



# Connecting the Unconnected: Bridging the Digital Divide in Rural South Morocco

An in-depth look into the digital divide between Morocco's rural and urban communities.







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**SMEX** is a nonprofit dedicated to safeguarding human rights in digital spaces across West Asia and North Africa. We advocate for safe and uncensored access to the internet, mobile services, and networked spaces for people in the region and the diaspora. Recognizing the inseparable link between digital rights and human rights, SMEX focuses on the impact of technology on fundamental freedoms.

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## **Executive Summary**

This research endeavors to raise awareness regarding the digital disparity between urban and rural communities in Morocco. It places specific emphasis on the predominantly Amazigh communities situated in the southern regions, which are least likely to benefit from socio-economic development in the region. The primary objective of this research is to highlight the significant gap in digital access and literacy, challenging misconceptions that limit these communities' understanding of the digital world.

The research methodology involves an in-depth examination of the existing technological infrastructure in rural Amazigh communities. This includes conducting online surveys and field interviews to systematically identify barriers to internet access and comprehensively evaluate digital literacy levels within these communities.

The study emphasizes the critical importance of digital literacy and rights in bridging Morocco's urban-rural digital gap. It underscores the significance of internet access beyond social media and entertainment platforms, envisioning an inclusive digital landscape that facilitates learning, communication, and professional growth for all demographics.

In conclusion, this research aims to narrow the digital divide in Morocco, particularly within the Amazigh communities, by understanding specific issues related to internet usage. It will set the stage for developing tailored plans to equip both the elderly and the youth with digital literacy skills. Ultimately, this initiative aims to empower, educate, and enable these communities' secure and equal participation in the digital age.

https://merip.org/2021/03/government-efforts-to-reduce-inequality-in-morocco-are-only-making-matters-worse/



<sup>&</sup>lt;sup>1</sup> Woodward, M. (2021, April 6). Government efforts to reduce inequality in Morocco are only making matters worse. MERIP.





# **Key Findings**

- 1. **Digital disparities in Morocco**: There is a persistent digital divide between urban and rural communities in Morocco, particularly affecting vulnerable populations in remote and underserved areas. Despite efforts by the government to improve internet infrastructure, inequalities persist, hindering equal access to opportunities such as learning, economic activities, and communication.
- 2. Communication challenges during crises: Vulnerability during crises, exemplified by the Al Haouz earthquake, underscores the urgent need for digital literacy among rural communities. Rural communities are more susceptible to the spread of misinformation and may be unable to properly discern accurate information from misinformation during emergencies.
- 3. **Misinformation and Disinformation spread:** Misinformation, the unintentional sharing of false information, and disinformation, the deliberate spread of false information are rampant, with WhatsApp and YouTube being primary sources. This observation stems from fieldwork, where many individuals, often illiterate elderly, heavily depend on forwarded messages or viral YouTube videos shown on the recommendation page and pushed by the YouTube Algorithm.
- 4. **Online safety concerns**: In addition to the spread of misinformation, instances of online threats and exploitation emphasize the need for increased digital safety measures and public awareness. Vulnerable populations, including children, especially young girls and the elderly, are particularly at risk, highlighting the importance of education and policy initiatives to safeguard online spaces.
- 5. Persistent language and access barriers: The language barrier, with many rural communities predominantly speaking Amazigh rather than Arabic, further complicates efforts to bridge the digital divide. Additionally, limited internet infrastructure and high costs contribute to unequal access to digital resources and opportunities.
- 6. **Role of local NGOs and global advocacy**: Efforts by local NGOs are crucial in addressing digital inequality and advocating for policies that promote digital inclusion. However, more programs focusing on productive, accessible, and safe internet usage for vulnerable groups are still needed.







#### Introduction

In today's world, internet access is typically taken for granted. However, rural communities in Morocco face a widening digital gap, leaving them vulnerable to various challenges. This research aims to illuminate the issues surrounding digital literacy and internet access. It uses the Al Haouz earthquake as a prime example of the vulnerabilities faced by these remote areas due to a lack of understanding of the importance of digital safety as well as an existing fragile infrastructure.<sup>2</sup>

