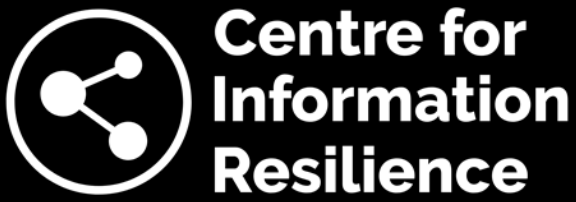


Project Title: Sahel Conflict Monitoring Unit
Report Title: Satellite Imagery Analysis of Malian Population Displacement Dynamics

Date: 15 March, 2024

Table of Contents

1 Executive Summary

Following more than a decade of regional political violence and rising violent extremist organisations (VEOs), hundreds of thousands of Malians are currently displaced from their homes. The effects of climate change have compounded insecurity and contributed to further population movements.

While international organisations such as the United Nations High Commissioner for Refugees (UNHCR) and the International Organisation for Migration (IOM) help monitor these phenomena, there is currently no publicly available up-to-date, detailed, and comprehensive dataset linked to large scale displacements both within Mali and into neighbouring countries over the past year.

The following report uses satellite imagery analysis to complement existing data, shedding light on displacement in Mali over the course of 2023, including large scale population movements following FAMa and Wagner's entry into Kidal in November 2023. The hybrid methodology employed includes satellite analysis in combination with a quantitative analysis of conflict event data, and qualitative analysis of open-source reporting (see annex).

Key findings include the following:

- Out of the investigated locations in border areas and neighbouring countries, satellite imagery analysis shows that the Tinzaouaten (Mali) and Mbera (Mauritania) settlements received the most displaced Malians over the past year.
- Among Malian cities of interest, satellite imagery assessment indicates that Ménaka and Ansongo stand out as the localities with the most urban growth in 2023. Ménaka and Gossi also underwent higher urban growth in 2023 than in previous years. This suggests that these towns were probably affected by relatively important internally displaced person (IDP) influxes.
- Higher rates of urban expansion were detected in locations with more insecurity, indicating that rural populations may be congregating in nearby cities where they may be less vulnerable to attack. However, rapid urbanisation may contribute to livelihood disruptions for rural families and labour-market disequilibrium in cities.
- The security situation for displaced Malians appears more stable in the four IDP/refugee settlements under investigation than in the cities examined within Mali.
- The majority of displaced persons in Mali are women and children. As of August 2023, children under the age of 18 accounted for 57% of the total IDP population in Mali, and women accounted for 63% of internally displaced adults aged 18 to 59.

2 Introduction

Since 2020, Mali has experienced significant transformations following two military coups and the withdrawal of the UN Peacekeeping force, MINUSMA. Heightened insecurity, political violence, and the security forces' introduction of new military tactics, including drones and partnerships with Russia's Private Military Company (PMC) Wagner, have profoundly affected the well-being of local communities[1].

These conflict developments, coupled with factors such as climate change, have contributed to a high surge in population displacement, both within Mali (IDPs) and to neighbouring countries (refugees).

The collection and analysis of displacement data are crucial for understanding the severity of underlying issues and the extent of humanitarian requirements. International bodies such as the UNHCR and the IOM play pivotal roles in monitoring these dynamics.

At the time of writing, the latest detailed data provides an overview of the IDP situation as of September (IOM) and October 2023 (UNHCR, using government sources), while some of the most recent detailed data on refugees dates back to earlier in 2023. Most of the information was thus collected prior to the major offensive by FAMa and Wagner in November 2023 to reassert control over the Kidal region of Mali during the withdrawal of MINUSMA.

The primary objective of this report is to use satellite imagery analysis to complement existing data, and to provide an analysis of the scale of displacements in recent months, especially from Northern Mali following the FAMa/Wagner offensive. Secondly, this report considers the safety and security of displaced people when they arrive at new locations. Additionally, this report provides a contextual analysis to better understand the drivers of displacement in Mali since 2020, and particularly in 2023, as well as an assessment of its impact on gender.

Limitations

While satellite imagery assessment can add significant value to studies of population movements, they have limitations which are important to understand. The technology is limited to identifying structures, and not persons. However, it tends to provide an accurate count[2] of these structures, which may be used to further strengthen ground survey datasets.

Another relevant restriction is that remote sensing is not well-suited to detect whether people have left their home, and to assess departure locations. Satellite images show the new structures that

[1] See for instance the latest Human Rights Watch reports on the situation here and here.

[2] Especially when using satellite images with a very-high spatial resolution, which allows a count of each structure individually, and captures even the smallest of them. This type of analysis is performed by widely recognised organisations such as the UN Satellite Centre.

are built in destination areas, but do not show significant changes to the old houses that people departed from, except if the structures were damaged by violent incidents or natural disasters.

