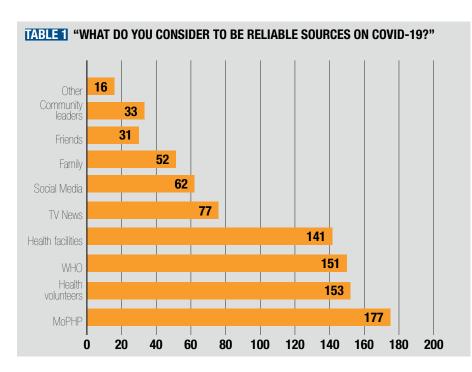
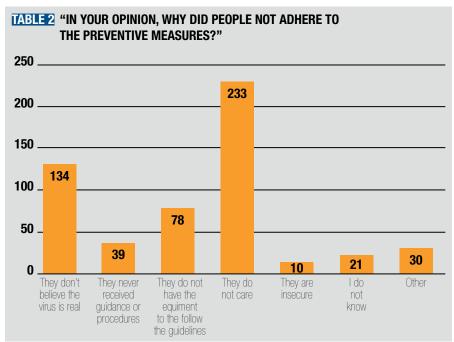


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EXECUTIVE **SUMMARY** —





emen's COVID-19 outbreak came at a dangerous and challenging time for the country. By 2020, Yemen's government had largely vanished due to the then six years of civil war. The conflict and bombing campaigns had transformed the country's physical infrastructure (roads, bridges, cities, etc.) and Yemeni demographics were shifting as a result of emigration, displacement, disease, and malnourishment. These problems affected – and were compounded by – the sociopolitical problems in the country that led to the start of war in 2014. These include decades with a weak national economy and high rates of poverty; low education and literacy rates; weakened rights regarding freedom of expression and freedom of

press; gender discrimination; and ongoing social and religious tensions.

This report serves as an assessment of Yemen's information ecosystem, with particular focus on the latter half of 2022 and into 2023. It is based on quantitative and qualitative research conducted during 2022 and 2023 in the Yemeni governorates of Hadramout, Lahj, Aden, Taiz, Marib, and Sana'a. Research incorporated marginalized and displaced Yemenis as well as community leaders, civil society workers, and healthcare professionals. This report explores how information is produced, distributed, consumed, and shared within the country using the above regions as examples. Focus is placed on informa-

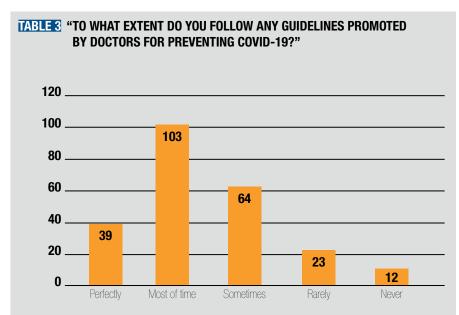
tion pertaining to COVID-19 and other diseases and pandemics that have spread through Yemen during this time period.

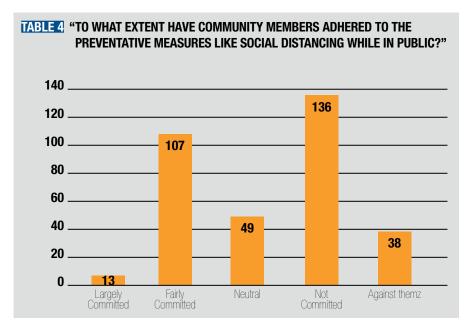
Quantitative data for this research was gathered using surveys run by local and independent Yemeni organizations. These organizations also collected qualitative data using Key Informant Interviews (KII) and Focus Group Discussions (FGD). This report also draws on data collected from traditional national and international media sources as well as by monitoring Yemeni social media (e.g., Facebook and Twitter). Additionally, we incorporate data from third-party organizations who have conducted peer-reviewed, studies in Yemen using similar quantitative and qualitative methods.

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EXECUTIVE SUMMARY

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The collective data from Internews and other reliable sources are replete with contradictions in how information is produced. consumed, and shared throughout Yemen. For instance, Internews' data shows that Yemen's media outlets regularly promote misinformation through traditional and digital information sources. Yet, even though survey respondents acknowledged and identified media misinformation, a majority of those surveyed still described national media to be credible. Other contradictions include a majority of respondents' recognition that health education courses provided the most reliable information on COVID-19 and other diseases. Yet while the majority of respondents overwhelmingly asserted that they follow COVID-19 guidelines, they also note that most everyone else does not follow them. Contradictions also extended to individual information sharing practices. For example, a majority of individuals noted that friends and family were not reliable sources of information. However, most individuals also claimed that much of their information is gained through sharing information with friends and family. A primary goal of this report is thus to draw attention to these contradictions and use qualitative data to bring nuance and understanding to these information practices. This approach will then be used to inform upon our recommendations for improving Yemen's information ecosystem.

In Yemen, the range and quality of information sources frequently depend on age, class, gender, education, and governorate. Thus, younger, wealthy men, with good education, living in urban, southern governorates were more likely to have access to a wider range of information sources. Those with the most constrained information access tended to be older women; racial and ethnic minority groups (*al-muhammasheen*); the displaced; those living in rural areas; or some combination of those listed. While the former categories are more likely to

have access to international sources, digital media sources, and multiple national media formats, the latter are more likely to draw on gossip, rumor, and word of mouth spread through family, friends, and other community members. Additionally, the latter categories frequently lack the education to read newspapers, nor the financial resources to utilize social media apps and other digital media. As a result, their primary source of official news comes largely from radio.

With the advent of COVID-19 in Yemen in 2020, the country's information sources had fully shifted into acting as the promoters of political propaganda for either the Presidential Leadership Council (PLC), in the south, or the de facto authority (DFA) controlling much of the northwest. COVID-19 became fodder for this fragmented national ideology, with media outlets taking turns blaming one the PLC or the DFA other, blaming international groups, denying the seriousness of the

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EXECUTIVE **SUMMARY**

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virus, or simply denying its existence altogether. In place of Yemen's national information conduits, international aid organizations, NGOs, and several independent, local bodies stepped in to provide reliable and credible information to the Yemeni communities.

More recently, international organizations have begun to work closely with Yemeni government institutions. This is primarily true in the south due to the fact that the DFA has resisted international aid for COVID-19, while also denying its existence in the country. While it has been beneficial to have both national and international bodies disseminating information on health and pandemics in Yemen, there are still many hurdles to overcome with regards to political, social, cultural, and health problems in Yemen. Government sources and news media outlets continue to spread mis/ disinformation within the country resulting in variable degrees of trust in media by citizens.

Yemen's progress hinges on spreading credible information within the country and bringing greater legitimacy to the organizations who are meant to help the people. With this in mind, this report lists several critical recommendations for national and international organizations working to spread information and counter disinformation in Yemen. A succinct review of suggestions for strengthening Yemen's information ecosystem is provided below, with a more detailed account listed in Section 7.

Media Outlets

- Local Focus Currently, media attention is heavily centered on national and international relations. It is important that relevant, local information is spread through the media to those it most effects.
- **Protect Journalists** As Yemeni journalists are increasingly under attack, journalistic organizations in Yemen should work with authorities to ensure the safety of journalists.
- lacktriangle National, International, & Independent Collaboration
- It is important for media outlets to work together with

- groups inside and outside of Yemen. This will bring greater credibility to information and will help to instill deeper journalistic standards.
- **Branch Out** Many communities in Yemen have limited access to information for numerous reasons. Media outlets should consider alternate means for reaching the illiterate, lower class communities, the marginalized, and the displaced people.

Government & Public Institutions

- Strengthen Avenues for Accessing Information Critical information on health, diseases, and pandemics in Yemen should be widely disseminated by the Ministry of Public Health and Population (MoPHP) to media outlets and local health centers within the country.
- **Transparency** Mis/ disinformation is causing harm and confusion throughout the country and the Yemeni governments are not doing enough to stop it.
- **Timely & Relevant** Health information must be disseminated quickly through trusted channels throughout the country to ensure the public is able to act safely and appropriately.
- Work Together Authorities in Yemen must work together with international groups, independent organizations, and the other national or tribal governmental bodies within the country. Additionally, intra-governmental collaboration among different ministries is necessary for spreading credible information to the people.

Communities

■ Be Ever Mindful of Mis/ Disinformation — The best way to stop mis/ disinformation, is to stop spreading through conversations, social media, and the like. As it is clear that fake news is spread from government sources, rumors, and online, it is crucial that Yemenis remain skeptical and verify any information they receive before spreading it to others.

■ Recognize Your Role in Your Community — All individuals have different degrees of influence over how mis/ disinformation is spread. For instance, community and religious leaders must be extremely careful of what information they spread because their authoritative position within the community gives their voice considerable weight. This is not to say that they are the only individuals with such power. Everyone holds some influence over others in their families or communities and should thus be careful on how their sharing of information affects others.

Humanitarian Actors

- Localize As the country remains heavily divided and fractured by war, local communities become more important due to their growing autonomy. Thus, humanitarian groups must work to address the needs of localities by working with community leaders.
- **Guide, but Listen** While it is important to offer communities reliable and correct information, it is also necessary to understand the unique needs of each individual community within the country.
- Build Multi Level Partnerships In the absence of a strong, centralized government, many different organizations are working independently to address the problems of the country. To avoid overlap and redundancy, humanitarian groups should seek out and work with the different NGOs, CSOs, and other local organizations active in the country.

Donors

Diversify Finances – Diversify funding to different types of media and information sources active in Yemen.

Foster Collaboration – Encourage international aid groups, NGOs, CSOs, and local organizations to work with one another and support each other's strengths.

Promote Two-Way Communication – Encourage humanitarian actors to work with, listen, and understand the needs of communities and vice versa. ●

LIST OF **ACRONYMS**

-AA

Anadolu Ajansi

ACAPS

Assessment Capacities Project

COVID-19

Coronavirus Disease 2019

COY

Cabinet of Yemen

-CSO

Civil Society Organization

DFA

De Facto Authority (in Yemen)

-FGD

Focus Group Discussion

International Committee of the Red Cross

IDP

Internally Displaced Person/people

Information Ecosystem Assessment

IFCR

International Red Cross & Red Crescent

-ISP

Internet Service Provider

KII

Key Informant Interview

MCTQI

Mass Communication Training & Qualifying Institute

MoPHP

Ministry of Public Health and Population

- MSF

Médecins Sans Frontières

MTIT

Ministry of Telecommunication and Information Technology

- NGO

Non-Governmental Organization

- PLC

Presidential Leadership Council

RCCE

Risk Communication and Community Engagement

-RSF

Reporters Without Borders

- OCHA

United Nations Office for the Coordination of Humanitarian Affairs

STC

Southern Transitional Council

UN

United Nations

UNCT

United Nations Country Team

UNDP

United Nations Development Program

UNICEF

United Nations Children's Fund

UNOPS

United Nations Office for Project Services

UNESCO

United Nations Educational, Scientific and Cultural Organization

UNHCR

United Nations High Commissioner for Refugees

-WHO

World Health Organization

1.1. RESEARCH SCOPE & THE MAIN BUILDING BLOCKS OF THE IEA

IEA

This report contains an assessment of the information ecosystems in five different governorates in Yemen affected by COVID-19 - Marib, Taiz, Hadramout, Aden, and Lahij - covering urban regions and displacement camps. Additional qualitative data was also collected in Sana'a. This research covers how information is produced, distributed, and consumed during the COVID-19 pandemic, and to what end. Quantitative and qualitative data has been gathered through focus group discussions with communities; key informant interviews with public bodies, humanitarian organizations, media stakeholders; and community representatives, and quantitative surveying.

Full country

Targeted geographic area

Entire population

Focus on specific Entire population population groups

RESEARCH THEMATIC SCOPE

GEOGRAPHIC AND DEMOGRAPHIC COVERAGE

INFORMATION SUPPLY

- National media
- Digital Media & platforms
- Community media
- Non media
- Information providers

Environment (economic, political, and regulatory) Media capacity and quality assessment

DYNAMICS & INTERACTIONS

Trust (trusted channels, key driers of trust

Sharing & gatekeeping

Influence & impact of information

Linkages between different actors of the information ecosystem

INFORMATION DEMAND

Information needs and gaps

Preferred channels and sources

Barriers to information access

Information needs by humanitarian and other stakeholders.

RESEARCH METHODOLOGY

Desk Research (Information Supply Side)

Interviews with key informants and community

Community Focus Groups

Quantitative Survey Research led by the community Results dissemination and feedback from communities Continuous feedback by panel of experts and community

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1.2. PHILOSOPHY & METHODOLOGICAL PRINCIPALS

hile this analysis describes the information ecosystem for all Yemenis, we pay particular attention to vulnerable communities living in some of the most challenging circumstances within the country. These include internally displaced people (IDPs) and the *Muhammasheen*; the country's largest racial minority group.

Many of Yemen's internally displaced have moved to camps located in empty areas such as flood plains, deserts, and other dangerous spaces. In some instances, these camps are established and/ or funded by aid groups, although by 2022, 40% of the country's camps were informal and lacked adequate water supply, sanitation, and other utilities (Relief Web 2022).

Al-Muhammasheen, or "the marginalized," have historically lived on the periphery of Yemeni society due to the country's structural and systemic racism. Discrimination against this group is tied to many factors, including their darker skin tone and their social position outside Yemen's tribal system. This discrimination, in turn, leads to low school enrollment for children and low-wage, menial jobs for adults. Coupled with their precarious financial state, the community's informal housing often means they lack sewage, fresh water, electricity, and other necessary utilities.

The unstable nature of many of the IDP and *al-muhamma-sheen* living spaces are the roots for many of the challenges they face in accessing and spreading information. Low incomes and unreliable utilities too often translate to limited access to a broad range of information sources including television, radio, and the internet. Additionally, the low education rates for *al-muhammasheen* indicate low literacy rates, meaning that newspapers and some internet sources are likewise insufficient.

Internews embarks on Information Ecosystem Assessments (IEA) in order to better understand unique and localized information needs. This includes exploring gaps in information, in sources, and in the different ways that individuals access and engage with information in their environment. In this report, we examine how IDPs, *al-muhammasheen*, and other Yemeni communities access, consume, and share information. Critically, we explore how different communities select reliable information sources, how they determine what constitutes misinformation, and with whom they share information.

The goal of the Information Ecosystem Assessment is to provide us with an analytical framework that captures the different dimensions of the relationship between information consumers and their community's information supply. Gaining precise, high-quality insights into these interactions, allows us to design truly unique projects. Such projects will allow us to meet people where they are, in order to deliver information through the channels, platforms, formats, or people that they prefer and trust.

OUR IEA RESEARCH IS BASED ON FOUR KEY PRINCIPLES:

Putting the community at the center of the research — Internews reaches the central issues of the communities it serves. For our IEAs, we endeavor to have the community itself do a large part of the research: we hire researchers and enumerators from the community, and we rely on community members to disseminate results and gather feedback. When context truly limits our ability to do so (as during the COVID pandemic) we strive to design multiple ways to gather feedback from community members and representatives as a second-best alternative.

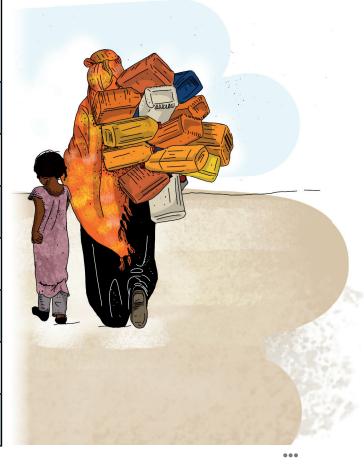
- Pollowing a human-centered research design We develop a holistic understanding of people's information practices. We understand demand and supply in a broad sense, not narrowly focused simply on media outlets or traditional media actors. Our scope of analysis is defined by how people access and consume information rather than by pre-defined categories. We strive to understand both which practices are broadly shared and what are the specific needs and behaviors of groups, especially the most vulnerable ones.
- Marrying qualitative and quantitative data We combine different types of data to best understand both the supply (what is available to communities via sources like traditional and digital media outlets) and demand (the information gaps that community members seek to fill) of information and how the two interact to produce a dynamic ecosystem. In this sense, we go beyond traditional mapping and audience surveys. Our IEAs rely heavily on a qualitative approach: understanding information practices requires getting up close and personal to people to figure out the best ways to reach them with good information. As such we work diligently to understand the communities we work with by listening to them and letting them guide us to understanding their world.
- Integrating research and action We do not see Information Ecosystem Assessments as an "end product." They are most often the first stage of our project design, providing an invaluable glimpse into the contexts facing communities. They also offer a way to build a trusting relationship with the communities we hope to work with. They are always connected to recommended actions, whether our own, those undertaken by the communities or by our partners and other key stakeholders in the ecosystem.