The divide manifests itself in various aspects, encompassing differences in infrastructure, education, healthcare, employment opportunities, and access to basic services. Historically, rural areas in Morocco faced limited investment and development initiatives compared to urban areas, resulting in inequalities in access to resources and essential facilities. The north of Morocco has a bigger concentration of wealth. According to research by the Policy Center For The New South: "Regional inequalities in Morocco are marked. Indeed, the three regions of Casablanca-settat, Rabat-Salé-Kénitra, and Tangier-Tetouan-Al Hoceima alone concentrate 58% of the total wealth created in Morocco, far higher than their 44% share of the total population (General Population and Housing Census of 2014, HCP)."<sup>3</sup>

The research is mainly conducted in the Boutrouch rural community of Sidi Ifni province located in the Guelmim-Oued Noun region in the Southeast of Morocco, almost 8 hours from the capital Rabat. This region has the third-smallest population, with a total of 414,489 inhabitants, according to a 2014 report by the Statistical Directorate of Morocco. Based on official government data from the 2021 Annual Statistical Directorate of Morocco, Sidi Ifni has 19 communes.<sup>4</sup>

https://www.hcp.ma/region-quelmim/Annuaire-Statistique-Regional-Guelmim-Oued-Noun-2021 a246.html



<sup>&</sup>lt;sup>2</sup> Tachfine, K. (2023b, September 20). *Meet the Moroccan youths supplying quake-hit villages with free telecom, internet access.* HESPRESS English - Morocco News.

https://en.hespress.com/71341-meet-the-moroccan-youths-supplying-quake-hit-villages-with-free-telecom-internet-access.html

<sup>&</sup>lt;sup>3</sup> Dadush, Uri, and Hamza Saoudi. "Inequality in Morocco: An International Perspective." *Policy Center*, Policy Center For The New South, 23 Aug. 2019,

www.policycenter.ma/publications/inequality-morocco-international-perspective-0.

<sup>&</sup>lt;sup>4</sup> 2021 Annual Statistical Directorate of Morocco.





الجدول 3: توزيع التجهيزات المدرسية وهيئة التدريس حسب الأقاليم 2020/2021

Tableau 3: Ecoles, classes, salles de cours et personnel enseignant 2020/2021

	عدد المدارس	عدد الأقسام	عدد قاعات الدرس		nseignant هينة التد		
Provinces				المجموع	منه الإناث	الأقاليم	
	Ecoles	Classes	Salles de cours	Total	Dont Femmes		
Guelmim	30	263	274	461	369	كلميم	
Assa-Zag	5	20	15	43	33	أسا الزاك	
an Tan	12	124	145	175	144	طانطان	
idi Ifni	1	6	8	15	15	سيدي إفني	
Total	48	413	442	694	561	المجموع	

The table above, taken from the 2021 Annual Statistical Directorate of Morocco for the Guelmim-Oued Noun region, provides key statistics on the number of schools, classrooms, and teaching staff in selected Moroccan provinces for the 2020/2021 academic year, highlighting the state of educational infrastructure. The existence of only one school with eight classrooms to accommodate all the children and teens of the province, as shown in the table, indicates that the overall resources for learning are limited due to the government's negligence in the development of rural regions in Morocco. Additionally, the standard educational curriculum in Morocco does not include classes on internet usage or technology, except in private schools that offer additional courses. Consequently, students in this region do not receive education in digital literacy or digital safety.

In 2005, the Moroccan government introduced a program to promote and popularize technology and information systems in educational establishments nationwide. However, the initiative has not met most of the goals that it set out to achieve as most classrooms, if not all, in the rural regions do not have any internet coverage nor even necessary equipment for teaching.<sup>5</sup>

<sup>&</sup>lt;sup>5</sup> Abdelkhalek Touahar, "Distance education in the Moroccan rural school environment: Means and obstacles - State of the Direction of Sidi Kacem," *International Journal of Innovation and Applied Studies*, vol. 35, no. 2, pp. 375–384, January 2022.







An already precarious infrastructure in rural areas was made even less reliable due to a devastating earthquake in Al Haouz Province in September 2023. The earthquake measured around seven on the Richter scale, with the epicenter in the High-atlas mountains. This tragedy not only leveled many villages to the ground, claiming more than two thousand lives (2901 lives)<sup>6</sup> and causing grave injuries but also isolated the survivors due to the collapse of internet and telecommunication services caused by the already lacking infrastructure in the rural region. Meanwhile, the rest of Morocco saw a surge in online scams<sup>7</sup> that exploited the vulnerabilities of people's willingness to help and the inability of residents in affected remote villages to communicate or speak for themselves to the outside world.

