuanced analysis of the Environmental Pathways for Reconciliation project, combining quantitative rigour with qualitative depth to provide a holistic understanding of the issues at hand.

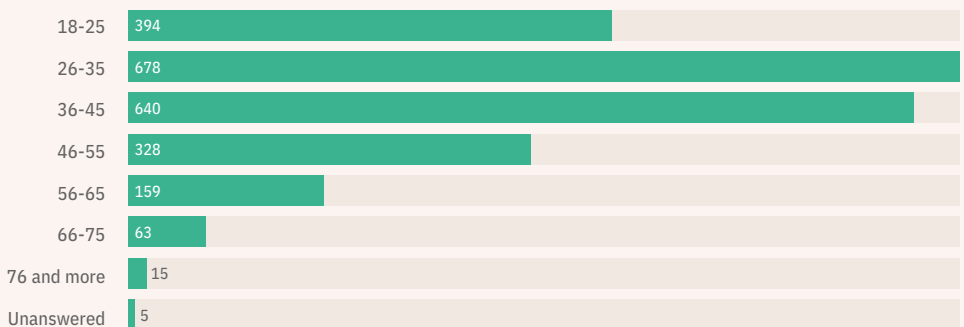
Challenges

The consultation was employed in a logistically challenging and politically complex environment, which imposed a set of limitations to data collection. While the consultation reached nine out of 22 Yemeni governorates selected to be geographically, politically, and demographically representative, limitations arising from the sampling need to be considered as they do not cover the entire country. Another limitation refers to the representation of socio-demographic groups across the sample. While the quantitative data retrieved from the survey captures perspectives from participants of a wide range of educational backgrounds, professional categories, and age groups, harder-to-reach, and marginalised groups such as women are slightly less represented. While women made up over 40% of survey respondents, male voices were more dominant across the FGDs and KIIs, which targeted people of higher influence in their communities and hence showed an underrepresentation of women.

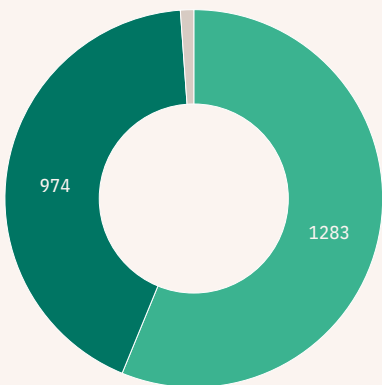
ANNEX 2 | SAMPLE DATA

Quantitative data

Age group of respondents

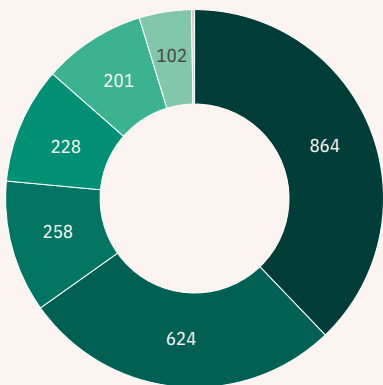


Responses by sex



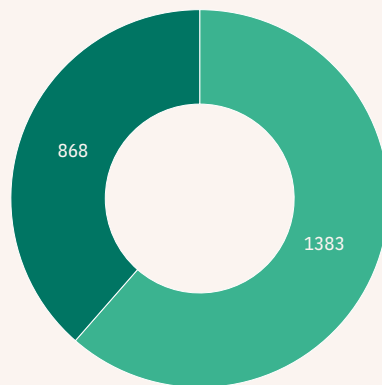
- Male
- Female
- Unanswered

Respondents' level of education



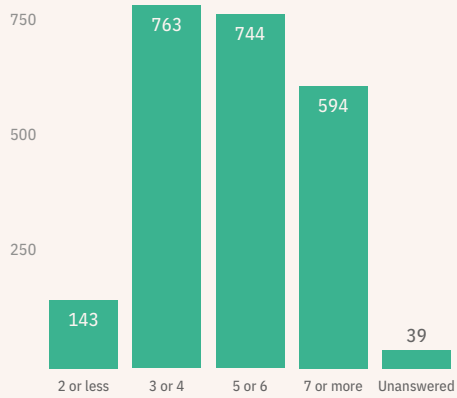
- Higher
- Secondary
- Primary
- Vocational training
- Uneducated
- Illiterate
- Unanswered