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TABLE 5

KEY INFORMANT TYPE	COLLECTION TOOL	SAMPLE SIZE	RESPONDENTS BY COMMUNITY STATUS
	4 FOCUS GROUPS	33	2 GROUPS W/ <i>AL-MUHAMASHEEN</i> 2 GROUPS W/ IDPS
INDIVIDUALS & COMMUNITIES	1 SURVEY	360	IDPS, <i>AL-MUHAMMASHEEN</i> , COMMUNITY LEADERS, HEALTH FACILITY WORKERS, DISABLED, HEALTH OFFICES, MEDIA WORKERS, SOCIAL MEDIA ACTIVISTS, AND CSOS
INFORMAL REPRESENTATIVES & LEADERS	19 KEY INFORMANT INTERVIEWS	2	RELIGIOUS LEADERS
		3	COMMUNITY LEADERS
		7	LOCAL AUTHORITIES
		5	CSO WORKERS
		2	SOCIAL MEDIA ACTIVISTS/ INFLUENCERS
VULNERABLE COMMUNITIES	4 KEY INFORMANT INTERVIEWS	2	AL-MUHAMMASHEEN
		2	IDPS



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1.3. DATA COLLECTION & SAMPLE

ur assessment is based on data collected from five different governorates with marginalized and displaced communities, affected by COVID-19 – Marib, Taiz, Hadramout, Aden, and Lahij. Additional data was collected in Sana'a using Klls.

Methods used for data collection include randomized sampling for surveys and purposive sampling (selection of respondents made by the researcher based on either their characteristics or their expertise) for interviews, as well as focus group discussions and direct observation. To best understand communities' needs and practices, we prioritized direct interactions with community members through focus groups and a quantitative survey. We also interviewed key actors who interact with communities on a regular basis, including religious and community leaders, local authorities, and CSO representatives. To gather the perspectives of information providers and humanitarian actors, we carried out interviews with media stakeholders, national non-governmental organizations (NGOs), and international humanitarian organizations, as well as with the Ministry of Public Health and Population (MoPHP) – the primary national provider of COVID-19 statistics in Yemen.

We also leveraged community feedback data collected through social media listening and community engagement activities, led by our media partners' rumor tracking teams under Internews' Rooted in Trust project.

TABLE 6

COVID-19	CONFIRMED CASES	11,945
COAID-19	DEATHS	2,159
FREEDOM HOUSE INDEX	POLITICAL RIGHTS (OUT OF 40)	1
	CIVIL LIBERTIES (OUT OF 60)	8
	FREEDOM IN THE WORLD 2021 (OUT OF 100)	11 (NOT FREE)
	FREEDOM IN THE WORLD 2022 (OUT OF 100)	9 (NOT FREE)
	FREEDOM IN THE WORLD 2023 (OUT OF 100)	9 (NOT FREE)
ICTs	INTERNET PENETRATION RATE 2022	26.7%
1010	MOBILE PHONE PENETRATION 2022	62.2%
PRESS RELATED INDEX	CIVIL LIBERTIES (INCLUDING FREEDOM OF EXPRESSION)	8
	PRESS FREEDOM INDEX 2022 (OUT OF 180 COUNTRIES)	169/180
	PRESS FREEDOM INDEX 2023 (OUT OF 280 COUNTRIES)	168/180
KEY DEMOGRAPHICS, SOCIAL & POLITICAL FACTORS	TOTAL POPULATION IN MILLIONS	32.9
	POPULATION IN MULTIDIMENSIONAL POVERTY (% HEADCOUNT)	71% - 78%
	HUMAN DEVELOPMENT INDEX (RANK 2021)	0.455 (183)
	RURAL POPULATION (%) (2021)	61%
	ILLITERACY RATE	29.9%
	REFUGEES, OUTGOING	4.5 MILLION
	ELECTIONS	NONE

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1.4. LIMITATIONS TO RESEARCH

he ongoing war and the accompanying social and political turmoil detrimentally affected our team's ability to collect data from all areas in Yemen. Ongoing health crises and a culture of distrust for international organizations further contributed to our data collection limitations. As a result, our survey data exclu-

sively comes from southern governorates, while our qualitative data contains some information from Sana'a, but is still largely focused on southern Yemen.

Our data likewise was limited by the respondents' reluctance to answer certain questions. For instance, those li-

ving in displacement camps were unwilling to elaborate on questions about how, or with whom, they maintain contact after coming to the camp. As we sought data on how individuals maintain networks and share information, this type of apprehension in answering questions speaks to the challenges we faced. •



2. COUNTRY PROFILE ____

ccording to the World Bank's most recent estimate, Yemen's population reached 32.9 million in 2021. As of 2023, poverty levels in Yemen have reached between 71% and 78%; estimates indicate that 18 million Yemenis live without access to clean water; and 16.2 million Yemenis require assistance for food insecurity or malnutrition (World Bank, 2023b). The country's most recent human development index, in 2021, stood at 0.455 and ranks 183 globally (Country Economy, 2023). As of 2021, Yemen's rural population had risen 1.1% from the previous year to 20.2 million people (Macro Trends, 2023). Illiteracy rates in the country are at 29.9% (Country Meters, 2023).

2.1 INTERNAL DISPLACEMENT, COVID-19, & WAR

Disease, conflict, and displacement have been three interconnected crises plaguing Yemenis since 2014. In March of 2022, The United Nations High Commissioner for Refugees (UNHCR) declared that 4.3 million Yemenis were internally displaced, and roughly 2 million Yemeni children were living in shelters or camps without access to education (UNHCR, 2022; Relief Web, 2022b).

Additionally, the war has severely hampered Yemen's healthcare system. Between 19.7 and 20.1 million Yemenis currently lack ac-

cess to basic healthcare (Garber et al., 2020). This is largely due to the destruction of healthcare facilities by the different political-military groups. As early as 2019, there were a reported 130 attacks on medical facilities and healthcare workers in Yemen (Magdy, 2019). By 2020, only 54% of Yemen's 275 hospital were fully functioning with another 36% partially functioning. Additionally, only 51% of the country's 4767 primary care facilities were functioning with an additional 14% partially functioning (Garber et al., 2020).

Adding to the country's healthcare woes is the fact that many of Yemen's roads and bridges have been destroyed during the war. This creates more challenges for Yemenis who need to travel for healthcare. By the start of 2023, more than one hundred bridges and close to 6,000 kilometers of paved road have been destroyed during the ongoing conflict (Coombs et al., 2023). Additionally, many roads have been periodically closed; have become unusable due to lack of upkeep; or have been destroyed by flash floods, landslides, or other natural disasters (Alkamali, 2021). As a result, 40% of the country is living more than two hours from the nearest health care facility, provided that they have access to cars or similar transportation (Garber et al., 2020).

A further byproduct of the war's effects on healthcare is an underreporting of COVID-19 cases and deaths. The World Health Organization (WHO) reports a total of 11,945 cases of COVID-19 in Yemen with a resulting death count of 2,159 (WHO, 2023). However, the DFA — who control nearly two-thirds of Yemen's population — have stated that they will not share data on COVID-19 from their region; that they are generally opposed to COVID-19 vaccines; and that they are unconvinced as to whether the virus exists (Human Rights Watch 2021). This, coupled with disinformation leading to Yemenis' fearing hospital treatment for the virus, means that the actual case numbers and death count in Yemen are unclear and most likely higher than reported (Médecins Sans Frontières, 2020).



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2. COUNTRY PROFILE

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2.2 VULNERABLE GROUPS I: AL-MUHAMMASHEEN: THE MARGINALIZED

Al-Muhammasheen are a racial and ethnic group that have historically faced discrimination, isolation, and poverty due to their African heritage and skin color in Yemen (Minority Rights Group International, 2023). Much of the prejudice against them is rooted in the country's structural racism whereby Yemen's education, health, employment, and land ownership systems explicitly or implicitly deny access for this predominantly southwestern Yemeni community.

Al-Muhammasheen primarily live together in isolated communities with limited utilities or sanitation on the edges of cities (Colburn et al., 2021). In general, most members of this ethnic group work odd jobs like street sweeper or trash collector, or simply subsist by begging (Al-Sarai, 2022).

The COVID-19 pandemic has exacerbated the stigmatization of this community, creating deeper financial and social problems. This is especially true as the health crisis is contextualized within an ongoing civil war that coincides with numerous health and ecological disasters. The muhammasheen have been disproportionately affected by these crises, with many families displaced

and forced to live together in refugee camps. In such spaces, muhammasheen live in isolation, forced to live together away from other Yemenis where they receive minimal medical resources and information. The inequality they face makes it unclear as to how this community is receiving health care information or, more broadly, the issues facing Yemen. Moreover, the community's high rate of poverty and low rate of education mean that traditional sources of information via phone, internet, or other media sources are largely unavailable to them. Likewise, the discrimination leveled against them makes it challenging for *al-muhammasheen* to reach outside of their community for help and information from other Yemenis, including healthcare professionals.



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2.3 VULNERABLE GROUP II: INTERNALLY DISPLACED PEOPLE (IDP)

Prior to the 2014 civil war, years of drought, ineffectual irrigation systems, and financial stagnation, led to population displacement. This largely came from increasing numbers of farmers who were forced to abandon their farms to find work in urban centers. This rural-urban migration pattern further aggravated the country's already high unemployment rate, while also limiting the amount of food produced within the country.

The outbreak of war in 2014 has only served to intensify the scarcity-based population displacement in Yemen. Projections indicate that 4.3 million Yemenis — about 14% of the total population — have been displaced as of 2023, with 40% of those displaced living in unofficial camps without adequate healthcare, fresh water, sewage, or other resources (Relief Web 2022a). Additionally, the war is disproportionately affecting women and children. Reports indicate that 3.2 million women and children are suffering from acute malnutrition as the war has disrupted internal supply chains (Bamatraf, 2023).

2.4 MEDIA LANDSCAPE

More than three decades after the unification of Yemen, the country's media continues to be dictated by the social and political division of north and south Yemen. The unification of Yemen in 1990 initially sparked a period of growth in both national and private Yemeni news agencies. At that time, media expansion occurred across multiple genres, including newspapers, television, and radio. Newspapers offer a prime example of this growth. In the early 1990s, print circulation peaked at around 150 private and national periodicals in Yemen, under the support of the newly unified country's laws, which encouraged a free press (Baasleem. 2003). Additionally, periods of media

expansion in television continued with the advent of satellite technology in the coming millennium. By 2014, the country had access to nearly twenty Yemeni television channels — with the majority run by private companies (Al-Shami, 2021).

Nevertheless, civil wars between north and south Yemen in both 1994 and 2014 led to the restriction of access to media and journalism within the country. This is especially true for the most recent war, where fights to control mass media and information have arguably been as important as battles for territory. Since the start of this war, political-military groups in the north and south have attacked media headquarters, shutdown radio and television programs, and detained and even killed journalists (Nasser, 2017).

The media that remains in the country in 2023 are being coerced by Yemeni political-military groups to promote particular political and religious ideologies on all media platforms or face similar retribution. The result of this is a national media landscape filled with dissonant, contradictory reports, blatant propaganda, and disinformation campaigns.

According to Freedom House's Civil Liberties Score Index in 2022, Yemen ranked eight of sixty, with a Global Freedom Score of nine out of one hundred (Freedom House 2022). Like other media in the country, websites are heavily censored by Yemen's political-military groups, and the country's strained infrastructure often leads to regular internet and electricity outages.

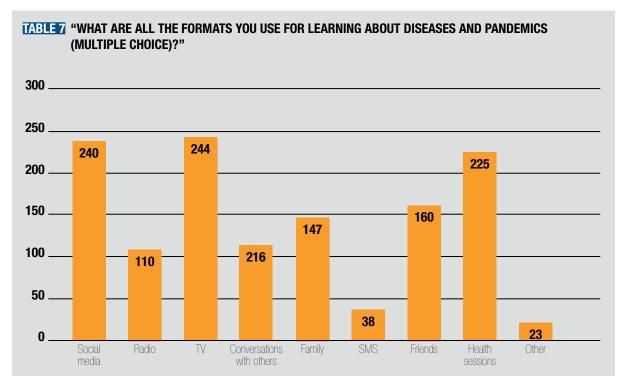


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3.1. TRADITIONAL MEDIA LANDSCAPE

ational demographics and statistics on media consumption in Yemen are sparse and inconsistent, especially with regards to the recent years of civil war. For example, while there is statistical data on television ownership per household in Yemen, there is no data that shows what percentage of Yemenis use television as a major source of information. More to the point, the available data does not indicate the demographics on Yemenis' use of television. Nor is there consistent data on the types of TV programs Yemenis are consuming. Additionally, there is no data showing how media consumption trends have changed over time. Similar gaps occur across data on radio, newspapers, and digital media.

Thus, rather than a comparative analysis on the uses of different media formats or on changing trends among media uses, this report will instead provide an overview of each Yemeni media format. Focus will be placed on how the individual media formats have changed in recent years vis-à-vis social and political developments and shifts in user behavior. Formats will include television, radio, newspaper, internet, and social media. Analyses will include some historical background, but primary attention will be placed on the current state of the different forms and contexts of media.



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NATIONAL TELEVISION

Yemen currently has a mixture of terrestrial, national satellite, and international satellite channels. The primary terrestrial channels are government owned. They are *Yemen TV*, *Aden TV*, *Sheba TV*, and *Al-Eiman TV* (Dubai Press Club et al., 2012). Additionally, the *Saba News Agency* functions as the official state news organization in Yemen. They produce programming and stories for television, radio, and newspapers with particular focus on the government's announcements regarding social or political topics (Battaglia, 2020). *Saba* is run through nine branches spread throughout governorates in north and south Yemen.

Of the four government channels, *Yemen TV* and *Aden TV* are the two main television stations in Yemen, providing both news and entertainment programming. *Yemen TV* is historically part of the former Yemen Arab Republic (North Yemen) and was founded in 1975 prior to unification of north and south. Aden TV was founded in the People's Democratic Republic of Yemen

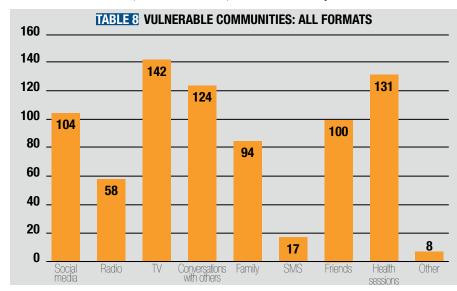
(South Yemen) in 1964, which was a British Protectorate at that time. The other two channels – Sheba TV and Al-Eiman TV – provide educational and moral programming. Sheba TV is primarily for students and young adults, while Al-Eiman provides state sponsored religious programming.

The outbreak of civil war has redefined Yemen's television programming. In 2015, the newly established DFA took control of the country's capital, Sana'a, and thus took control of *Yemen TV*, *Sheba TV*, *Al-Eiman TV*, and the *Saba News Agency*. *Aden TV* was briefly taken off the air in 2015 following attacks, but the station is currently under the control of the PLC (Al-Arabiya News, 2015).

Complicating Yemen's television landscape is the fact that many stations have split into two broadcast channels: one for DFA and the other for PLC. For instance, while DFA controls *Yemen TV* out of Sana'a, there are also broadcasts of the station controlled by the PLC. Both stations use the same name, logo, and other

identifying materials yet offer different programming that suits their individual political agendas. The separate branches of the *Saba News Agency* have likewise split, with each following the politics of whichever group controls their governorate.

Additionally, Yemenis have access to a variety of satellite channels broadcast out of Qatar and other neighboring countries. Notable channels like *Suhail Television* serve as the primary broadcast channel for *Al-Islah* — a religious based, Yemeni political party in opposition to the DFA. *Al-Islah* had broadcast out of Yemen until it was raided in 2015. It currently broadcasts from Egypt. Additionally, the Houthi channel, *Al-Masirah*, ran via Egyptian satellite until 2015 when the Saudi government pressured Egypt to close the channel due to anti-Saudi propaganda. Currently *Al-Masirah* is broadcast through Russian satellites to a mostly Northern Yemen audience (Battaglia, 2020). Popular international satellite channels for Yemen include *Al-Jazeera* and *Al-Arabiya* — both out of Qatar — and *Al-Sa'idah* — out of Egypt (Ibid.).



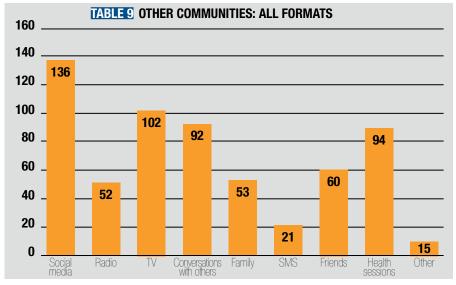
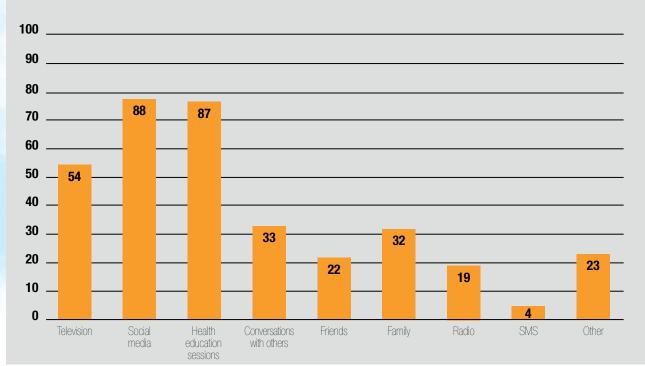




TABLE 10 "WHAT IS THE PRIMARY FORMAT FOR YOU TO OBTAIN INFORMATION ABOUT THE PANDEMIC OR OTHER DISEASES (ONE OPTION)?"