Misinformation spread widely, exploiting vulnerabilities in communication and digital literacy. In one example, an image of a water source (See Figure 1) and an 11-second audio in Amazigh about a "holy" water source (Ain) that was created by the earthquake along the small Atlas mountains were disseminated widely on WhatsApp. While the message might not be directly harming anyone, Moroccans are still haunted and traumatized by such natural disasters. This is especially the case for the Amazigh community in the small Atlas mountains after the 1960 Agadir Oufella earthquake that killed a third of Agadir's population. Thus, such messages exploit the religious conservatism of the community to spread misinformation about the existence of alleged holy and miraculous water sources. Disseminating non-evidence-based medicine or pseudoscience could in turn harm those who follow such practices by discouraging them from seeking much-needed medical help. By fact-checking the image using the reverse search image site TinEye.com, it seems that the picture was first uploaded to the internet in 2017. A Google image search shows that the location is a waterfall in Pakistan in the Hunza Valley.

6



<sup>&</sup>lt;sup>6</sup> AJLabs. (2023, September 13). *Morocco earthquake death toll: Live Tracker*. Al Jazeera. https://www.aliazeera.com/news/2023/9/10/morocco-earthquake-death-toll-live-tracker

<sup>&</sup>lt;sup>7</sup> FADLI Taibi, archos technology. "Morocco Earthquake: SOS Fake News." *MapNews*, 10 Sept. 2023, www.mapnews.ma/en/actualites/general/morocco-earthquake-sos-fake-news.

<sup>&</sup>lt;sup>8</sup> Pierandrei, E. (2023, September 27). *3 major seismic events hit Morocco in less than a century*. The New Arab. https://www.newarab.com/features/3-major-seismic-events-hit-morocco-less-century







Figure 1 A widely shared picture of the alleged water source erupting from a mountain.

The research utilizes surveys, interviews, and insights from local NGOs to comprehensively explore the digital hurdles faced by rural communities with the hopes of laying the groundwork for potential solutions to empower them in the digital era. It also sheds light on the disparity between urban and rural development, emphasizing the need for targeted interventions to create a better future for younger generations.<sup>9</sup>



<sup>&</sup>lt;sup>9</sup> "The Human Capital Project - World Bank.", World Bank Group, 2018, <u>www.openknowledge.worldbank.org/server/api/core/bitstreams/9b478ffa-2027-5290-bb62-816f6d385027/content.</u>





## Methodology

To comprehensively investigate digital literacy and internet access issues within underserved Moroccan rural communities, a mixed-method research approach was employed, combining qualitative insights obtained through field interviews and consultations with local non-governmental organizations (NGOs) and quantitative data from surveys. The different methods are explained in more detail below.

#### 1. Surveys:

A survey was designed and administered to assess digital literacy levels and internet usage patterns among the general Moroccan population. The survey focused on questions concerning basic digital literacy skills, the extent of internet use, and preferred online activities, with a total of 93 responses collected as of December 7, 2023. While this survey represents a small sample, it was shared during field interviews and through social media to capture a broad spectrum of perspectives. However, a significant number of responses came from urban communities, with 74 participants based in urban areas or suburbs compared to only 19 in rural regions.

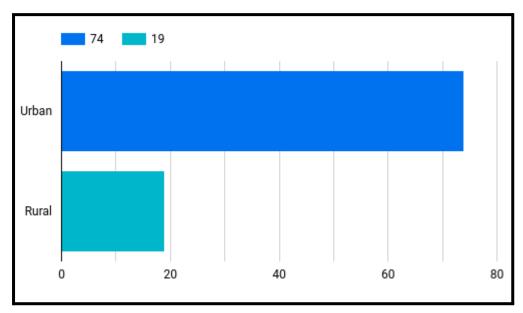


Figure 2. Where the participants are based

### 2. Field interviews and focus groups:

Face-to-face interviews were conducted with community members in selected villages, including Id Mbarek, Id Houmaed, and Anamer. These villages were chosen for their proximity to the only elementary and middle school as well as a high school in the Boutrouch (بوطروش) commune, located in Laarba (لعربة). These interviews provided in-depth







qualitative data regarding internet access challenges, digital literacy, and personal experiences of the inhabitants, especially the youth of the community. Additionally, a workshop with the Tiddoukla Alumni Association introduced to the discussion older youth from the community, consisting of university students from the "Institut Spécialisé des Arts Traditionnels (ISAT)," an institute teaching traditional Moroccan crafts and arts for graduates in the nearby town of Inzegane.