Structure of the report

The first section of this report details the evolution of structures and urban areas using satellite imagery in selected displacement hot spots over the course of the 2020-2024 period, with a focus on 2023. The second section provides further analysis of the data, providing elements of comparison, detailing trends and providing some elements of interpretation. The third, fourth, and fifth sections respectively address the safety of displaced populations; the drivers of population displacement; and gendered dynamics linked to these themes. The annex includes details on the methodology that was used in this investigation.

Locations

Although these contextual elements are not strictly limited to specific locations, satellite imagery analysis was restricted to a selection of 15 areas of interest. These locations include some of the areas most affected by Malian population displacements in the past few years, according to previous UNHCR and IOM data[3]. They also comprise localities that were especially affected by the recent conflict dynamics in the north of the country (such as Mbera and Tinzaouaten) according to open sources[4]. Importantly, Bamako was not included in the list because it was relatively low-ranking in number of IDPs in previous years, and manual analysis of such a large area would have been made at the expense of other locations.

Outside of Mali, or on the border with its neighbouring countries, CIR's analysis includes Abala in Niger, Dori in Burkina Faso, Mbera in Mauritania and Tinzaouaten (Mali) near the Algerian border. Within Mali, CIR's analysis focused on Ansongo, Bandiagara, Bankass, Djenné, Gao, Gossi, Kidal, Koro, Ménaka, Mopti and Niono.

[3] For example, see here for Mali, here for Burkina Faso, here for Mauritania and here for Niger (noting that Malian refugees reportedly left Intikane camp).
[4] See here (Mbera) and here (Tinzaouaten) for instance.