NATIONAL RADIO

Radio in Yemen emerged independently in North and South Yemen, prior to unification. North Yemen's first radio station, Sana'a Radio, began broadcasting in the 1940s while South Yemen's Aden Radio began broadcasting in the 1950s (News Yemen, 2023). Early programming in both regions consisted largely of religious based materials and generally only aired a few times per week. By the 1960s, small broadcast stations opened in other cities throughout the country, leading to more localized programming, which complimented the established national programming.

ng (Al-Emad, 2020). This localization of programming continued after unification, leading to around fifteen government run radio stations and nearly sixty private stations prior to the 2014 civil war (lbid.).

Presently, radio provides information for many Yemenis — especially for Yemen's poor — as high rates of poverty make television ownership unattainable for many, while low literacy rates make information in newspapers inaccessible. Considering that 70% to 80% of Yemen's population is currently impoverished (World Bank, 2023a) and about 30% of the population is illiterate, radios

have developed into a primary source for the spread of news and information throughout the country (Country Meters, 2023).

The importance of radio in spreading information is precisely why the medium has become central to the war itself. Since 2014, political-military groups have relentlessly raided and attacked radio stations throughout the country and continue to do so as late as 2022 (Al-Batati, 2022). As a result of these raids, radio stations in Yemen have shut down, adjusted their programming to match specific political-military groups' ideologies, or moved their programming to neighboring countries.

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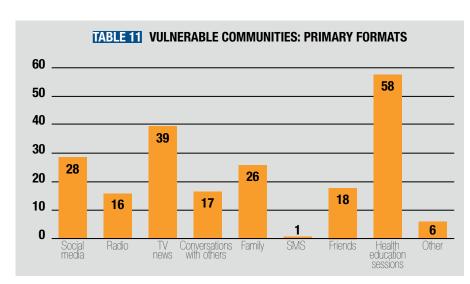
PRINT MEDIA

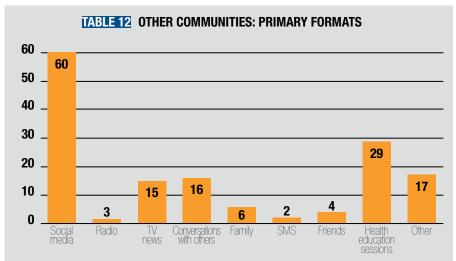
Newspapers – already being supplanted by television and radio – have further diminished in Yemen with the spread of internet and other digital media forms. The newspaper with the widest circulation in Yemen is the government run *Al-Thawra News*, founded in the 1960s (Rugh, 2014). While the newspaper has held a pro-government position, it switched to a pro-DFA stance following the takeover of Sana'a in 2015.

Other popular newspapers in Yemen include the southern newspaper *Al-Jumhryah* — established in Taiz, but currently running out of Aden; a city controlled by the Presidential Leadership Council Several other newspapers circulate in southern governorates and hold a pro-Cabinet position. These include *Al-Motamar, 14th October,* the English language newspaper *Yemen Observer,* and the economic focused *Yemen Times.*

Like radio, many newspapers closed due to threats from poli-

tical-military groups, while others closed because of the financial burdens brought on by the civil war. Additionally, numerous newspapers closed due to the financial burdens brought on by Saudi Arabia's blockade of Yemen, which began in 2015 (Shaker, 2018). Those that remained, have struggled to either continue publishing or shifted to online publication. *The Yemen Observer*, for example, attempted to shift their newspaper online with only limited success (lbid.).





FREEDOM OF EXPRESSION

NYemen lacks a clear, independent media source able to report information without succumbing to the threats or influence of the country's controlling groups. National media groups are under surveillance from these groups and few foreign journalists are permitted to enter the country. As a result, Yemeni journalists live under constant threat of being abducted by political-military groups or terrorist organizations.

The journalistic freedoms in Yemen are under serious threats from political-military groups. This is especially true in cases where reporters share information on the war, on political corruption, or on any issues that run contrary to the ideologies of those in power. From 2014 to 2022, a total of forty-five journalists have been killed due to the war. Seventeen were killed by the DFA; fourteen died during Saudi airstrikes; twelve were killed by unknown assailants; and two were killed by terrorist

organizations (Abu Bakr, 2022).

As of 2022, there have been 1,465 separate attacks on journalists (lbid.). These range from arrests and arbitrary detentions to disappearances and murders. Additionally, according to Reporters without Borders, there are currently at least fourteen journalists in Yemen being held by political-military groups under trumped up charges of terrorism (RSF, 2022).

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3.2. DIGITAL MEDIA LANDSCAPE

s of 2023, Yemen has 9 million internet users; 3 million social media users; and 19.6 million active cell phone users out of a population of roughly 33 million people (Data Reportal 2023). While these numbers are low, they nevertheless mark a small increase from five years ago when Yemen had 7 million internet users; 2.3 million social media users; with 18.3 million active cell phone users, out of a population of 28.5 million people (Data Reportal 2018).

INTERNET

Presently, more than 200 news websites have been blocked in Yemen (Digital Rights, 2022). Much like the traditional media formats, websites that remain are either produced – or heavily censored – by the separate political-military groups in Yemen, in order to promote information that fits their agenda.

Prior to the outbreak of war in 2014, a unified Yemeni government established surveillance and physical restrictions on internet use throughout the country. Many of these early laws centered on internet cafés. In particular, café owners were empowered by authorities to observe and report on their clienteles' web activities. This was done by requiring café patrons to provide identification to owners and by organizing café computer screens to always be visible to the owner (Al-Omari, 2009; Mareb Press, 2008).

These actions established a precedent for closing down websites; a practice that continued after the start of the 2014 civil war. Beginning in March of 2015, *Marib Press*, *Yemen Voice*, *Sahafa Net*, *Al-Sahwa Net*, and *Yemen Press* have all been blocked by political-military groups (Ghattas, 2015). The ma-

jority of these sites had previously reported on human rights violations, while Sahafa Net was the country's most popular search engine. In 2017, sites loyal to Saleh, such as *khaba-ragency.net*, were also blocked for posting defamatory materials (Al-Arabiya, 2017).

Along with blocked sites, Yemen is plagued by slow internet speeds, a history of connectivity issues, and has recently suffered from military attacks on Yemen's FALCON international cable – which links most of the country to the internet (Access Now, 2022; al Sakkaf et al., 2022; Gebeilly, 2022). These factors, along with regular electricity outages, have made the internet an unreliable source in the country (UNOPS, 2021).

SOCIAL MEDIA

The most popular social media sites in Yemen are Facebook, YouTube, Instagram, and Twitter (StatCounter, 2023). By 2015, 93% of Yemenis who accessed the internet used Facebook while 41% used YouTube. Additionally, 92% of internet users in Yemen use the messaging application, WhatsApp (Issac, 2015). Initially, internet cafés served as the primary place for Yemenis to access the internet. However, as mobile phone technologies have advanced, and phone prices and services have dropped, Yemen has seen a shift in internet users from public computers in cafés to their own personal phones and tablets. This move to mobile devices has likewise grown due to the closing of many internet cafés because of health pandemics and the ongoing civil war (Gebeilly, 2022).

Social media comes with benefits and drawbacks. On the one hand, it offers the population a new way to interact with one another and share information at the local, national, and

international level. On the other hand, our research shows that social media is one of the primary vehicles for sharing rumors, misinformation, and disinformation. Additionally, social media is carefully observed by the different political-military groups in Yemen. As such, individuals who post dissenting or disparaging opinions of Yemeni leaders and ideologies, risk imprisonment and torture (Al-Jazeera Staff, 2023).

Due to the aggressive punishments doled out to social media influencers, Yemen's social media landscape is largely populated by politically neutral figures like religious leaders, celebrities, lifestyle influencers, or by Yemenis living abroad. Social media influencers posting activist content are frequently removed and punished.

Data collected through Key Informant Interviews (KII) and Focus Group Discussions (FGD), suggest that the majority of social media activity in Yemen occurs in WhatsApp groups and similar end-to-ed encryption protected messaging. Taking into account the anonymity that the app provides its users; it is no wonder that application has been labeled "the biggest disease in the Islamic world" by Yemeni leaders who have begun making efforts to ban it in parts of the country (Al-Samei, 2020).

Along with causing serious threats to communication in Yemen, this proposed threat of criminalization of WhatsApp has created problems for Internews' data collection. For example, respondents frequently refused to answer any questions about their WhatsApp usage, including who they speak with on the app or what topics they discuss. This again speaks to the challenges in collecting data from a population with deep reservations about discussing their information consumption and sharing practices.

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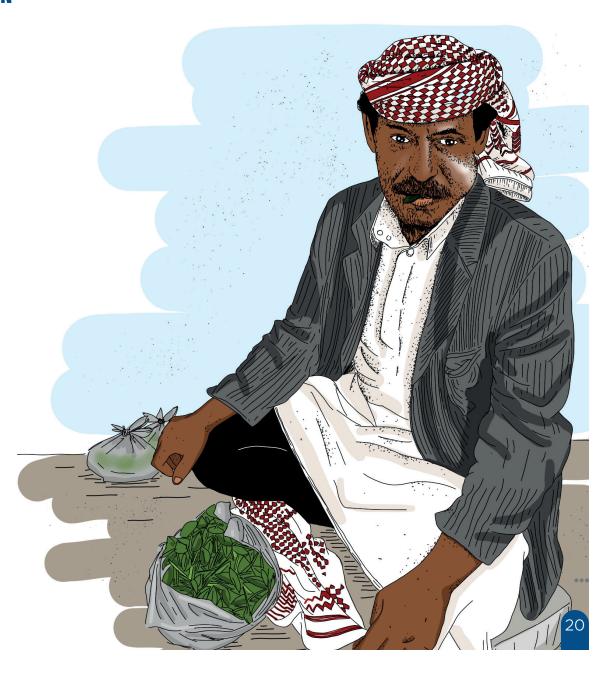
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3.3. LOCAL RELEVANCE OF INFORMATION

s Yemen's news media is almost entirely controlled by different political-military groups, the news and information reported through the country's news channels and websites are largely driven by propaganda and should thus be considered mis/ disinformation. Individual news stories are typically framed by broad, international or national narratives in order to showcase the strength of a particular ruling group. In general, this means that news from local areas is rarely covered at the national level, unless local events can be used in conjunction with one of the groups' main story lines.

For example, the Presidential Leadership Council's Saba News Agency website contains a local news page. Popular local news stories for May of 2023 include headlines like: "US Envoy: Iran Still Smuggling Weapons, Drugs to Yemen; Yemenis to decide their own fate (Saba News, 2023b);" or "Head of Presidential Leadership Council Meets with Top Ranked Egyptian Military Delegation in Aden (Saba News, 2023a)." In these examples, the stories refer to events at the national or local level either by referencing how global actions will affect the Yemeni people or by referencing a locality where events are taking place (i.e., Aden). However, while the stories involve Yemen's population or cities, the overall content itself is rooted in national politics or the civil war and the roles played by international actors.

Other major media formats, including newspaper and radio, have likewise been coopted by the major political-military groups, namely the PLC and the DFA. This has led to local news coverage being limited across these sources.



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3.4. MEDIA CAPACITY AND INFORMATION QUALITY

MEDIA LAWS

oth the PLC and the DFA control their respective region's media formats (television, radio, newspapers, internet, etc.) through separate Ministries of Telecommunication and Information Technology (MTIT). Each ministry regulates telecommunication through The Press and Publications I aws of 1990.

Each ministry grants licenses to Internet Service Providers (ISPs) for the northern and southern governorates of the country. ISPs, in turn, police online content and share any materials with their respective MTIT that may be deemed religiously, morally, or politically offensive. Either government can then punish internet users using the same Press and Publications Law that has been used to punish media stations and journalists. That law threatens fines and jail time for any conduct that can be interpreted as defaming Yemen, or Arab and Islamic heritage (Press & Publications Law, 1990).

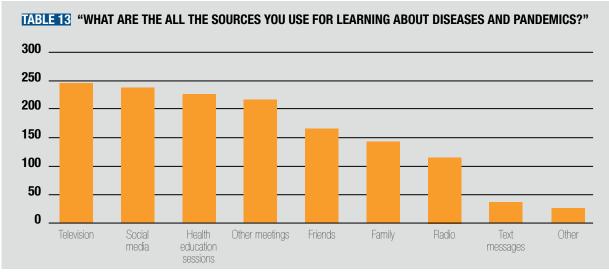
The breadth of this law – coupled with established precedent for arrests and imprisonment of journalists prior to the civil war – emboldens both governments to attack any dissenting voices that could loosely be labeled as defaming the government or attacking the country's heritage (CPJ, 2015).

DEMOGRAPHICS & DATA AVAILABILITY

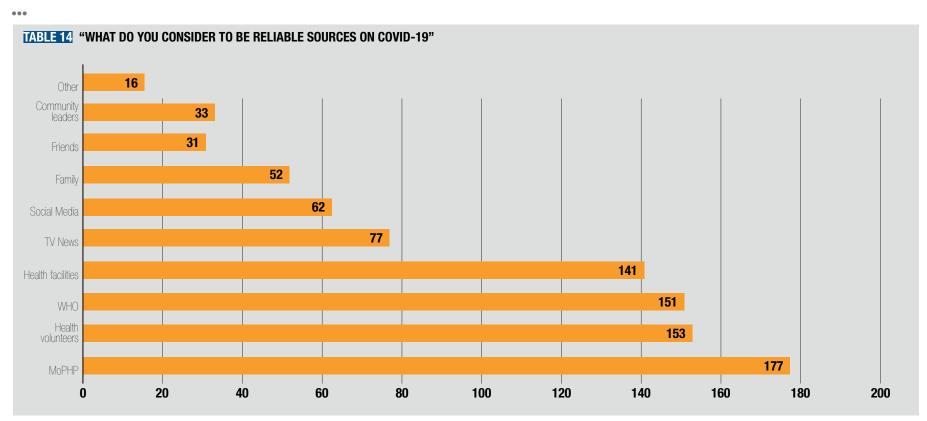
It is crucial to understand how access to different types of media, divide along the country's demographics. Arguably, both traditional and digital media are available throughout each governorate as newspapers, radio programs, television broadcasts, mobile phones, and internet services reach every region. However, access to particular formats will be restricted by financial, cultural, and social factors.

Bearing this in mind, there is little data linking population demographics in Yemen to the use of traditional or digital media. For that reason, some conjecture is necessary for understanding what types of Yemenis are using which formats. First, it is clear that computers and mobile phones require some technical knowledge and familiarity, both of which will be more readily available for younger Yemenis. As of 2020, 21% of Yemenis — or about 7 million people — were between the ages of 15 and 24. This is the age group that is statistically most likely to seek out and use the internet (Index Mundi, 2021). We can assume, then, that the majority of Yemen's nine million internet users will come from this demographic.

Next, computers, mobile phones, and subscriptions for internet services are all expensive. As indicated, the country's poverty level exceeds 70% and internet service prices have been rising steadily in Yemen, with nearly a 50% increase for internet packages as recently as early 2023 (Access Now, 2020). Thus, we can assume that digital media is financially out of reach for many people in Yemen. From this, it can be presumed that Yemeni internet users will largely come from social classes where disposable income is readily available for purchasing the required technology and subscriptions for accessing the internet. Additionally, internet service and mobile phone towers are more readily available and run more consistently in urban rather than rural areas. Meaning that internet and mobile phone services will more likely be accessible to Yemenis living in cities.



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Taking this information together, it can be inferred that the majority of internet and social media users in Yemen will be young, living in urban areas, and hold non-agricultural office or business jobs. Also, because men are generally more financially and socially independent, we can assume that they will represent the majority of internet users.

This presumption can be contrasted with traditional media formats – especially radio – which we can assume will be the main source of information for much of the population; especially for those who are older, poorer, and more likely living in rural areas. Additionally, while new media formats like the internet are commonly accessed through men's spaces – like

internet cafés — radio programs are increasingly associated with women. For instance, local radio is commonly referred to as "kitchen radio" by Yemenis because it is primarily consumed by women while they cook and clean their homes (Busquet et al., 2018).

It is important to note that these figures only reflect the likely demographics of media consumption in Yemen. Put differently, we are not saying that only young, middle class, urban men use the internet, or that all poor, rural, women in Yemen can only rely on radio. Rather, the data simply correlates likely gendered or financial and social statuses with Yemen's separate information formats.

JOURNALISM EDUCATION & PROFESSIONAL TRAINING

The threat to journalism in Yemen comes from multiple fronts. As has been mentioned, journalists are being assaulted, imprisoned, and killed for their reporting. These attacks then affect other reporters who are deterred from continuing to work as reporters and it also discourages young people from pursuing journalism as a career.