#### 3. NGO consultations:

Interviews were conducted with two NGOs operating in the Guelmim-Oued Noun region and two focusing on youth development at a national level to comprehensively understand the challenges faced by these communities. These organizations provided valuable recommendations to address community needs and advocate for digital inclusion, offering insights that contribute to a holistic view of the challenges. Moreover, all representatives from these organizations focused in particular on discussing potential solutions and recommendations to support rural communities and youth regarding digital safety and awareness, which will be highlighted in the recommendations section of this paper.

#### 4. Data analysis:

Quantitative and qualitative data from the survey were analyzed using the statistical software Google Looker Studio and Microsoft's Power BI to identify patterns and correlations. Qualitative data from field interviews and NGO consultations were transcribed and analyzed to extract key insights and narratives. Integrating both quantitative and qualitative data enables a rich and comprehensive understanding of the research issues, with relevant data presented as charts or tables to simplify comprehension.

#### **5. Ethical considerations:**

Ensuring ethical practices was paramount throughout the research process. Informed consent was obtained from all survey participants and interviewees, with rigorous protection of their privacy and anonymity, particularly considering that many participants in field interviews were minors or elderly. Moreover, it is essential to acknowledge the communities' skepticism towards outsiders, which has led to restrictions on photography, especially for women. Participants were assured that the findings would be used solely for research purposes and not for any exploitative or harmful activities. Additionally, the researcher's proficiency in the Amazigh language facilitated obtaining consent for anonymous interviews without issue.







## Limited foundational knowledge

The survey covered various ages (see Figure 3) and diverse backgrounds across Morocco, revealing a stark disparity between the responses of different age groups. However, it is crucial to note that many youths migrate to major cities in Morocco upon completing their high school education in search of employment or higher education opportunities. This migration trend, documented by the International Migration Institute in its working paper titled "Social Transformations and Migrations in Morocco," has persisted throughout Morocco's history and continues to influence demographics and societal dynamics. Thus, while it is important to acknowledge this fact, it remains impossible to differentiate the responses of such individuals in this survey.

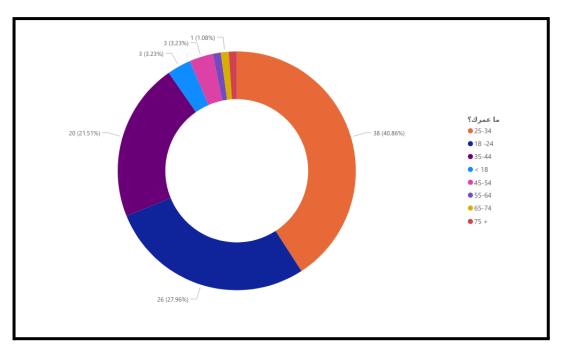


Figure 3. Ages participating in the survey.

Based on the focus groups and the various interviews, it was clear that a significant portion of the rural community demonstrates a limited understanding of the Internet, both conceptually and practically, underscoring the urgent need for educational intervention.

This deficiency was apparent during the initial field focus group session involving students from the sole elementary and middle school in the Sidi Ifni province. When prompted to discuss digital safety, most students were perplexed about the potential dangers of the digital realm. Some expressed concerns about social media exacerbating their socio-economic insecurities as young people from a village, unable to mirror the lifestyles depicted on platforms like Instagram. The lack of awareness about the severe consequences of internet bullying, misinformation, or cyberattacks is particularly alarming, given the vulnerabilities associated with this level of knowledge. To illustrate the gravity of this







deficiency, Houria Chouhab of the High Atlas Foundation for Sustainable Development recounted an incident following an earthquake aid trip to the High Atlas mountains to assist isolated villagers in the village of Ijoukak. With the local school damaged, students were relocated to a boarding school in the Marrakesh-Tensift-El Haouz region, away from their families. Authorities provided smartphones for communication, but panic ensued when families were unable to reach their children after a threatening message, warning of phone explosions if used within a specified timeframe, was circulating on Facebook in Moroccan Darija. Upon seeing the posts, the students promptly turned off their only means of communication and tried to return to their isolated villages, which caused further chaos given the limited transportation. It took significant effort and patience for facilitators, including Houria, to explain the nature of the news as misinformation and calm the families and students.