Respondents' role in family

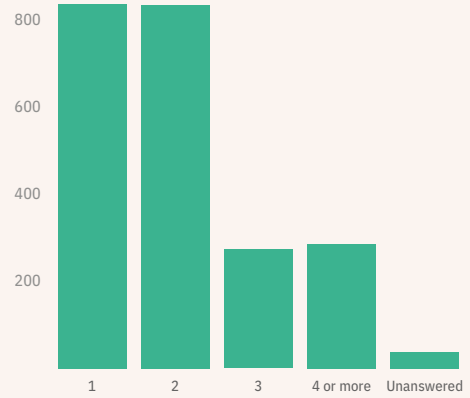


- Head of the family
- Family member

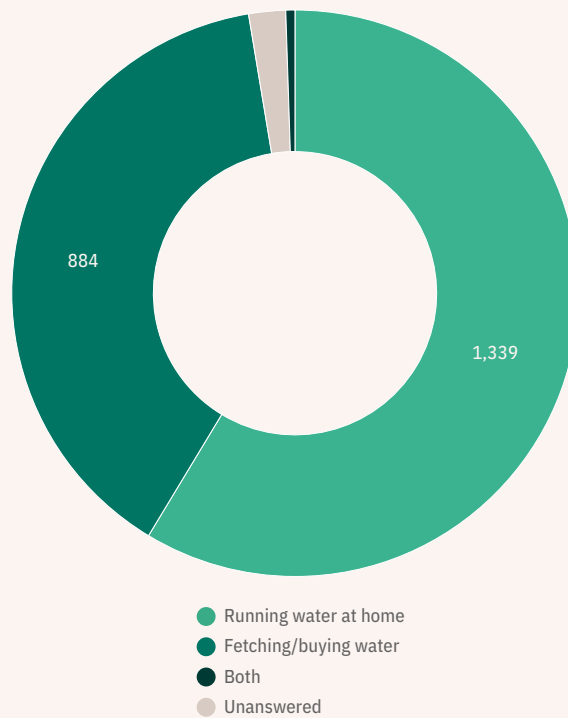
Number of members living in the same household as respondent



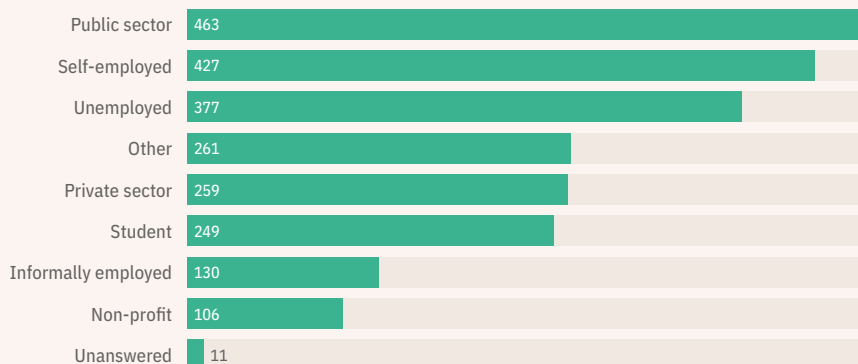
Number of families living in the same household as respondent



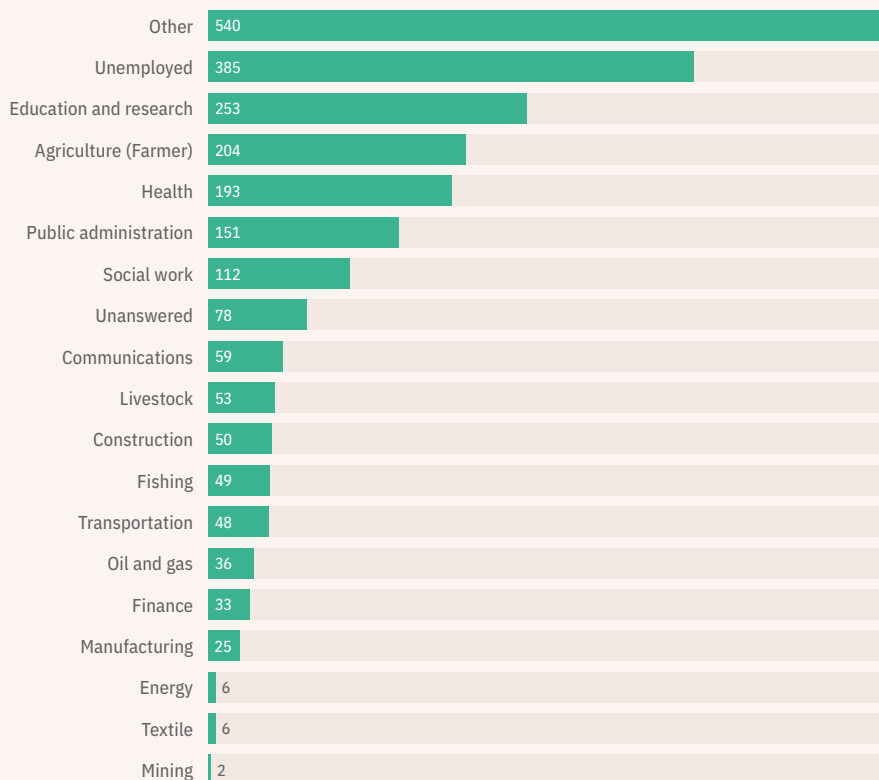
Water availability in respondents' household