This creates a cycle whereby professional journalists are exiting the profession without passing on their knowledge and experiences to new generations. In turn, new journalists are

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entering the field without the necessary level of experience, skills, and professionalism that comes from working alongside seasoned veterans.

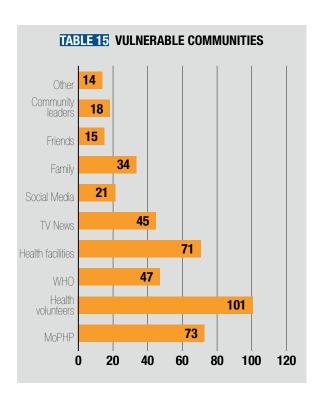
The journalistic training offered at Yemeni universities do not provide students with the necessary skills for writing or editing programs or for mastering the necessary equipment. For instance, journalism training and coursework is offered at Sana'a University's Faculty of Mass Communication (https://su.edu.ye/ci/). The faculty offers degrees in both broadcasting and journalism, among other majors. However, coursework only provides students with the theoretical tools for media and news cove-

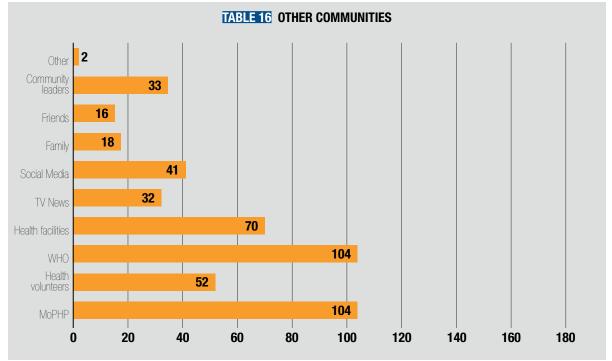
rage. The university does not provide professional, on the job training or actual experience in producing objective news.

Additionally, Sana'a was home to the Mass Communication Training & Qualifying Institute (MCTQI) run through the Ministry of Information. The institute provided workshops and training courses for Yemeni journalists run by professional journalists from neighboring countries and abroad (Yemen Times, 2004). However, it is unclear how the war has affected the MCTQI. There are records and news stories referencing the activities of the MCTQI prior to the war, but there is no information in recent years. This suggests that the institute has been closed or defunded.

More recently, international organizations have established training programs for Yemenis in journalistic practices. The United Nations Educational, Scientific and Cultural Organization (UNESCO) trained thirteen Yemenis (seven women and six men) on human rights journalism and the peacebuilding process in Yemen (2021). The goal was to empower journalists by training them on their rights and on the importance of journalism.

It is unclear, however, if and how these workshops will affect journalism within the country either in the short- or long-term.





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3.5. COVID-19 INFORMATION COORDINATION MECHANISMS

he introduction of COVID-19 came in 2020 when the DFA were fully established in Sana'a. Additionally, there was the Internationally Recognized Government in Yemen (IRG). The IRG are the remaining political authorities of the former regime following the takeover of Sana'a by the de facto government. As their title indicates — they are widely recognized throughout the world as Yemen's true political authority. After 2015, the IRG controlled much of the central and eastern parts of the country. Along with the IRG, there was the Southern Transitional Council (STC). The STC are a collection of southern regions that seek to secede from the rest of Yemen in order to form their own independent nation with borders similar to those before the country's unification in 1990. By April of



2022 – near the end of the pandemic – the IRG and STC joined together to create the Presidential leadership Council (PLC) (UN Affairs, 2022).

Information dissemination within Yemen during this period was thus fractured across three distinct political-military groups, each of whom were frequently in direct conflict with the others. Each group held different positions on the veracity of COVID-19 claims and were also differently affected by international aid groups and NGOs.

As has been established, media in Yemen during the civil war has been heavily controlled by the political-military groups controlling each region. Thus, the reporting that occurred on COVID-19 during the pandemic largely reflects the position taken by each group.

COVID-19 was first detected in Yemen's northeastern governorate of Hadramout, in April of 2020 (Relief Web, 2020). By the end of 2021, COVID-19 vaccines were provided to Yemen by the international community but were only accessible in the south, where roughly one-third of the population lives (ACAPS 2022). Initially, in 2021, the DFA's Minister of Health requested 10,000 COVID-19 vaccines for use on healthcare workers. However, later reports indicated that the DFA refused all but 1,000 shots (Qasem, 2021). The DFA position has been to not supply vaccines to the public, claiming the pandemic to be an international conspiracy. Nevertheless, some international organizations, like the WHO, have been able to offer vaccines to the Yemenis in DFA controlled regions (Barrington, 2021).

Each of the political-military groups moved slowly at the outset of the pandemic, largely due to their respective roles in combating other disease outbreaks and the war itself. As the STC gained control of the southern governorates, for example, they focused their attention on combating the growing rates of dengue fever (Peace Rep, 2020).

The internationally recognized government in Yemen was comparatively more stable than the STC at the outbreak of the pandemic. As a result, the government was able to maintain greater control and implement systems for greater safety. In the Marib governorate, for example, the government established curfews in 2020 and implemented community education programs about COVID-19 (Mareb Press, 2020).

Yet, shared boundaries between governorates affected these regions much like it did in Aden. By May of 2020, nearly 750,000 internally displaced individuals poured into Marib from the neighboring DFA regions. This vast shift in population more than doubled the governorate's population of 500,000. This extreme influx of displaced people created severe health resource shortages for the internationally recognized government during the pandemic's peak (Human Rights Watch, 2020b). The DFA's approach to COVID-19 was altogether different. Particularly after the start of the civil war, the DFA maintained an acrimonious relationship with humanitarian groups, and rejected their aid offers (Human Rights Watch 2018). Additionally, the DFA refused to release statistics on the spread of COVID-19 from their region and informed doctors and journalists only to disseminate information that aligned with the DFAs position on the virus (Euronews, 2020). Moreover, the war had taken a toll on local government funding in the north, meaning that many assistance and education programs on COVID-19 were never able to be effectively implemented (Peace Rep 2020). ●

4. INFORMATION **DEMAND** ——

THIS SECTION COVERS HOW COMMUNITIES IN YEMEN ACCESS INFORMATION AND WHAT THEIR INFORMATION NEEDS ARE.

4.1. INFORMATION NEEDS & GAPS

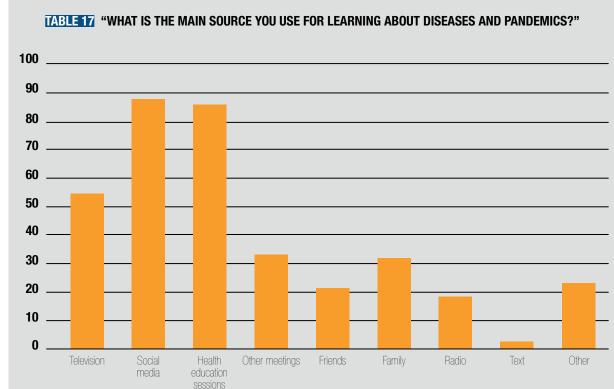
s discussed, the ongoing conflicts in Yemen have resulted in Internews surveys only being conducted in PLC regions of Marib, Aden, Lahj, Taiz, and Hadramout. No surveys were conducted in the DFA controlled regions. However, our partners were able to collect qualitative data from Sana'a. Additionally, researchers outside of Internews have collected data in the DFA region, and their findings will be discussed below. Broadly, Internews surveys indicate that Yemenis obtain information using multiple sources, including traditional media, digital media, and information provided in education sessions by international organizations, like the WHO, and/or the MoPHP. Additionally, data suggests that information consumption and sharing practices are affected by gender, class, and geography.

These surveys also indicate the population's experience of a gap between — on the one hand — the reliability of information sources on diseases and pandemics in Yemen and — on the other hand — the amount of information available to Yemenis. This is to say, the majority of Yemenis surveyed perceive the media to be reliable on many issues, but a sizeable number of individuals believe that information on diseases is being withheld or otherwise unavailable to the public. This is outlined in the two pie charts, where two-thirds of respondents assert that the (PLC) Yemeni media is credible in its reporting on diseases and pandemics. Yet, nearly half of those same respondents express that they are not receiving enough information on the same subject.

Additionally, respondents who stated that the media is not credible reasoned that news programs are largely shaped by politics and are thus providing skewed information. Moreover, they argue that information from the media is typically exaggerated, not the whole truth, or a blend of truth and falsehoods.

Taken together, this data indicates that the main critique of Yemeni media by the population is that it is either withholding information, kowtowing to political ideologies, or exaggerating the facts.

The bar charts indicate how Yeminis surveyed engage with different information formats. Television, social media, and health education sessions are the three most popular formats for Yemenis to gain information on diseases and pandemics. However, the challenge in assessing Yemenis' information needs is the fact that there is, to a large extent, mis/ disinformation in the country. As previously discussed, Yemen's information supply is heavily saturated in rumors and contradictory propaganda. Much of this is the result of the different political-military groups in the country, ac-



4. INFORMATION **DEMAND**

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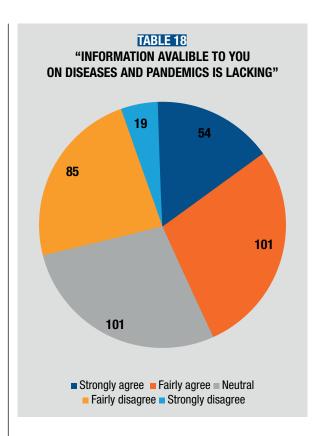
tively trying to spread disinformation that will discredit other groups. As a result, it is difficult to discern whether the average citizen is receiving correct information and, if so, from what sources. Moreover, it is unclear whether the average citizen is able to filter out misinformation from the correct information available to them.

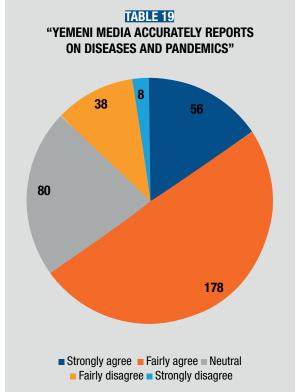
Based on the data collected, the greatest gap appears to be a lack of information on diseases and pandemics. As shown in the pie chart, this comes from 43% of those surveyed citing a lack of availability of medical information.

Yemeni community leaders' Klls provide some nuance and depth to this data. They position the described lack of information within an intersection of new and existing problems. All of which collectively contribute to gaps in information for many Yemenis. Specifically, they point to a widespread lack of education, reliable media sources, and communication technologies.

When asked to elaborate on the challenges facing their community in receiving information about diseases and pandemics, one community leader argued that Yemen lacks a high percentage of educated citizens. This reflects many of the problems currently facing the country, namely that schools in Yemen have closed due to the war. Several million children have been left without reliable education since 2014. This has only added to the country's ongoing schooling problem. As of 2015 – just after the start of the war – literacy rates rested just below 70%; the lowest rating of all MENA countries (ICRC, 2022; Population Pyramid, 2015).

This community leader's statement on education can be interpreted in different ways. For instance, he may be implying that this is a government problem, which means that Yemen's education system is too weak to provide adequate schooling





to the population. Additionally, he may be suggesting that an ongoing war and persistent financial crises have meant that Yemenis need to make sacrifices. That they must prioritize issues like food, health, and housing over education; or some combination of these and other reasons.

Regardless, his statement is clear in indicating that many – if not most – of the citizens in his community are unable to fully understand the dangers or complexities of the diseases and pandemics facing them today. He asserts that their limited

education leads to a lack of awareness about the country's health crises and similar problems. And because people cannot comprehend the issues, he argues that they resign themselves to indifference on health topics that they feel they cannot understand or handle.

Other community leaders acknowledge that poor education limits information. However, they place more emphasis on Yemeni families' financial burdens as causing gaps in information. This argument is based on the fact that many neighbo-

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4. INFORMATION **DEMAND**

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rhoods and communities in Yemen consist of large numbers of lower-class families and/or struggling farmers who have migrated to the city looking for work. Thus, along with poor education, these individuals lack the financial means to acquire cell phones or computers which in turn could be used to access information available on social media apps like WhatsApp and Facebook. Granted, social media is one of the primary contributors of rumors and misinformation in Yemen. However, these digital media formats also provide a direct way for efficiently spreading community information. As the community leader notes, without access to these technologies, spreading necessary information often necessitates door-todoor visits throughout their community in order to pass on information. Such a process requires a great deal of time and manpower and is entirely unrealistic for spreading any emergency information.

Lastly, the politicization of media in Yemen means that the most readily available news sources from traditional media — i.e., television, newspapers, and radio — are only spreading information if and when it is beneficial to particular political-military groups. One community leader succinctly described this dilemma, stating: "The challenges [of acquiring information] are very great. Yemen has been suffering from a war for more than eight years. There is no media source from the government, or any authority, which people can rely on."

Thus, the gaps in information for Yemeni communities is directly tied to gaps in basic education; reliable media formats; and Yemenis access to multiple media formats. The community leader's statement that the there is no authority for Yemenis to rely on exemplifies these gaps. As the data demonstrates, the media promotes propaganda as news to Yemenis who too

often lack education and — by extension — the necessary critical thinking skills to question the news stories presented to them. Moreover, a lack of media diversity means that most Yemenis — particularly vulnerable communities — draw their information from a small collection of radio or television news programs, all of which are controlled by one political-military group in each of the country's divided regions.

When asked to remark on the credibility of media, most individuals can only draw from their very limited experience with traditional and digital information outlets that are aligned together and spreading the same message. As many Yemenis lack access to information from different viewpoints, it becomes easy to see their primary information source as credible, simply because it is so consistently reinforced through multiple formats.



4.2. MAIN DETERMINANTS & BARRIERS TO ACCESSING INFORMATION

he greatest hurdle for accessing information in Yemen is the aforementioned spread of mis/ disinformation in conjunction with the use of traditional and digital media for political gains. Nevertheless, Yemen does not exist in a vacuum. The DFA and PLC media's affect information on each other's regions, and other sources of information enter Yemen from neighboring countries, Yemenis abroad, the internet, and other sources. This raises the question as to how mis/ disinformation differently affects communities in Yemen. As discussed, Internews' survey indicates that the majority of those polled believed that their region's media was largely credible. But is this in both PLC and DFA regions, or are there differences? Moreover, are Yemenis' views on their regional media outlet's credibility affected by other information sources?

To address these topics, we draw on both Internews studies and data from outside researchers, such as the Yemen Policy Center. Their findings indicate that DFA propaganda has been especially effective at spreading misinformation. Moreover, their data indicates the DFA has deftly framed and defined both the war and the pandemic in ways that the PLC government has not been able to do. The Yemen Policy Center also notes that the DFA has been highly successful at spreading their own propaganda while simultaneously legitimizing their ideologies in both northern and southern regions.

The Yemen Policy Center's 2021 survey explores the perceived credibility of the DFA's media channel - Al-Masirah - from the perspective of Yemenis living in DFA and PLC controlled areas. In that study, 17% of those living in DFA controlled areas view the Al-Masirah channel as unreliable, compared to 83% of PLC citizens who question the channel's credibility (Porter, 2021). This is the expected result of a singular group holding a monopoly on a region's information: the majority of those who live within that region believe the information available to them to be true, while a majority of those outside the region believe it is not credible.

The DFA and its media outlets – particularly during the second wave of COVID-19 - had managed to present themselves to their communities as being credible and reliable. This runs contrary to expectations, as the DFA was regularly spreading misinformation during this period. In 2021, 79% of DFA citizens acknowledged that their local officials were providing them with credible information compared to only 26% of PLC citizens, who were reported to believe that their local government officials were providing reliable information. These trends were likewise reflected in media surveys conducted in 2021 in the DFA and PLC regions. The Yemen Policy Center found that 84% of citizens in DFA territories believed their region's media coverage of COVID-19, whereas only 43% of PLC citizens believed their region's news reports on the virus (Porter, 2021).

Internews data suggests, however, that these viewpoints are not set in stone. Our survey conducted in 2023, shows that 65% of PLC citizens now view their news outlets as accurately reporting on diseases and the pandemic, as indicated in the pie chart above. More data is required to understand why opinions on media credibility in PLC region have shifted from 26% support to 65% support from 2021 to 2023. One possibility would be that the PLC could not control outside information to the same degree as the DFA could. Additionally, the DFA's stance that the COVID-19 virus was not real may have resonated more with the population than the position put forth in the south. Also, more data is needed on whether opinions in the DFA region have seen comparable shifts from 2021 to the present.

Regardless, other surveys conducted in Yemen in 2021 suggest that the lack of information – or poor information quality – coming from traditional media sources, may have led Yemenis to seek news elsewhere. Studies suggest that some Yemenis supplemented their region's news with unreliable sources that spread mis/ disinformation. Thus, unreliable media formats beyond those controlled by the PLC and DFA may have contributed to how Yemenis understood COVID-19. By extension, Yemenis' beliefs shaped by these formats may have affected how they viewed the credibility of their own region's media.