Additionally, WhatsApp has emerged as a prominent platform and the primary communication tool in various communities, as well as a major culprit behind widespread misinformation and disinformation. According to the survey, 70 out of 93 (75.26%) of participants marked it as their primary communication application (Figure 4). In the villages, residents rely on it to reach out to relatives who have moved out from the villages and are seeking job opportunities and higher education. WhatsApp's popularity also facilitates the rapid dissemination of false information, contributing to misinformation campaigns that carry notable social and political consequences, as shown in the previous example. This is also confirmed by the various interviews conducted in the villages.

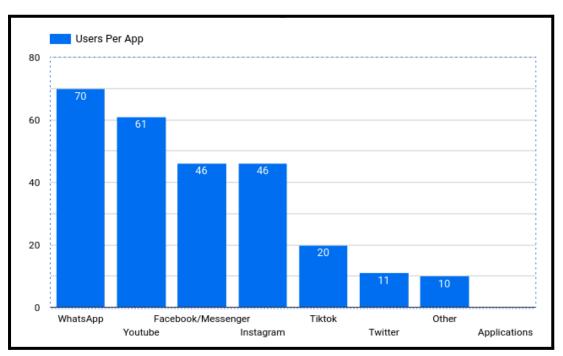


Figure 4. Survey results for Most Used Applications







## **Entertainment-centric Internet Usage**

According to the survey results, Moroccans predominantly utilize the Internet for entertainment purposes, with social media and communication-centric platforms like WhatsApp, YouTube, and Facebook being the primary choices (Figure 4). This highlights the need to expand digital horizons to include educational and professional applications, where we could introduce Moroccans to online learning platforms, digital libraries, and productivity tools which can significantly enrich their skill sets and career opportunities.

While young people in the community rely on the internet for various purposes, including communication and information-seeking, their interest in exploring its full potential remains restricted (Figure 5) and more directed towards social media and entertainment. 76 out of 93 survey respondents said they use it for social media browsing, and only six said they rely on the internet for research or accessing the news. It is worth acknowledging that YouTube, which is the second most used application based on the general survey conducted and confirmed through interviews, can provide both entertainment and education. The platform is popular as a result of its recommendation system, which uses an algorithm that automatically recommends content based on users' previous views without them needing to type anything. This is convenient for illiterate elderly individuals, based on discussions conducted with several of them as part of the field visits.

لماذا تستخدم الإنترنت ?Your internet usage Objectives	Count of responses
رالبريد الإلكتروني ، الرسائل ، مكالمات الفيديو/Communication (Email, Messaging, Video Calls	8
,وسائل التواصل الاجتماعي/(Social Media (Facebook, Instagram, Twitter	76
رالتسوق عبر الانترنت/Online Shopping	6
,البحث وجمع المعلومات /Research and Information Gathering	6
Online Banking and Financial Transactions/ المعاملات المصرفية و البنكية والمعاملات المالية عبر الإنترنت	5
,الدورات التعليمية والتعلم عبر الإنترنت / Education and E-Learning	52
التحقق من الأخبار والأحداث الجارية /Accessing News and Current Affairs	6
,(الترفيه (أفلام ، موسيقى ، ألعاب/Entertainment (Streaming Movies, Music, Games	6
العمل عن بعد /Travail professionnel et collaboration à distance	34
لا استعمل الانترنت	1

Figure 5. Results of the survey of internet usage objectives







Moreover, the elderly members of the community, predominantly uninterested in technology or the internet, perceive smartphones primarily as tools for communication, while YouTube serves as the second most popular due to its user-friendly interface and usage. This perspective became evident during the field interview with the Boutrouch rural community. Since the YouTube algorithm curates content, eliminating the need for manual input, it caters to the preferences of elderly individuals with little to no educational background.<sup>10</sup>

Responses out of 93	Highest educational level أعلى مستوى تعليمي لديك؟
68	الجامعة (طالب / متخرج)  University-Level student
10	المدرسة الثانوية   high school level
	education not affiliated with   تعليم عالي غير تابع للجامعات
5	universities
1	Elementary school   مدرسة ابتدائية
5	مدرسة اعدادية   Middle school
4	مسيد / لا تعليم رسمي   Msid / No formal education

Figure 6. Education for survey participants

While the survey (Figure 6) reveals a diverse educational background among respondents, with varying levels of formal education, the field interviews present a different narrative, particularly in rural villages where the majority of individuals, especially women, are illiterate.<sup>11</sup>