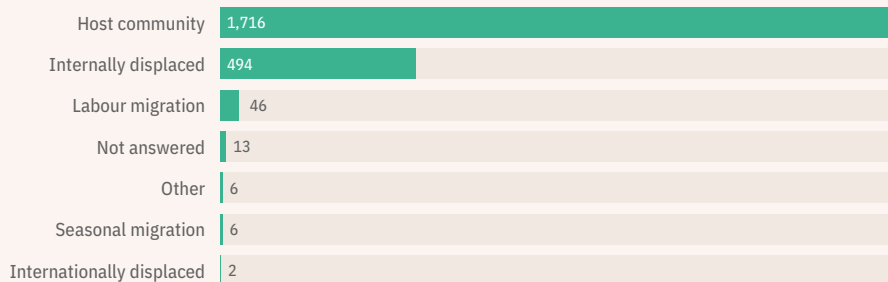
Respondents' employment status



Respondents' employment sector



Respondents' displacement status



Responses by governorate

Aden	250
Al-Dhale'e	251
Al-Hodeidah	238
Al-Maharah	83
Hajjah	514
Ma'rib	140
Sana'a	261
Shabwah	246
Taiz	300

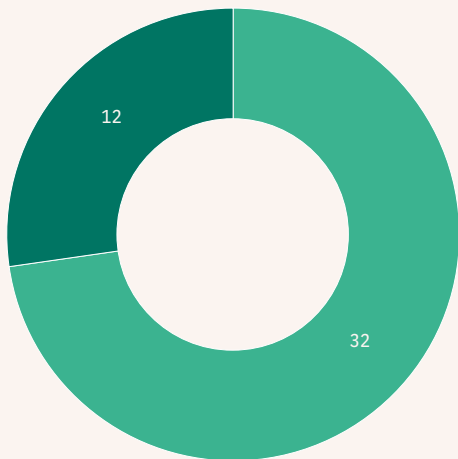
Responses by district

Midi	88	Khur Maksar	54
Abs	87	Al-Durayhimi	52
Bakil Al-Mir	87	Al-Shamayatatayn	51
Bani Al-Harith	87	Bajil	49
Damt	87	Al-Jubah	48
Ma'een	87	Al-Mansura	48
Sana'a City	87	Al-Tuhayta	48
Hajjah	84	Salh	48
Harad	84	Serah	48
Kushar	84	Ma'rib City	47
Al-Dhale'e	82	Al-Dhahi	45
Ataq	82	Al-Tawani	45
Bayhan	82	Harib	45
Mayfa'ah	82	Al-Makha	44
Qu'Atabah	82	Al-Khawkhah	43
Al-Mudhaffar	62	Qishn	43
Al Ta'iziyah	55	Al-Ghaydah	40
Al-Buraiqeh	55	Dhubab	40

Qualitative data

Total key informant interviews

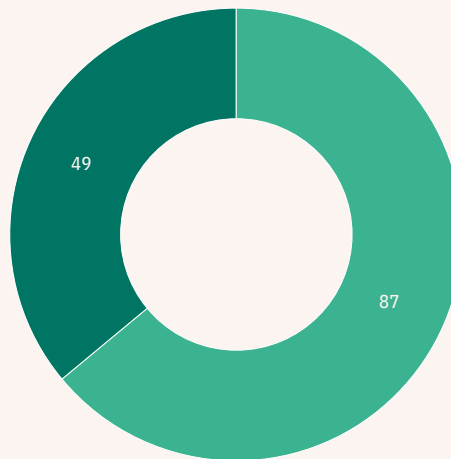
n = 44



● Male
● Female

Gender disaggregation of total focused group discussions composition

n = 136



● Male
● Female



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