A survey funded by the University of Science and Technology in Yemen, found that when asked about COVID-19, respondents answers contained misinformation commonly circulating by unreliable sources (websites, gossip, etc.) Their answers ranged from containing 10% to 40% of misinformation, depending on the specific topic (Bitar et al., 2021). For instance, the study shows that 23.2% of Yemeni respondents believed that COVID-19 was made by pharmaceutical companies while 40% believed the virus was a man-made, biological weapon. What is unclear in these analyses is who spread these rumors and where the majority of the information came from. This study notes that rural and poor communities were more likely to ascribe to these types of misinformation, but they did not explain how that information was acquired.

Based on our survey, it is more likely than not that the health education sessions provided by the WHO and the MoPHP are providing correct information with regards to COVID-19 and other diseases. Thus, it is most likely that the reported mis/ disinformation described above came from social media, which has been listed as one of the top three formats where Yemenis acquire information on diseases and pandemics.

Internews' work on debunking online rumors have encountered these rumors circulating on social media – that COVID-19 is a product of pharmaceutical companies or that it is a biological weapon.

5.1. TRUSTED INFORMATION PROVIDERS

he majority of survey respondents stated that they trusted information from health education sessions the most. This suggests that Yemenis recognize both international and national healthcare organizations as reliable authorities on diseases and pandemics. This is important because — despite the war and the many pandemics that have ravished Yemen in recent years — citizens have not lost their trust in the doctors and health organizations working in the country.

Television was a key source as well as social networking sites. This is of particular concern, as a large quantity of Yemenis view TV and social media as reliable source of information. The data indicates that many people also find TV and social media to be unreliable. This polarization of opinion creates challenges in that it is unclear why these sources are so widely divided. For instance, it is good that social media is viewed as unreliable from the perspective that many rumors and misinformation are spread through social media, much like TV. However, at the same time, these types of digital media formats have also provided the population with accurate information on the country's diseases and pandemics. Additionally, social media has proved to be effective at keeping individuals in contact with one another and as a means for spreading information quickly within and across communities. It is therefore important to help communities differentiate between useful social media resources and harmful ones.

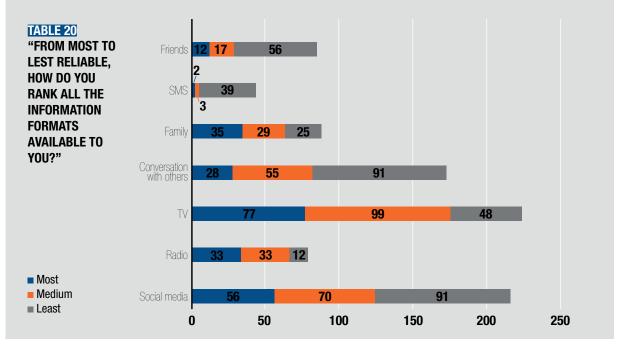
The survey indicates that the least trusted sources of information came from text messages, friends, and conversations. These sources – and family to a lesser degree – are seen as sources of rumors and misinformation. As such, their wides-

pread dismissal as unreliable sources are a positive sign. However, the qualitative data suggests that the survey data is split across different socioeconomic groups in Yemeni society. In particular, educated individuals such as community leaders or civil service workers tended to share the same opinions expressed in the survey. However, members of al-muhammasheen as well as IDPs tended to hold opinions that contrasted with the majority of those surveyed.

Religious leaders and community leaders' opinions largely reflect the survey's data. Many expressed that education sessions were the best ways to spread information and that any information from the MoPHP, public health facilities, or international organizations like the WHO was best. One community

leader lamented that social media could not be used for all citizens but noted that information is often spread through additional seminars or other publications.

Other sectors of the population expressed different opinions, however. Individuals who identify as al-muhammasheen stated that television offers the most trusted information. One individual stated that he did not have a mobile phone to access information, and reasoned that television was his best alternative. Referencing television credibleness, he reasoned that the programs he watches are verified and then broadcast throughout the world. The implication here being that the programs' accuracy can be equated to its wide broadcasting audience.

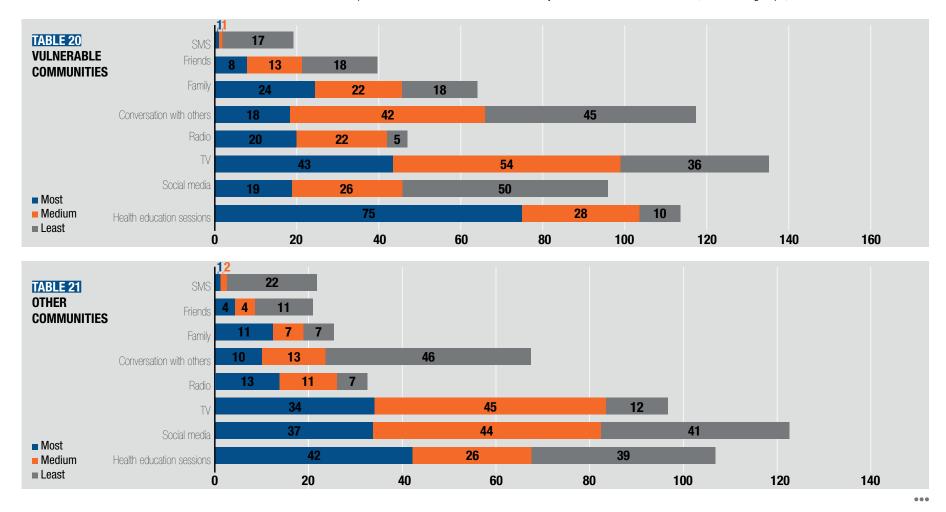


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Some comments from IDPs were similarly problematic. One individual remarked that he did not have faith that doctors provided advice based on reputable sources. Because of this, the individual argues that he was unwilling to trust anyone and would only believe what he could see with his own eyes.

In considering both the quantitative and qualitative data together, it is clear what is considered a trusted information source correlates with individuals' economic positions within society. Individuals with more education and reliable jobs were more likely to trust doctors and health education sessions, while those living in more precarious circumstances and/or without jobs were more

likely to trust less reliable sources like television or gossip. The challenge for government and humanitarian groups is therefore to find ways to ensure credible information is widely spread through the least reliable sources (radio, television, etc.), which also happen to be the most accessible sources for low-income communities, vulnerable groups, and rural communities.



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5.2. TRANSMISSION – INFORMATION SHARING

he majority of those surveyed acknowledged that, while they do share information with family members and friends, they nevertheless view both groups as unreliable sources on diseases and pandemics.

However, from the KII data, many individuals contradict this statement by noting that they regularly engage in group chats involving family, friends, and neighbors with the soul intention of learning about, and spreading, information. Expectedly, those individuals who widely engage in these communication activities came from vulnerable groups like *al-muhamma-sheen* and IDPs. For example, an *al-muhammasheen* woman noted that any information she hears about diseases or pandemics — such as a person's symptoms or the possible cause

of the disease — she makes sure to pass it onto family, friends, and neighbors. When asked specifically how she shares information, she simply remarked that she does so whenever she gathers with others. IDPs offered similar responses, stating that they share any information they hear from health centers in group conversations.

The spread of information through casual group chats, gossip, or by word of mouth substantially shapes how individuals interpret and understand diseases and pandemics in Yemen. Traditionally, oral communication — such as poetry recitation — has played a crucial role in the tribal politics of the country (Caton, 1990). In Yemen, oral poetry is at once an art form and a performative and ceremonial expression of social and religious ideologies. Additionally, it serves as a rhetorical device for speakers to persuade or inform others about their views. Thus, Yemen is imbued with cultural values favoring poetic, metaphorical, and hyperbolic speech used to communicate

and argue sociopolitical and religious opinions. As diseases and pandemics are inherently political, social, and religious topics, they are therefore regularly hashed out in face-to-face discussions or in text and online discussions.

In such discussions, exaggerations and falsehoods are framed by the reputation of the individual who is sharing them. Thus, as dangerous as mis/ disinformation is from the media, it poses an even greater threat when it is reaffirmed in sharing sessions by a trusted and respected member of the community.

As a whole, information that is shared in these discussions comes from multiple and often contradictory sources, which in turn are trusted and distrusted by different groups throughout the country. How communities view information tends to be shaped both by how that information is consumed and then how the information is talked about by family, friends, neighbors, coworkers, etc.

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5.3. INFLUENCE – HOW INFORMATION IS SHAPED BY CLASSES IN SOCIETY

amily and class-based relationships are the definitive influential means for interpreting information in Yemen. This should come as no surprise, as the data collected by Internews has demonstrated that the different socioeconomic groups surveyed consume, value, and share information in their own different ways.

In essence, the information shared through traditional or digital media sources is refracted through the ideological beliefs that historically emerged through the different social experiences of each community. For younger, wealthier, urban Yemenis, social media and other digital media formats are highly valued for their speed and reliance on drawing in information from multiple sources. At the other end of the spectrum, al-Muhammasheen and IDPs appear to rely more on information shared by word of mouth through trusted networks of family and friends.

This distinction in how information consumption is influenced within communities has emerged out of national context where Yemen's traditional media has become corrupted through war and politics, leading to local and international media formats being questioned for truthfulness. This in turn speaks to the deepening fissures developing within Yemen's society. Not just between north and south, but also separation among the different social, cultural, and economic groups within the country based on the kind of information that shapes their current realities.

It is important, then, to strengthen shared information sources that are commonly valued by all communities involved. Also, it is key to make multiple information formats readily available to all communities in Yemeni society. In doing so, these formats will serve as a common source of information linking the population, through which people will be able to identify with one another.

Doctors, healthcare workers, and national or international health organizations rank as the most trusted individuals by all those surveyed. Yemeni healthcare workers acknowledge this and recognize their part in spreading information to all communities in Yemen. Their responsibility is to share information from reliable sources to the rest of the population. They suggest, however, that this can be a daunting process. Based on qualitative data, Yemeni healthcare workers indicate that the most timely and accurate information available to communities tends to come from independent journalists, certain radio stations, and social media sites. However, they note that spreading this information to the community can be rather problematic. One issue is that not all information on diseases and pandemics is freely shared with the community. Health institutions will conceal information if they are concerned that it will cause fear for the community. Similarly, hospitals and healthcare facilities have been known to hide details about cases from the community so as not to cause panic.

The qualitative data demonstrates that Yemeni healthcare workers are frequently communicating with their communities without having all the facts or data. This can create distrust in communities towards healthcare workers, as they may perceive them as not able to provide definitive facts or advice on health issues facing their area. In the healthcare workers own words, "We can often access the information but not always in a suitable time."

The war has also left an information vacuum within Yemen that is being filled by NGOs, International organizations, and aid groups. These groups are able to use money and resources to reach particular communities in the government's absence. This is especially true in IDP camps and al-Muhammasheen communities. In these spaces, health organizations are able to provide treatment, food, aid, and — in some cases — even shelter.

Nonetheless, COVID-19 and other diseases have created confusion and rumors that have not been able to be fully resolved by the government or health organizations. For many, the threat of the virus was overshadowed by existing diseases or the war. Thus, when asked why they think individuals might not follow COVID-19 safety guidelines, responses tended to vary in many different directions.

Of those surveyed, the number one explanation for ignoring health directives was that people in their communities were simply not interested in following them. The second most common response was the belief that the virus does not actually exist. Both statements have recurred regularly in our research in Yemen. Frequently, people feel that the necessary guidelines for safety are too extreme, or they believe that the virus is no stronger than the common cold. Still others argue against following the directives because they believe they are healthy enough to fight off the virus, or that the virus is only something for elderly people to be concerned with. These rumors are also frequently shared with the notion that the virus is either completely false or that it is actually just a different strain of influenza.

On the one hand, we have seen that Yemenis widely acknowledge that doctors and healthcare workers provide the most reliable information on COVID-19 and other diseases. Yet, on the other hand, Yemenis contradict this position by disregarding doctors' directives for preventing COVID-19 and relying instead on mis/ disinformation. This is one of the primary challenges facing Yemen's information ecosystem. We must find ways to bridge the combination of credible information in the country and Yemenis' trust in doctors and healthcare workers with engagement of health directives and acceptance and understanding of the short- and long-term effects of diseases spreading within the country.

6.1. NATIONAL COVID-19 RESPONSE PLAN

emen received various shipments of COVID-19 vaccines in 2021. In March of 2021, Yemen received 360,000 AstraZeneca vaccines and in August of 2021, Yemen received the first 151,000 Johnson & Johnson vaccines as part of a 504,000 total shipment (Reuters, 2021; UNICEF, 2021). Yet by August of 2022 — eighteen months after vaccines came to Yemen — only two percent of the country was fully vaccinated, which is one of the lowest rates in the world (Essa, 2022).

The primary reason cited for such low vaccine rates is the war. Healthcare infrastructure was heavily damaged by bombing, while many doctors were either killed or fled the country. Similarly, many of the country's major roads were destroyed during bombing campaigns, making it difficult to effectively ship vaccines to all the governorates of the country. Additionally, the politics of war heavily effect where vaccines are utilized. In the south, the STC planned to have 30% of the population vaccinated by December of 2022, while the DFA in the north were hesitant to allow humanitarian workers to bring vaccines to their regions (lbid.).

Many Yemenis have also chosen not to be vaccinated, citing unfounded rumors and disinformation (Al-Naggar et al., 2022). Studies show that female Yemenis, from lower income families, are most likely to resist the COVID-19 vaccine, with the most popular reservation being the belief that pharmaceutical companies have manufactured the pandemic for financial gain (Bitar et al., 2021). Social media posts in Yemen provide similar rumors, including the prevalent belief that COVID-19 vaccines are either different from the rest of the world's or have expired when they reach the country. Or that the vac-

cines deteriorate reproductive organs or are simply a plot to experiment new drugs and diseases on the Yemeni people.

Each of the governments moved slowly at the outset of the pandemic, largely due to their respective roles in combating other disease outbreaks and the war itself. As the STC gained control of the southern governorates, for example, they focused their attention on combating the growing rates of dengue fever (Peace Rep, 2020). Yet, by May of 2020, the STC was closing hospitals because they feared they did not have the staff or

resources to combat the spread of COVID-19 (Fahd, 2020). By 2021, with COVID's second wave, the STC converted hospitals to COVID-19 centers, outsourcing authority to humanitarian groups, like Médecins Sans Frontières (MSF) (2021a).

Adding to the challenges, many of the STC controlled areas – like Aden – bordered with the internationally recognized government areas. The political-military groups thus competed with one another for health resources and humanitarian aid across these newly formed and frequently fluid boundaries.



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6.2. MAP OF HUMANITARIAN ORGANIZATIONS

umanitarian groups have been working in Yemen since before the pandemic began. The Saudi based relief group, King Salman Humanitarian Aid and Relief Center, had been working in Yemen since 2017 and the outbreak of Cholera (KSrelief, 2017; UNICEF, 2022; WHO, 2020). Similar international groups like the UNICEF, WHO, the Red Cross/ Red Crescent, and the UN's OCHA have been integral parts of Yemen's health system for many years, working on the COVID-19 pandemic as well as the cholera pandemic, the civil war, and the ongoing famine (OCHA, 2021). In 2022, the United Nations raised \$2.3 billion for Yemen, which fell short of

their \$4.27 billion goal (Magdy, 2022). The war in Ukraine was viewed as the reason why the fund goal was not achieved.

While most groups are offering aid, there are some Humanitarian organizations conducting research and offering suggestions on supply and demand information within Yemen. For instance, Human Rights Watch (HRW) has conducted research on humanitarian aid provided in Yemen and the obstruction seen by humanitarian workers. Following interviews with Yemenis and humanitarian workers in Yemen, HRW provided a detailed list of recommendation for the different political-military groups, humanitarian organizations, and donor governments (Human Rights Watch, 2020a). Broadly, they ask that all government obstacles be removed to allow humanitarian workers greater access to the Yemeni population. Additionally,

they ask for greater transparency and for the dissemination of more accurate news information to the public.

The United Nation's Office for the Coordination of Humanitarian Affairs (OCHA) implemented the Yemen National COVID-19 Preparedness and Response Plan in September of 2020. The goal of the plan has been to support testing and case management while gathering necessary health resources like oxygen and personal protective equipment (Relief Web, 2020). Additionally, the plan sought to produce a grass roots information campaign, using local religious leaders, WhatsApp groups, and schools as dissemination points of information. While they have implemented many of their plans, persistent fears and stigma surrounding hospitals and COVID-19, nevertheless persist in Yemen (MSF, 2021).



6.3. RISK COMMUNICATION, COMMUNITY ENGAGEMENT MECHANISMS, & COORDINATION

byproduct of the ongoing hostilities between the DFA and PLC in Yemen is the fact that neither government has the resources to effectively engage with many of their communities' needs vis-à-vis COVID-19 or other similar diseases and pandemics. This is especially true in the north where the DFA has held to their position that the Corona virus does not exist.

Additionally, Yemen is facing a multitude of problems including inflation, food shortages/ malnutrition, and reductions in incomes/ salaries. This is on top of the already discussed healthcare shortages, population displacement, and aggressive attacks on national and international media.

In short, RCCE projects have predominantly been spearheaded by international organizations, namely the WHO and the World Bank.