# Prevalence of smartphone usage

A significant portion of survey respondents has access to smartphones, as depicted in Figure 7. However, observations from field research and community discussions reveal that many individuals living in rural areas limit smartphone usage to indoor spaces. Reasons vary, with some citing the durability and size of older non-smartphones compared to delicate smartphones, which may not withstand the physical demands of their daily work in the fields or other strenuous jobs. Thus, they prefer having a non-smartphone with them outside. Others attribute this to limited internet coverage outdoors while they work, longer battery



<sup>&</sup>lt;sup>10</sup> Note d'information du Haut-Commissariat au Plan à l'occasion de la journée internationale des personnes agées du 1 octobre 2017.

https://www.hcp.ma/Note-d-information-du-Haut-Commissariat-au-Plan-a-l-occasion-de-la-journee-internationale-des-personnes-agees-du-1\_a2019.html

<sup>&</sup>lt;sup>11</sup> Haskouri, Khouloud. "Access to Education for Rural Moroccan Girls Jumps 34 Points in 20 Years." *Https://Www.moroccoworldnews.com/*, Morocco World News, 18 Oct. 2021, <u>www.moroccoworldnews.com/2021/10/345029/access-to-education-for-rural-moroccan-girls-jumps-34-points-in-20-years</u>.





life of non-smartphones, and concerns about the fragility and cost of smartphones.

Additionally, the risk of theft, damage, or loss associated with carrying a smartphone outside their safe spaces or homes further discourages their use among this demographic.

For many villagers in the community, smartphones serve as the primary gateway to the internet, especially since personal laptops are rare and typically found only in wealthier households. This underscores the importance of digital literacy initiatives tailored to smartphone-focused usage for rural communities.

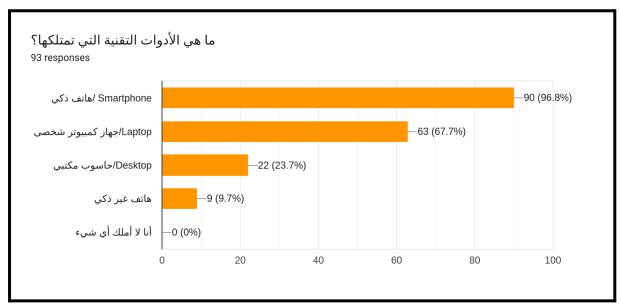


Figure 7. Technical gadgets owned by survey participants







## Challenges related to scams and misinformation

Challenges related to scams and misinformation pose significant threats to the rural communities in Morocco, making them vulnerable to online exploitation and fraudulent activities. Limited awareness regarding online scams has been identified, with young girls in rural areas being particularly susceptible to targeted advertisements and exploitation.

Following the September earthquake, there was a disturbing rise in phishing campaigns targeting vulnerable minors, often orphaned or homeless, with promises of marriage or a better life in the city. These exploitative campaigns gained international attention,<sup>12</sup> prompting calls for action from activists and authorities.<sup>13</sup>

The use of social media exacerbates these challenges, as vulnerable children lack the knowledge to protect themselves from online threats effectively. Furthermore, misinformation spread through platforms like WhatsApp poses significant risks, especially considering language barriers where almost 99% percent of the population of the commune speak only Amazigh, in addition to the nature of apps like WhatsApp where content that is disseminated is not public-facing, making false news harder to track and investigate.

Unlike headlines and posts shared on Facebook or other platforms, which are typically in French, Arabic, or Darija (Moroccan Dialect), audio messages from bad actors can be recorded in the Amazigh language<sup>14</sup>. Spreading rapidly through constant forwarding on WhatsApp, exacerbating the problem of misinformation or disinformation, and even potential phishing messages.