Since the outbreak of COVID-19, these international bodies have worked with the different political-military groups in Yemen to create a project centered on assessing the risks of the pandemic in Yemen, manage that risk, and create effective lines of communication to control and minimize health concerns related to the virus. This is the basic outline for Yemen's COVID-19 Response Project which was designed and run by the WHO — with funding from the World Bank as of 2020.

Further funding was given to the project from the World Bank in 2021 in order to support the expanding activities associated with the project. These included support with vaccine deployment and further detection, prevention, and threat response activities.

The WHO and World Bank report that by mid-2020, their partners in the country had been able to reach roughly 16.5 million Yemenis using a variety of different outreach platforms and methods. This included direct community outreach through religious leaders and mosques; technology like WhatsApp to send information out to the community; information spreading through cars equipped with megaphones, and visualizations posted on a variety of social media platforms.

The PLC has sent COVID-19 messages to 13.5M subscribers, while their MoPHP has received over 5,600 hotline calls, 14,730 calls received via radio phone-in programs, nearly 10, 000 community gatherings with 626,730 people reached and over 9,640 women social events. Home visitation by social

workers has reached 2.6 million people via over 450,000 house-to-house visits and mother-to-mother sessions, and 33,980 people reached through 920 awareness sessions in health facilities (Abdalla, 2020).

Additionally, the PLC government has been tasked with sending text messages to mobile phone subscribers; their MoPHP has set up hotlines to receive calls on questions or concerns about the virus; radio programs were set up to answer callin questions on air; community gatherings and door-to-door visits targeted women; and health facilities sponsored CO-VID-19 awareness sessions (lbid.).

As the war continued, many Yemenis had to contain diseases without proper equipment. This has become a common theme in Yemen: as the national government continues to fragment, local administrative services or traditional authorities have needed to create systems to ensure the safety of their community. In the northern governorate of Hajjah, for instance, many women served as volunteers to make face masks and protective suits in order to shield their community from the ongoing pandemic (UNDP, 2020).

As COVID-19 has waned in Yemen – and throughout the world – the goals moving forward are shifting to food security and raising the quality of life in the country. The new demographics of post-war and post-pandemic Yemen indicate emerging atrisk communities. These include: Women and girls who make up roughly 73% of the country's displaced population; the many children who have not had access to education due to the war; the IDPs and refugee or migrants; the growing number of disabled individuals; and minority groups like the *muhammasheen* (UNSDCF, 2022).



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6.4. RUMOR TRACKING & COMMUNITY FEEDBACK MECHANISMS

study by ARK International found that nearly all Yemenis see rumors and mis/ disinformation as a significant problem in their country with respondents indicating they recognize false news reports several times each week (Porter et al., 2021). This is despite the fact that – as we have seen – a majority of Yemenis see their region's information sources as credible. Generally, the most common topics of misinformation center on military activities, the peace process, or the status of basic government services. Supporting Internews' Klls, more than 70% of respondents acknowledged that coverage of COVID-19 had become politicized in Yemen.

The ARK survey also noted that mis/ disinformation follows a pattern within Yemen. There is a correlation between DFA mis/ disinformation in news media and regions where military

conflicts are present, or in regions that are heavily contested. In 2021, for example, the DFA and the PLC battled for regions in the Marib government. Additionally, the governorate was increasingly becoming a destination point for displaced Yemenis coming from DFA controlled areas. The ARK survey found that during this period, 42% of respondents reported exposure to fake news stories at least once per day (lbid.).

Combatting mis/ disinformation is a daunting and challenging task. As the Yemeni government is divided, there is no national organization working to combat these issues. On the contrary, the two main governments in the country use mis/ disinformation as part of their larger war strategies. The best way to combat mis/ disinformation is to have citizens draw from multiple information sources in order to ensure that they

are engaged with different viewpoints. This would allow individuals to recognize how different pieces of information are presented through different ideological positions like DFA, the PLC, international groups, etc. However, of those surveyed by Internews, nearly 75% stated that they only used one information source for particular topics.

Naturally, this is a reflection of the many problems facing Yemenis in the country's current state. This is to say, it is unreasonable to expect that individuals have the time and resources to seek out multiple sources of information.

With that said, there are organizations emerging within Yemen that seek to control the number of rumors spread through digital media. This is critical to the fight against mis/ disinformation as traditional news stories, rumors, and types of information are regularly recycled and spread through digital media. These emerging organizations in Yemen work diligently to report mis/ disinformation and to fact check stories related to COVID-19 and other issues. Groups like Sidq Yemen follow in the footsteps of Fatabyyano, in Jordan, and Tech4Peace, in Iraq (Porter, 2022). Both latter organizations catalogue and dispel rumors circulating in their national media. Sidq work specifically targets larger, international tech companies, like Facebook, to combat misinformation by pushing these sites to take down false and misleading posts about their country.

Outside of Yemen, several international organizations provide similar work to dispel mis/ disinformation. Internews, for example, works with both Yemeni and international organizations to collect common rumors spread through social media or through offline conversations. They then provide monthly bulletins dispelling the rumors and providing context and background to the information. Additionally, they supply recommendations to the community and other international humanitarian organizations for combating rumors. lacksquare



7. KEY FINDINGS & RECOMMENDATIONS - TOWARD A HEALTHIER INFORMATION ECOSYSTEM

7.1. KEY FINDINGS ON THE INFORMATION LANDSCAPE AND COMMUNITIES' INFORMATION PRACTICES

Foundations to Build Upon

A broad range of actors have been committed to delivering quality information on COVID-19 and other topics of diseases and pandemics –

- Throughout the COVID-19 pandemic, both the internationally recognized government in Yemen and the STC facilitated international aid groups and NGOs in helping Yemenis. This continued after the two political-military groups aligned to become the PLC. This work included permitting vaccines, educational materials, and other medical needs caused by war and an overstretched national healthcare system. These established relationships between the PLC and international groups must be parlayed into post COVID-19 healthcare issues. In particular, the PLC should seek help from these organizations in continuing to spread medical resources throughout the region and also to help rebuild the country's hospitals and healthcare facilities.
- Despite the DFA's problems (e.g., spreading dis/ misinformation), they have allowed for some vaccinations to enter the region as well as limited numbers of outside healthcare aid. The WHO was granted access to administer 10,000 vaccines to healthcare workers in DFA controlled areas as of June of 2021 Barrington, 2021). However, by October of 2021, the DFA reduced that number of permitted vaccines down to 1,000 (Qasem, 2021). It is unclear why the WHO was initially allowed to administer 10,000 vaccines or why this number was later reduced so heavily. Nevertheless, the DFA actions suggest that they are open to some outside support under specific circumstances. It is incumbent upon the WHO to continue to seek out ways to offer support to

the DFA and the Yemeni people. Similar to the needs of the PLC, the WHO can offer the DFA continued support on rebuilding hospital or by offering other needed medical supplies, like medicines for malaria.

- International bodies like the WHO, the World Bank, and other international health authorities have helped fund and train Yemeni healthcare workers so they can provide educational health sessions to the Yemeni population. This funding and the training sessions should be encouraged to continue and be expanded by international organizations. The war has severely depleted the country's medical resources and personnel. As such, the country requires newly trained nurses and doctors to replace those lost in the war. Additionally, experienced healthcare professionals are needed to provide quidance as the country works to reopen hospitals and health centers. Both governments should likewise enact policies that promote a suitable environment for doctors and healthcare workers to return. Policies should include security and protection for doctors and acknowledgment that military forces will not attack medical facilities.
- UNESCO is training young, Yemeni journalists on critically important issues related to the rights of the press. Their work helps to ensure the unbiased and credible reporting will continue in Yemen. These training sessions should be systematically expanded to include Yemeni journalists and journalism students from different governorates. Additionally, training should continue to be given to both men and women. With so many journalists lost during the war, Yemen needs to have experienced journalists who can mentor a new generation of reporters.

Many Yemenis have banded together to form networks of support within and across communities, in spite of threats from disease or government retribution –

- Independent media watchdogs, like Sidq Yemen, are working to combat the spread of mis/ disinformation on digital media.
- Community leaders regularly expressed in the Klls their willingness to spread correct information. When asked about correcting mis/ disinformation within their communities, all leaders interviewed acknowledged that they actively correct any rumors and work to both inform their communi-



7. KFY FINDINGS & RECOMMENDATIONS – TOWARD A HEALTHIER INFORMATION ECOSYSTEM

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ties about correct information and advise them on credible sources available to them. Similar answers were given by both workers from local CSOs and from healthcare workers.

■ Data from both Internews and other available research organizations contain numerous anecdotes of community members volunteering with local or international aid programs to spread correct information on diseases and pandemics via digital media, door-to-door campaigns, or information sessions.

Aid and attention to IDPs and al-Muhammasheen continue to serve as a safety net for Yemen's most at risk groups --

- Organizations including Internews, the UN, the WHO, and many others work with IDPs and marginalized communities in an effort to magnify their voices so their struggles can be better understood and addressed by relevant groups.
- The UNHCR is working with international and national organizations to ensure that IPDs, refuges, migrants, and asylum seekers are receiving aid including medicine, shelter, food, and proper utilities.

Healthcare workers and international and national healthcare organization consistently rank as the most trusted sources for diseases and pandemics --

- While the amount of mis/ disinformation in Yemen is daunting, surveys, Klls, and FGDs consistently demonstrate that the majority of Yemenis value information from the most trusted sources.
- Individuals surveyed recognize the common symptoms associated with COVID-19 and other diseases, and often recognize the correct directives to follow for preventing the spread of disease.

Challenges Still to Address

Knowledge of COVID-19 continues to spread through reliable sources. Nevertheless, apathy and indifference continue to interfere with the directives --

- As indicated in the survey, many respondents acknowledge that they do not follow the recommended COVID-19 guidelines, nor do many people that they know. Studies must be conducted to better understand the disconnect between people recognizing health problems, on the one hand, and their reluctance to follow lifesaving directives, on the other.
- Despite credible sources offering information on COVID-19, some respondents in the survey still believed false information about the virus. This is particularly true with regards to its origins, its communicability for young people, and its long-term effects. While we understand many of the ways misinformation is shaped, spread, and consumed in Yemen, it is not always clear why particular rumors are so readily believed. More research is needed on how certain rumors remain so prevalent despite being proven wrong.

The politicization of healthcare continues to create roadblocks for credible information to reach the wider population –

■ While the majority of those surveyed recognized that health education sessions were the best sources of information, there were still high rates of individuals who believed that government run media was credible. Additionally, many still repeated rumors that COVID-19 was manufactured, or that it was not real, or that it was no different from the common cold or other respiratory diseases. The fact that northern and southern governments relay information that is contradictory with one another only serves to erode the population's faith in the government's messaging. Long-

term, this can create problems with international organizations who seek to help communities with healthcare or other aid related issues. These organizations often already face stigma as outsiders or as Western institutions. As faith in governments continue to fall, these organizations will have to face additional challenges for necessary ties to Yemen's administrations.

- The DFA reluctance either to track COVID-19 cases or share case data with other organizations created confusion on how to estimate COVID-19 trends and hotspots within the country. Their denial and stonewalling of health organizations most likely contributed to more COVID cases in the country as well as more deaths; a longer timeline for eradicating COVID-19 from the country; and longer waits for health care, including hospital visits and vaccinations.
- The political-military groups in Yemen continue to prioritize the war and other political agendas at the expense of the continued spread of diseases, pandemics, and other health-care problems.
- National and international media access to Yemen and the governments' actions remain extremely limited.
- As more and more Yemenis come to view national media as pushing fake news and political agendas, trust and reliance on traditional and digital media sources will continue to decline.
- The absence of any national oversight on social media and rumor spreading means that continued mis/ disinformation will spread on these formats.
- The imprisonment, torture, and killing of journalist and social media personalities has led to a decrease in credible news while also discouraging individuals from continuing to work as journalists or from entering the field of journalism.

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7. KEY FINDINGS & RECOMMENDATIONS – TOWARD A HEALTHIER INFORMATION ECOSYSTEM

7.2. KEY FINDINGS ON HUMANITARIAN RESPONSE

Humanitarian groups have provided resources and information to communities in Yemen, but information gaps remain as do needs of different groups --

- With the COVID-19 pandemic largely over, the risk communication and community engagement plans are now largely defunct. Nevertheless, the structure of the RCCE still remains and new objectives should be implemented to serve other health and safety issues facing the communities in Yemen. Assessment of new needs and the potential involvement of other organizations should be reviewed and considered in order to plan new objectives for the remainder of 2023 and into 2024.
- Humanitarian groups' risk communication and their engagement with Yemeni communities has created extensive amounts of data including rumors, misinformation, surveys, interviews, etc. While the use of much of this data is no doubt limited to the issues of COVID-19, there is still rich data that can be useful for the Yemeni government, local organizations, international groups, and/ or independent groups in Yemen. The benefits of these findings should be maximized by sharing the raw data with groups, provided that it is done so safely and without undue risk to the workers or respondents involved.
- In spite of all the educational sessions, bulletins, and other means for sharing information, many Yemenis remain unconvinced about COVID-19 or choose not to engage in safety directives. More data is necessary to understand the gap between knowing about particular diseases and willingness to comply with recognizable, lifesaving, preventable measures.



7. KEY FINDINGS & RECOMMENDATIONS – TOWARD A HEALTHIER INFORMATION ECOSYSTEM

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A More Egalitarian Approach Among International, National, and Local Groups is Needed

- The networks linking together intra-governmental groups, international aid groups, NGOs, and CSOs requires attention. Top-down communication from international groups to local groups is, at times, overly deterministic. Often, the needs of local and national groups are sidestepped in order to meet the international groups' objectives. This is especially true for marginalized communities and organizations whose unique and often esoteric needs seem to pass through the net of international organizations' broadly designed plans and policies.
- Examples of the above include community members unwillingness to follow COVID-19 directives and the belief by many Yemenis in COVID-19 misinformation. The persistence of these choices and beliefs implies that in spite of having the correct information on the pandemic humanitarian groups have not been able to frame the information in a suitable or credible way. It may be useful to better contextualize health directives in the everyday experiences of Yemenis; include respected community members in edu-

cational health sessions, or address health concerns primarily through the lens of the community.

National and local organizations have minimal input on the organization, standards, and processes that shape their relationship with international organizations –

- Much of the collaboration between international and local groups is dictated by the cultural and bureaucratic processes familiar to the international organizations. This includes how information is gathered and recorded, what issues are considered viable, the methods of communication, and the relationships among the international organizations, local groups, and other bodies inside and outside of Yemen. If and whenever possible, more time and effort must be made to understand how local level relationships are formed and shaped. These should then be folded into the processes that dictate the aid programs.
- The ongoing war, political strife, and social unrest play a major role in how COVID-19 and other diseases are understood and approached. While it is critical to address the pandemic, it also important that the virus be contextualized

within the issues facing Yemenis. It is thus important to be able to understand how local communities see COVID-19 as shaped by events taking place in their country. Addressing COVID-19 (or other health crises) within the context of other pressing issues may help to lessen the apathy and dismissiveness that so frequently arose when discussing the virus with respondents.

New techniques are needed for reaching marginalized communities and emergent social groups like IDPs --

- The civil war creates new roadblocks for international organizations to deal with. The war has divided the country and many governorates into new regions; conflict and natural disasters have decimated many of the roadways linking the country together; and at-risk and rural communities continue to sit on the country's periphery. To combat these problems, new relationship must be forged with different communities in Yemen and new technologies and information sources are required to reach the Yemeni people.
- Humanitarian groups' reputations as credible sources remains high, but rumor and misinformation regularly target these groups and the countries or global areas they are associated with. It is important to be mindful of these trends and to work diligently to earn the trust and support of communities and their leaders so as to curtail any continued growth in distrust. This includes straightforward examples like being mindful of local customs and norms to broader things like representing the goals and positions of the humanitarian group.
- Radio remains one of the most widespread and accessible sources for information but has largely been dominated by mis/ disinformation and propaganda since the start of the war. Efforts should be made to ensure credible information can be accessed from this critical source.



7. KFY FINDINGS & RECOMMENDATIONS – TOWARD A HEALTHIER INFORMATION ECOSYSTEM

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7.3. RECOMMENDATIONS

Recommendations for Government –

- The Yemeni population have found themselves living in a newly divided country. In many cases, friends, family, and co-workers are now suddenly living under new political authorities: the DFA or the PLC. This political and territorial division will assuredly create challenges for the Yemeni people with regards to travelling or communicating across the newly formed borders. To ease the possible health and safety problems that will arise out of the nation's division. the governments in Yemen need to compromise and work together on national issues relating to healthcare and humanitarian support. Laws must be enacted guaranteeing safe passage between the DFA and PLC controlled regions for all healthcare and humanitarian organizations. This will ensure that medicine, food, and other necessary supplies are able to reach at-risk communities across the country. Additionally, the MoPHP of both governments must commit to sharing medical data and statistics from their respective regions. They should likewise maintain communication with one another and work in tandem when communicating with any national or international healthcare organization or humanitarian group.
- Both governments must develop policies that focus on healthcare. Broadly, these policies must allocate money for rebuilding the healthcare infrastructure across Yemen including hospitals and health facilities, as well as roads and other necessary transportation systems. Likewise, policies should include incentives (financial or otherwise), which encourage doctors and healthcare professionals to reenter the country and/or return to working in hospitals and centers.
- Yemen has suffered through numerous outbreaks of disease

over the past decade including Cholera, COVID-19, and annual malaria epidemics. The governments in Yemen must work together to create policies aimed at preventing and/or mitigating future pandemics, epidemics, or outbreaks. Such policies should empower ministries — such as both MoPHPs — to act independently from government oversight in the event of future outbreaks. Moreover, the policies should direct the ministries to work closely with one another when making decisions about the country's healthcare systems. During health crises, such ministries should be given authority to govern hospitals and healthcare facilities, have the power to close facilities or redirect resources, and communicate with national and international aid organizations.

Government must improve information -

- Government controlled information formats traditional and digital have fostered an information ecosystem where rumor and misinformation thrive. This has predominantly been true of the DFA government, but the PLC government has likewise promoted misinformation. Both governments must be unified on topics involving the health and security of the country. These include health directives, stats and data on disease outbreaks, and any other relevant topics that are necessary for an informed and healthy population. The MoPHPs of both governments must work together on messaging and find suitable information formats for spreading a consistent and unified nationwide message on health concerns in Yemen.
- Both MoPHPs should work together to form networks of national and international healthcare workers, tribal leaders, local community leaders. These networks must effectively encompass each of the governorates, districts, and local communities of Yemen. The groups of these networks should be used for communication purposes in order to

- spread warnings, directives, information, and other necessary information throughout the country. The network would allow for information to be transmitted from the MoPHps to localities and vice versa. The networks would also extend outward to local health authorities in neighboring countries and other international political and NGO organizations. Such networks would therefore allow information to move from global to local levels and vice versa with ease. In doing so, local authorities would be able to dispense information quickly using whatever medium is best suited to them e.g., WhatsApp groups, radio, television, door-to-door visits, etc.
- While it is important for both governments to work together to spread reliable information, they must also strive to decentralize information sources by empowering private media groups, NGOs, and other local organizations. In doing so, both governments will be able to spread reliable information through government-controlled media, while also allowing local groups to spread information in ways that are suitable for their community's preferred information consumption modalities.
- Both governments must encourage and protect the development of a free and independent press. The hostilities between both governments mean that controlling information remains a vital part of either group's plans to destabilize the other side. Nevertheless, the importance of allowing independent journalists to report on health and safety concerns cannot be emphasized enough. The diverse communities in Yemen would greatly benefit from having their own local media that is in touch with needs of the population. To that end, both governments should encourage free press by revising the current press and publications laws. Specifically, laws must be enacted spelling out the freedoms of journalists to report on local, national, and international news without the possibility of retribution.

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7. KEY FINDINGS & RECOMMENDATIONS – TOWARD A HEALTHIER INFORMATION ECOSYSTEM

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Collaborate with more international, national, and local organizations –

- It is critical for both governments to maintain contact with different humanitarian organizations, health groups, CSOs, etc. Both governments should work together we these organizations in planning out how to rebuild the country's healthcare system. Additionally, both governments should work closely with organizations on the current aid being offered to IDPs and other vulnerable communities.
- While the governments do not have control over international internet sites like Facebook and Twitter, they do have considerable control over Yemen's different ISPs. Both governments should work together to leverage the power of ISPs to assert some degree of censorship with regards to rumors and disinformation. Such policies should be negotiated between both governments to determine what constitutes rumors and misinformation. The objective should be for the government to try and dispel misinformation on health topics as much as possible.

Community Recommendations –

■ Communities should petition their governments to create sustainable and trustworthy information sources at the national and local levels. Additionally, local community leaders should work to spread credible information and promote credible information sources to their communities. Moreover, they should actively denounce any unverified or suspicious information. This should be done through different formats. Schools and local religious centers are both important centers for information in communities across Yemen. Additionally, WhatsApp groups and other social media formats have regularly been cited as reliable modalities for spreading information.

Recommendations for Donors –

- Whenever possible, earmark funding for media transparency projects and for greater organizational support at the local political levels. This will ensure that resources are effectively reaching some of the country's most vital areas in need of improvement.
- Fund organizations that are equipped to work with Yemen's unique local communities. In particular, IDPs, al-Muhammasheen, and rural communities are in need of support and require organizations with political and cultural sensitivities to support their various projects.
- Donors should stress the need for international organizations to work with and listen to local communities in Yemen. The war and various health outbreaks have further fractured the country's already splintered social groups. As a result, the needs of local communities are often highly varied and different from one another. This means that organizations will need to be able to work closely with communities and recognize the diversity of the Yemeni people and their needs.

Recommendations for Humanitarian actors –

- The war has transformed Yemen's diplomacy and relationships with other countries and international organizations. Humanitarian groups must therefore work to foster a professional and diplomatic relationship among both of Yemen's MoPHPs by maintaining strong ties to ministers and other ministry employees. Groups must be transparent in their dealings with both governments by explaining their relationships and communications with each of the Yemeni governments.
- The war has overshadowed health issues in Yemen's governments for several years. One of the greatest challenges for humanitarian groups is to try and convince the DFA and PLC that greater time, attention, and resources should be invested

in health and information systems. To that end, groups should work closely with MoPHP representatives and coordinate with them on the needs of Yemen's healthcare system. In particular, groups should work with the MoPHP on rebuilding hospitals and other infrastructure and should petition donors for money specifically aimed at revitalizing the country's health system.

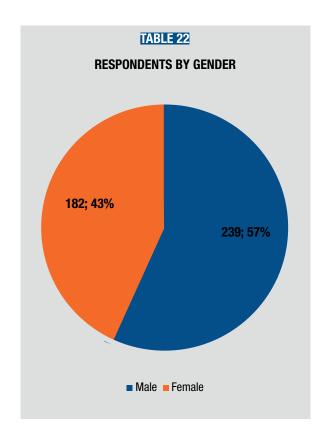
- While it is critical to build strong ties with both governments in Yemen, it is also important to maintain safety for individuals and the international organization itself. Many doctors, healthcare workers, and journalists have died or been imprisoned throughout the war. With this in mind, organizations should be careful to maintain anonymity of their local connects in Yemen so as to ensure their safety.
- As important as it is to work with both governments in Yemen, it is also key to foster support, trust, and relationships with local communities. Their input must be weighed against the plans of both Yemeni governments and other international groups involved. Their needs and positions on local issues should be presented to the Yemeni governments and vice versa.
- The needs of at risk, stigmatized, and/ or peripheral communities should be communicated to other local groups and the Yemeni governments whenever it is safely possible. These include IDPs, al-muhammasheen, women, rural communities, and other groups. These communities have historically been silenced. Humanitarian groups should use their financial power to amplify these vulnerable communities' voices at the local, national, and international level.
- Whenever possible, share data, details, feedback, and criticism with all involved and work to correct problems and celebrate victories with community members. By spreading information to all involved, humanitarian groups can establish lines of communication among different levels of government and community leaders.

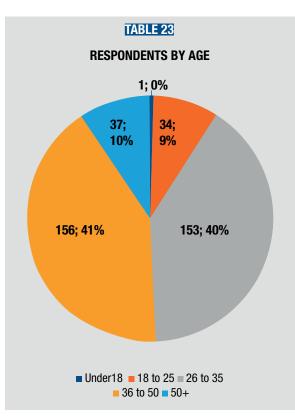
RESEARCH **ADDENDUM**

his IEA relies on surveys, key informant interviews, and focus group discussions carried out by our partners in Yemen. Questions for these research tools center on the role of information in their communities and the recent history of diseases. In particular, we asked questions about how individuals accessed information and what sources and formats they believed to be most reliable. For pandemics and diseases, we asked respondents to list diseases prevalent in their communities, as well as how they gained information on diseases, what they knew about the COVID-19 pandemic, and what they believed were the biggest causes to the spread of the disease.

We drew from a diverse body of respondents. This included a balanced number of men and women, with an age range dominated by 26- to 50-year-old individuals. Respondents

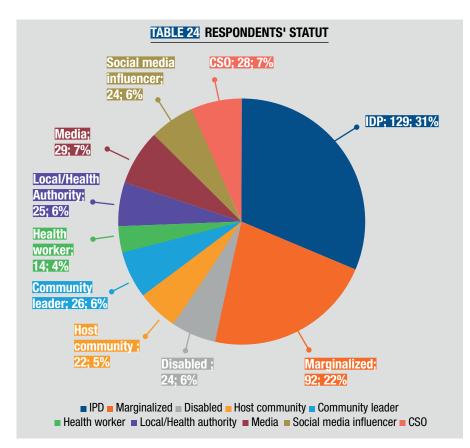
predominantly resided in PLC regions, with a handful of KIIs coming from individuals in Sana'a. Our respondents also represented a diverse cross-section of education levels in Yemen, from illiterate to PhD. And lastly, we incorporated individuals with varied statuses. This ranged from vulnerable communities like IDPs, al-muhammasheen, and disabled, to health workers, civil society workers, and community leaders.

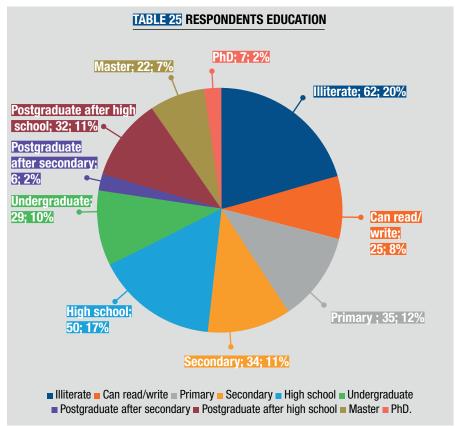




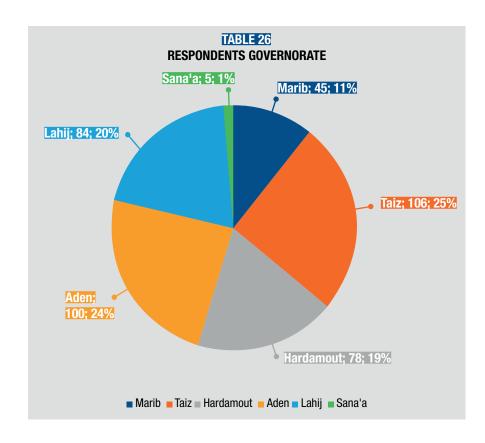
In Key Informant Interviews, we asked respondents to elaborate on their understanding of information and diseases. This qualitative data helped us to understand how individuals rationalized their behaviors and what they believed were the reasoning behind individuals' decisions. This critical data provided nuance to the IEA and helped highlight the kinds of contradictions that often arose in the quantitative data.

RESEARCH ADDENDUM

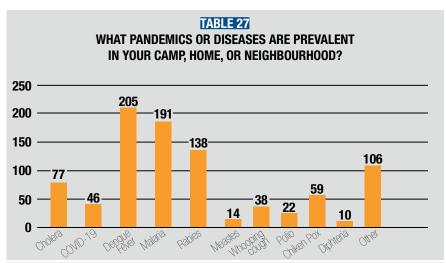


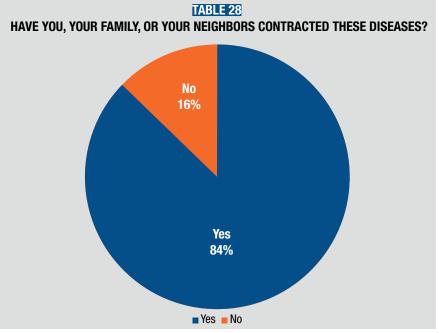


RESEARCH **ADDENDUM**



Data showed that 100% of respondents acknowledged that diseases or pandemics were spreading in their communities. They listed a range of different diseases with Dengue Fever and Malaria being the most widespread while COVID-19 ranked in the middle. More than ¾ of those surveyed acknowledged that they, or someone they knew, contracted one of these diseases.





- Abdalla, M., & Elsayed, M. M. (2020). Stakeholder Engagement Plan (SEP) Yemen COVID-19 Response Project P173862. Washington D.C.: World Bank.
- ACAPS. (2022). Yemen: COVID-19: Current Situation and Reasons for Vaccine Hesitancy. Washington D.C.: ACAPS Analysis Hub, Yemen.
- Access Now. (2020, June 25). #KeepltOn: As Yemen's War Goes Online, Internet Shutdowns and Censorship are Hurting Yemenis. Access Now. Retrieved from https://www.accessnow.org/keepiton-as-yemens-war-goes-online-in-ternet-shutdowns-and-censorship-are-hurting-yemenis/
- Access Now. (2022, January 28). Internet Shutdowns in Yemen: Telecommunications Infrastructure is not a Military Target. Access Now. Retrieved from https://www.accessnow.org/press-release/yemen-internet-shutdown-statement/
- Al-Arabiya. (2017, December 7). Houthis Limit Social Media Access in Yemen. *Al-Arabiya News*. Retrieved from https://english.alarabiya.net/News/middle-east/2017/12/07/Houthis-limit-social-media-access-in-Yemen
- Al-Arabiya News. (2015, April 5). Yemen Militias Attack Aden TV Station Loyal to Hadi. *Al-Arabiya*. Retrieved from https://english.alarabiya.net/News/middle-east/2015/04/05/Yemen-militias-attack-Aden-TV-station-loyal-to-Hadi
- Al-Batati, S. (2020, February 20). Houthi 'Gang' Loots Sana'a Radio Station in Defiance of Court Ruling. *Arab News*. Retrieved from https://arab.news/zmmyk
- Al-Emad, F. M. (2020, October). Major Trends of Media Development in Yemen. *Global Scientific Journals*, 8(10), 1021-1048.
- AI-Estiklal. (2023, January 17). Why are the Houthis Kidnapping Social Media Celebrities. *AI-Estiklal Newspaper*. Retrieved from https://www.alestiklal.net/en/view/16747/ why-are-the-houthis-kidnapping-social-media-celebrities
- Al-Jazeera Staff. (2023, January 11). Crackdown on

- YouTubers Leaves Little Space for Dissent in Yemen. *Al-Jazeera*. Retrieved from https://www.aljazeera.com/news/2023/1/11/crackdown-on-youtubers-leaves-little-space-for-dissent-in-yemen
- **Alkamali, Z.** (2021, October 18). Militias, Flash Floods, and Landslides: The Risks of Travelling in Yemen. *New Arab, The*. Retrieved from https://www.newarab.com/analysis/road-yemen-militias-flash-floods-and-landslides
- Al-Mashareq. (2021, June 2). Houthis Block COVID-19 Vaccine in Yemen, Activly Spread Disinformation. *Al-Mashareq News*. Retrieved from https://almashareq.com/ en GB/articles/cnmi am/features/2021/06/02/feature-01
- Al-Naggar, R., Ibrahim, H., Al-Rashidi, R., & Murtagh, S. (2022, June). COVID-19 Vaccine Hesitancy in Sana`a, Yemen. *International Journal of One Health, 8*(1), pp. 2455 8931. Retrieved from https://www.researchgate.net/publication/361490822 COVID-19 vaccine hesitancy in Sana'a Yemen
- Al-Omari, M. (2009, January 12). Search for Pornographic Material on Rise; Children are Most Vulnerable. *Yemen Post.* Retrieved from http://www.yemenpost.net/63/Reports/20084.htm
- AI-Sakkaf, N., & Alexander, J. (2022, March 4). Internet Access in Yemen Should Be an Opportunity for Cooperation, not a Target. Fikra Forum. Retrieved from <a href="https://www.washingtoninstitute.org/policy-analysis/internet-access-yemen-should-be-opportunity-cooperation-not-target#:~:text=The%20poor%20telecoms%20service%20in,private%20investment%20in%20the%20sector
- AI-Samei, M. (2020, September 10). Yemen's Houthi Rebel Group Bans WhatsApp. *Anadolu Ajansi*. Retrieved from https://www.aa.com.tr/en/middle-east/yemen-s-houthi-rebel-group-bans-whatsapp/2001118
- Al-Sarari, L. (2022, June 10). The Muhamasheen in Yemen: Alienation at the Bottom of the Heap. *Assafir Arabi*. Retrieved from https://assafirarabi.com/en/45626/2022/06/10/

- the-muhamasheen-in-yemen-alienation-at-the-bottom-of-the-heap/
- Al-Shami, A. (2021). Yemen: Unsettled Media for an Unsettled Country. In C. Richter, & C. Kozman (Eds.), *Arab Media Systems* (pp. 197-214). London: Open Book Publishers.
- Baasleem, H. (2003). *Daleel al-A`alaam al-Yemeni*. Sana`a: al-Yemen Wazaarah al-A`alaam.
- Barrington, L. (2021, June 1). WHO to Start COVID-19 Vaccination in Houthi-run North Yemen. *Reuters*. Retrieved from https://www.reuters.com/world/middle-east/who-start-co-vid-19-vaccination-houthi-run-north-yemen-2021-06-01/
- Batheeb, A. (2022, December 16). Harsh Conditions Pressured Many Yemeni Journalists to Flee Either Abroad to Practise Their Jobs More Freely or to Relatively Stable Yemeni Governorates. Fanack. Retrieved from <a href="https://fanack.com/yemen/human-rights-in-yemen/journalists-ad-versity-in-yemen/#:~:text=Eight%20Years%20and%2045%20Dead,-NABIL%20HASAN%20%2F%20FACE-BOOK&text=A%20report%20by%20the%20Yemeni,for%2-017%20of%20these%20killings
- Battaglia, L. S., & Wagner, P. (2020). *Yemen*. Retrieved from Media Landscapes: https://medialandscapes.org/country/yemen
- Bitar, A., Zawiah, M., Al-Ashwal, F., Kubas, M., Saeed, R., Abduljabbar, R., . . . Khan, A. (2021, October 29). Misinformation, Perceptions Towards COVID-19, and Willingness to Be Vaccinated: A Population-Based Survey in Yemen. *Plos One*. Retrieved from https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0248325
- Busquet, E., & Sacher, A. (2018). Yemen National Strategy for Social and Behavior Change in Nutrition 2018-2021. *Technical Rapid Response Team*, 1-20.
- Caton, S. C. (1990). Peaks of Yemen I Summon: Poetry as Cultural Practice in a North Yemeni Tribe. Berkley: University of California Press.