<sup>&</sup>lt;sup>14</sup> Recensement Général de la Population et de l'Habitat 2014 INDICATEURS DEMOGRAPHIQUES ET SOCIO-ECONOMIQUES ,PROVINCE : SIDI IFNI COMMUNE : BOUTROUCH <a href="https://www.hcp.ma/region-guelmim/docs/IFNI/boutrouch.pdf">https://www.hcp.ma/region-guelmim/docs/IFNI/boutrouch.pdf</a>



<sup>&</sup>lt;sup>12</sup> Jamal, U., & Makhlouf, K. (2023, September 23). *Moroccan girls at risk of sexual assault, forced marriage after earthquake*. Al Jazeera.

https://www.aljazeera.com/news/2023/9/18/moroccan-girls-face-threat-of-sexual-assault-forced-marriage-after-quake

<sup>&</sup>lt;sup>13</sup> Rabat, B. E. A. -. (n.d.). *Morocco jails student behind Child abuse earthquake campaign*. The New Arab. https://www.newarab.com/news/morocco-jails-student-behind-child-abuse-earthquake-campaign





### **Conclusion**

The digital divide persists in Morocco's remote rural regions, separating populations from the opportunities provided by the internet for learning and education, economic opportunities like e-commerce or remote work, etc.

The study underscored the necessity for tailored digital literacy programs in the Boutrouch rural community and the rural communities in the south of Morocco more generally. These programs should aim to address the community's basic internet knowledge, promote more diverse internet use beyond entertainment, and enhance digital safety awareness by focusing on smartphone-based education and leveraging popular applications. While addressing the language barrier and the different priorities of the community. These initiatives can empower the community to navigate the digital world more confidently and responsibly. Below is a list of recommendations to key stakeholders.







## Recommendations

#### Implement tailored digital literacy programs.

To bridge the digital divide in rural Moroccan communities, the government must develop and implement digital literacy programs tailored to their specific needs by including them in educational curricula, similar to technology classes being held in urban regions. These programs should focus on addressing foundational knowledge gaps and promoting critical thinking skills to mitigate the risks of online scams and misinformation as one of the main risks. Ensuring accessibility by taking into consideration the language barrier as explained previously, adopting cultural sensitivity to their beliefs and customs, and alignment with community preferences are key factors in the success of these initiatives.

#### Users should exercise caution and adopt basic digital security hygiene.

Akram Sebai advises using strong, unique passwords for different accounts and enabling two-factor authentication where possible. He also stresses the importance of being cautious of suspicious links, emails, or messages and verifying sources before sharing information online. These recommendations are crucial for everyone in Morocco's urban and rural areas. As for the rural communities, and depending on the level of technical knowledge of each target group, these digital security habits can be introduced gradually. Firstly, we should focus on basic digital hygiene and raise awareness of the importance of safety in the digital realm before trying to enforce more technical safeguards such as two-factor authentication. Nicola Dimarco, co-founder of Surf4Climate, emphasizes enhancing digital safety through measures like using VPN and regularly changing passwords for individual users. He also highlights the need for a regulatory environment that balances security concerns with privacy rights from a policy perspective.

#### Promote diverse Internet use.

To ensure the professional and educational development of the community, especially for the youth, civil society should promote internet use beyond entertainment. This would help bridge the knowledge gap and improve information accessibility compared to their urban counterparts. This would happen through face-to-face workshops implemented by local NGOs. Similar initiatives have been recently implemented in many regions of Morocco. For example, Mr.Sebai, a representative of the SOUL organization, conducted such workshops through his work with the regional committee of the Youth Policy Center in Morocco in their various rural initiatives in entrepreneurship and youth inclusion.







#### Strengthen community awareness through knowledge-sharing.

Civil society should consider launching more community-wide awareness campaigns, rather than campaigns taking place virtually only. The active youth in rural regions can partake by raising awareness about scams and misinformation and empowering individuals to recognize and address these challenges. Focusing on sharing knowledge by leveraging local languages and cultural references will ensure the messages resonate with the target audience to foster greater community resilience in the face of digital threats. Aicha Adoui, an expert in Internationalization, Education, AI, Technology, and Intercultural Communication, explains that the dominance of the Amazigh language, particularly among the elderly, limits the effectiveness of solutions tailored to combat digital disparities, especially among older generations who may not prioritize internet usage. Consequently, tackling this issue requires comprehensive fieldwork and the implementation of tailored strategies to bridge the gap effectively. This can happen, for example, when a local NGO trains individuals in a workshop and supplies them with shareable, concise, and clear tips, advice, or guidelines to spread themselves with their families and social circles.

#### • Foster collaboration between NGOs and the passionate youth of the community.

Collaborating with NGOs and utilizing the strong community bond in rural areas is key to developing and implementing comprehensive digital inclusion initiatives. It was clear through the research process and visits that there is an active and driven community of youth willing to contribute to and develop their communities. By pooling resources, expertise, and networks, initiatives that address the unique needs of rural communities can certainly be implemented.