- Colburn, M., Saleh, F., Al-Harbi, M., & Saleem, S. (2021, July 13). Bringing Forth the Voices of Muhammasheen. *Sana`a Center*. Retrieved from https://sanaacenter.org/publications/main-publications/14588
- Country Economy. (2023). Yemen Human Development Index (HDI). Retrieved from Country Economy: https://countryeconomy.com/hdi/yemen
- **Country Meters.** (2023). *Yemen Population*. Retrieved from Country Meters: https://countrymeters.info/en/Yemen
- **CPJ.** (2015, March 27). Media Outlets Raided and Banned as Conflict Spirals in Yemen. *Committee to Protect Journalists Alerts*. Retrieved from https://cpj.org/2015/03/media-outlets-raided-and-banned-as-conflict-spiral/
- **Data Reportal.** (2018, February 1). Digital 2018: *Yemen*. Retrieved from Data Reportal: https://datareportal.com/reports/digital-2018-yemen
- **Data Reportal.** (2023, February 14). Digital 2023: *Yemen*. Retrieved from Data Reportal: https://datareportal.com/re-ports/digital-2023-yemen
- Diab, J. L., & Jerjawi, A. (2022, May). Displacement i Yemen: An Overiew. *Relief Web*. Retrieved from https://reliefweb.int/report/yemen/displacement-yemen-over-view-enar
- **Digital Rights.** (2022, June 29). A Report Highlighting the Policy of Blocking News Websites in Yemen. *Digital Rights*, pp. https://samrl.org/l.html?|=e/10/34/c/1/91/87/4490/Areport-highlighting-the-policy-of-blocking-news-websites-in-Yemendigital-rights.
- Essa, A. (2022, August 19). Less than Two Percent of Yemenis Have Been Vaccinated Against COVID-19. *Middle East Eye.* Retrieved from https://www.middleeasteye.net/news/covid-vaccine-yemen-less-two-per-cent
- Estey, J. (2023). Yemen Humanitarian Crisis. *Care*. Retrieved from https://www.care.org/our-work/disaster-res-ponse/emergencies/yemen-crisis/

- **Euronews.** (2020, July 14). The Houthis Are Easing Restrictions Related to Prevention From Corona in Their Areas of Control. *Euronews*. Retrieved from https://arabic.euronews.com/2020/07/14/yemen-houthi-rebels-relax-restrictions-to-prevent-the-coronavirus
- Fahd, A. (2020, May 1). Fearing Corona and the Lack of Safety Tools, Hospitals Are Closing Their Doors in Aden. *Al-Mawqea Post*. Retrieved from https://almawqeapost.net/news/50143
- Freedom House. (2022). Freedom in the World 2022. Retrieved from Freedom House: https://freedomhouse.org/country/yemen/freedom-world/2022
- Garber, K., Fox, C., Abdalla, M., Tatem, A., Qirbi, N., & Lloyd-Braff, L. (2020, November). Estimating Access to Health Care in Yemen, a Complex Humanitarian Emergency Setting: A Descriptive Applied Geospatial Analysis. *The Lancet Global Health*, 8, pp. E1435 E1443.
- **Gebeilly, M.** (2022, March 20). Internet Woes Shatter Young Yemenis' Dreams of Startups and Studies. *Reuters*. Retrieved from https://www.reuters.com/article/yemen-internet-youth/feature-internet-woes-shatter-young-yemenis-dreams-of-startups-and-studies-idUSL5N2V61S2
- **Ghattas, A.** (2015, March 30). News and Search Websites Blocked in Yemen as Conflict Escalates. *Advox Global Voices*. Retrieved from https://advox.globalvoices.org/2015/03/30/news-and-search-websites-blocked-in-yemen-as-conflict-escalates/
- **Human Rights Watch.** (2018, September 25). Yemen: Houthi Hostage-Taking. *Human Rights Watch.* Retrieved from https://www.hrw.org/news/2018/09/25/yemen-houthi-hostage-taking
- Human Rights Watch. (2020a, September 14). Deadly Consequences: Obstruction of Aid in Yemen During CO-VID-19. Human Rights Watch. Retrieved from https://www.hrw.org/report/2020/09/14/deadly-consequences/obstruction-aid-yemen-during-covid-19

- Human Rights Watch. (2020b, May 22). Yemen: Displaced at Heightened COVID-19 Risk. *Human Rights Watch*. Retrieved from https://www.hrw.org/news/2020/05/22/yemen-displaced-heightened-covid-19-risk
- Human Rights Watch. (2021, June 1). Yemen: Houthis Risk Civilians' Health in COVID-19: Stop Spreading Disinformation; Ensure Access to Testing, Health Care, Vaccines. *Human Rights Watch*. Retrieved from https://www.hrw.org/news/2021/06/01/yemen-houthis-risk-civilians-health-covid-19
- ICRC. (2022, October 13). Yemen: Conflict Leaves Millions of Children Without Proper Education. International Committee of the Red Cross. Retrieved from <a href="https://www.icrc.org/en/document/yemen-conflict-leaves-millions-children-without-proper-education#:~:text=Schools%20in%20Yemen%20have%20not,used%20for%20non%2Deducational%20purposes
- Index Mundi. (2021, September 18). Yemen Age Structure.
 Retrieved from Index Mundi: https://www.indexmundi.com/yemen/age-structure.html
- Kozman, C. (2021). Arab Media Systems. *Global Communications*.
- KSrelief. (2017, June 23). His Highness the Crown Prince Directs the King Salman Center for Relief and Humanitarian Action to Respond to United Nations Appeals to Provide \$66.7 Million to Contain the Cholera Epidemic in Yemen. Retrieved from King Salaman Center for Relief and Humanitarian Action: https://ksrelief.org/Pages/NewsDetails/28b17867-fe1f-4f42-8909-f1e89ddc6228
- Macro Trends. (2023). Yemen Rural Population 1960
 2023. Retrieved from Macro Trends: https://www.macrotrends.net/countries/YEM/yemen/rural-population#:~:text=Yemen%20rural%20population%20for%20202021,a%201.11%25%20increase%20from%202020

Magdy, S. (2019, November 14). Report: Over 130 Attacks on Medical Facilities in Yemen War. AP News. Retrieved from https://apnews.com/article/8cae880768a849158756a03deefc1ce2

- Magdy, S. (2022, March 16). U.N. Raises \$1.3 Billion for Yemen, Less than a Third Requested, in Effort Shadowed by Ukraine War. PBS News Hour. Retrieved from <a href="https://www.pbs.org/newshour/world/u-n-raises-1-3-billion-for-yemen-less-than-a-third-requested-in-effort-shadowed-by-ukraine-war#:~:text=The%202021%20conference%20 raised%20only.the%20year%2C%20according%20to%20 U.N
- Mareb Press. (2008, March 20). Internet Cafes Closed After Midnight. *Mareb Press*. Retrieved from http://mare-bpress.net/news/details.php?sid=10305
- Mareb Press. (2020, July 8). Marib Approves the Amendment of the Start Time for Curfew. *Mareb Press*. Retrieved from https://marebpress.net/news-details.php?lng=arabic&sid=165196
- Medecins Sans Frontieres. (2021a, March 25). Yemen: Second Wave of COVID-19 Overwhelms Medical Facilities. *Medecins Sans Frontieres*. Retrieved from https://www.doctorswithoutborders.org/latest/yemen-second-wave-co-vid-19-overwhelms-medical-facilities
- Medecins Sans Frontires. (2020, July 9). As COVID-19 Spreads, Fear Drives People Away from Hospitals in Yemen. *Medecins Sans Frontieress*. Retrieved from https://www.msf.org/covid-19-spreads-fear-drives-people-away-hospitals-yemen
- Medecins Sans Frontires. (2021, August 11). Treating COVID-19 in Yemen Amongst Fear, Stigma, and Misinformation. Retrieved from Medecins Sans Frontires: https://www.msf.org/addressing-covid-19-yemen-amongst-fear-stigma-and-misinformation
- Minority Rights Group International. (2023). *Yemen: Muhammasheen.* Retrieved from Minority Rights Group International: https://minorityrights.org/minorities/muhamasheen/#:~:text=Al%2DMuhamasheen%20('the%20marginalized.ethnic%20origins%20of%20the%20group)

- Nasser, A. (2017, May 3). The Yemen War, Media, and Propaganda. *MENASource*. Retrieved from https://www.atlanticcouncil.org/category/blogs/menasource/
- **News Yemen.** (2023, February 16). Aden Station: The Second Radio in the Arab World and the Lady of Ether and Rhetorical Ability. *News Yemen*. Retrieved from https://newsyemen.news/news/91050
- OCHA. (2021, November 9). *Yemen: Aid Must Be Sustained to Avoid a Return to Near Famine*. Retrieved from UN OCHA: https://reports.unocha.org/en/country/yemen/card/12BiuxVlyU/
- Peace Rep. (2020). Yemen's Response to COVID-19: Part

 I. Edinburgh: Peace Rep. Retrieved from https://peacerep.org/2020/07/27/yemens-response-to-covid-19-part-i/
- **Population Pyramid.** (2015). *Literacy Rate, Adult Total (% of people ages 15 and above)*. Retrieved from Population Pyramid: https://www.populationpyramid.net/hnp/literacy-rate-adult-total-of-people-ages-15-and-above/2015/
- **Porter, H.** (2021, December). The Houthi Soft War on Enemy Propoganda. *Yemen Policy Center*. Retrieved from https://www.yemenpolicy.org/the-houthi-soft-war-on-enemy-propaganda/
- **Porter, H.** (2022, March). A Conversation on Fighting Disinformation in Yemen. Yemen Policy Center. Retrieved from https://www.yemenpolicy.org/a-conversation-on-fighting-disinformation-in-yemen/
- Porter, H., & Al-Hamdani, R. (2021, May 6). Fake News and Disinformation in Yemen's Conflict. *Ark*. Retrieved from https://www.ark.international/ark-blog/fake-news-and-disinformation-in-yemens-conflict
- Qasem, N. A. (2021, October 7). In Search of a COVID-19 Vaccine in Yemen. *Open Democracy*. Retrieved from https://www.opendemocracy.net/en/north-africa-west-asia/in-search-of-a-covid-19-vaccine-in-yemen/
- Relief Web. (2020, April 10). First Case of COVID-19 Re-

- ported by Authorities in Yemen. *Relief Web*. Retrieved from https://reliefweb.int/report/yemen/first-case-covid-19-re-ported-authorities-yemen
- Relief Web. (2020, September 20). Yemen COVID-19 Preparedness and Response Snapshot As of 19 September 2020. Retrieved from Relief Web: https://reliefweb.int/report/yemen/yemen-covid-19-preparedness-and-response-snapshot-19-september-2020-enar
- Relief Web. (2022b, October 13). Yemen: Conflict Leaves Millions of Children Without Proper Education. Retrieved from Relief Web: https://reliefweb.int/report/yemen/yemen-conflict-leaves-millions-children-without-proper-education-enar
- **Reuters.** (2021, August 29). Yemen Gets First Batch of J&J Covid-19 Vaccines. *Reuters*. Retrieved from https://www.reuters.com/world/middle-east/yemen-gets-first-batch-jj-covid-19-vaccines-2021-08-29/
- RSF Reporters Without Borders. (2022, January 20). 14 Journalists Detained in Yemen, 13 of them Held Hostage by Rebel Groups. *Reporters without Borders*. Retrieved from https://rsf.org/en/14-journalists-detained-yemen-13-them-held-hostage-rebel-groups
- RSF Reporters Without Borders. (2022a, May 22). Displacement in Yemen: An Overview. *Relief Web*. Retrieved from https://reliefweb.int/report/yemen/displacement-yemen-overview-enar#:~:text=The%20military%20operations%20had%20caused,humanitarian%20crisis%20in%20the%20world.
- Rugh, W. (2004). Arab Mass Media: Newspapers, Radio, and Television in Arab Politics. New York: Greenwood Publishing Group.
- **Saba News.** (2023a, May 11). Head of Presidential Leadership Council Meets with Top Ranked Egyptian Military Delegation in Aden. *Saba News*. Retrieved from https://www.sabanew.net/story/ar/97531

- **Saba News.** (2023b, May 11). US Envoy: Iran Still Smuggling Weapons, Drugs to Yemen. *Saba News*. Retrieved from https://www.sabanew.net/story/en/97560
- Sana`a Center. (2023, January 16). The War on Yemen's Roads. Sana`a Center. Retrieved from https://sanaacenter.org/publications/main-publications/19304#:~:text=At%20least%20100%20bridges%20and,internationally%20recognized%20government%20in%20Aden
- Sana`a University. (2018). Faculty of Mass Communications, Sana`a University. Retrieved from Sana`a University: https://su.edu.ye/ci/en/home-en/
- **Shaker, N.** (2018, December 11). The Yemen War's Latest Casualty is the Press. *TRT World*. Retrieved from https://www.trtworld.com/magazine/the-yemen-wars-latest-casualty-is-the-press-12728942
- **StatCounter.** (2023). *Social Media Stats Yemen: April 2022 April 2023*. StatCounter. Retrieved from https://gs.statcounter.com/social-media-stats/all/yemen
- The Press and Publications, Law No. 25 (Yemen December 20, 1990).
- UN Affairs. (2022, Sepetember 22). Leadership Council Marks 'New Era' for Yemen, but Country Remains Wary of Terrorist Threat. *UN Affairs*. Retrieved from https://news.un.org/en/story/2022/09/1127531
- **UNCT.** (2022). *United Nations Yemen Sustainable Development* Cooperation Framework 2022 2024. Washington D.C.: United Nations.
- UNDP. (2020, July 29). Empowering Communities to Lead COVID-19 Fight. *UNDP*. Retrieved from https://www.undp.org/yemen/news/empowering-communities-lead-covid-19-fight
- **UNESCO.** (2021, February 9). Young Yemeni Journalists Better Equipped to Report on the Yemeni Conflict and Peace Process. *UNESCO*. Retrieved from https://www.unesco.org/en/articles/young-yemeni-journalists-better-equipped-re-port-yemeni-conflict-and-peace-process

- **UNHCR** (2022, April 1). *Yemen*. Retrieved from UNHCR: https://reporting.unhcr.org/yemen
- UNICEF (2021, March 31). Yemen Receives 360,000 CO-VID-19 Vaccine Doses Througgh the COVAX Facility. UNICEF. Retrieved from https://www.unicef.org/press-releases/yemen-receives-360000-covid-19-vaccine-doses-through-covax-facility
- UNICEF (2022). Yemen Appeal: Humanitarian Action for Children. Washington D.C.: UNICEF.
- **UNOPS** (2021). Finding Light Amid Yemen's Darkest Times. *UNOPS*. Retrieved from https://www.unops.org/news-and-stories/stories/finding-light-amid-yemens-darkest-times
- UNSDCF (2022). United Nations Yemen Sustainable Development Cooperation Framework 2022 2024. Washington D.C.: UNSDCF.
- WHO (2020). *Yemen Crisis*. Retrieved from World Health Organizations: https://www.who.int/emergencies/situations/yemen-crisis
- **WHO** (2023, April 18). *Global, Yemen*. Retrieved from World Health Organization: https://covid19.who.int/region/emro/country/ye
- World Bank. (2023a). The World Bank in Yemen. Retrieved from World Bank: https://www.worldbank.org/en/country/yemen/overview#:~:text=Poverty%20worsened%20even%20before%20the,women%20being%20the%20most%20vulnerable
- World Bank. (2023b). World Bank Data, Republic of Yemen. Retrieved from World Bank: https://data.worldbank.org/country/YE
- **Yemen Times.** (2004, September 2). The Challenge of Media Training in Yemen. *The Yemen Times Archives*. Retrieved from https://yementimes.com/the-challenges-of-mediatraining-in-yemen-archives2004-769-local-news/