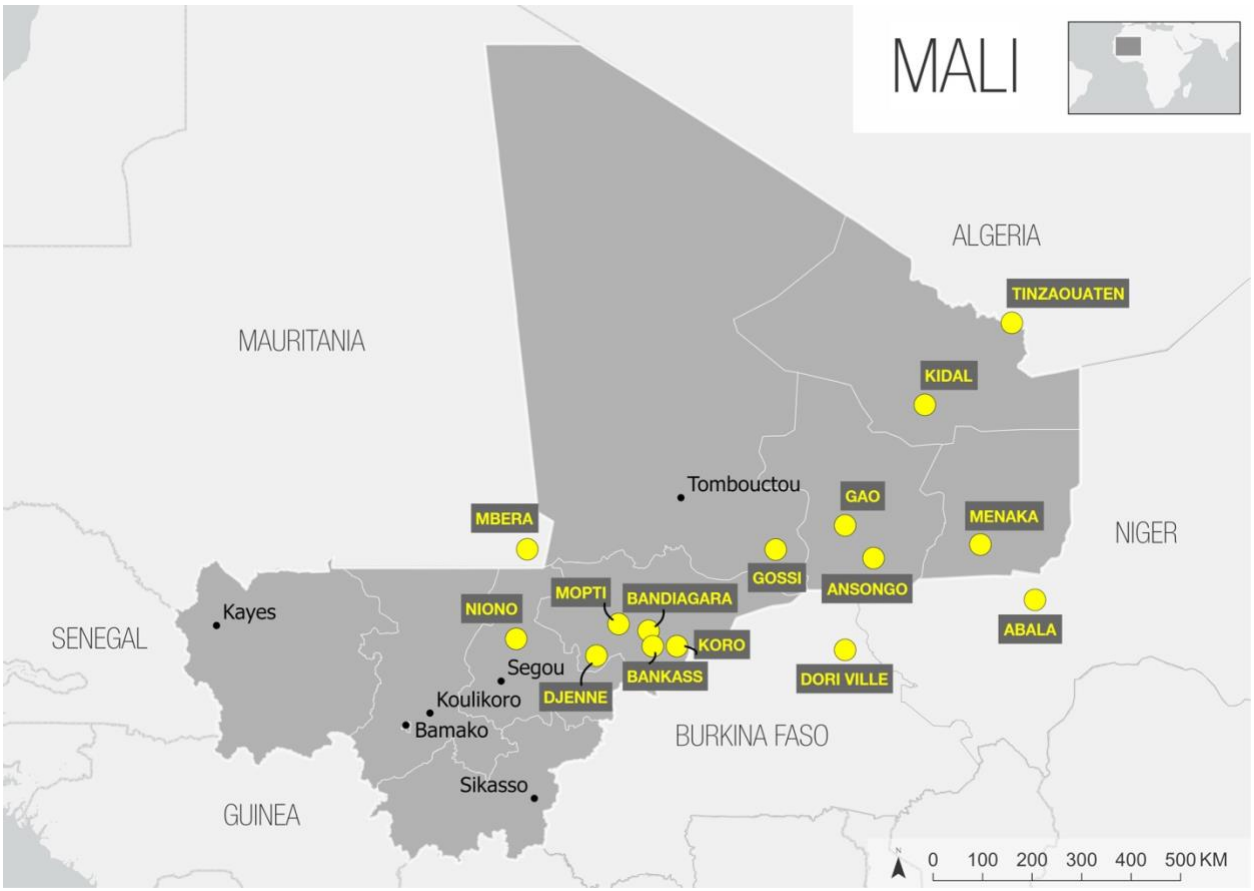
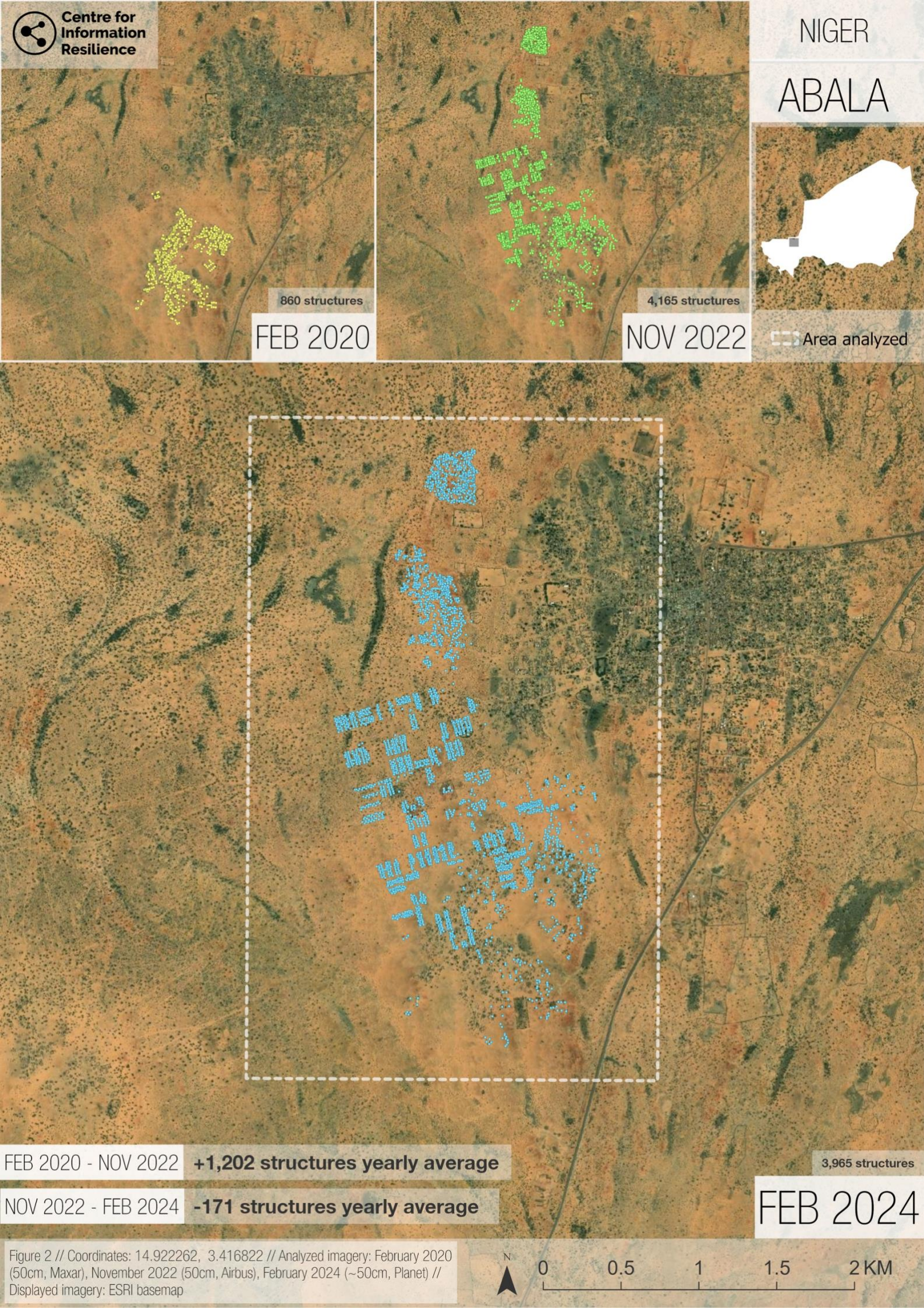


Figure 1: Locations analysed with satellite imagery.

3 Satellite imagery assessment of population displacements

This section provides a satellite-based overview of the evolution of various locations during the last four years. The first pages focus on the border areas of Mali and neighbouring countries, showing detailed structure counts. Later analyses present coarser urban growth results for some of the main cities in Mali. The technical aspects of these analyses are listed in the Methodology annex.



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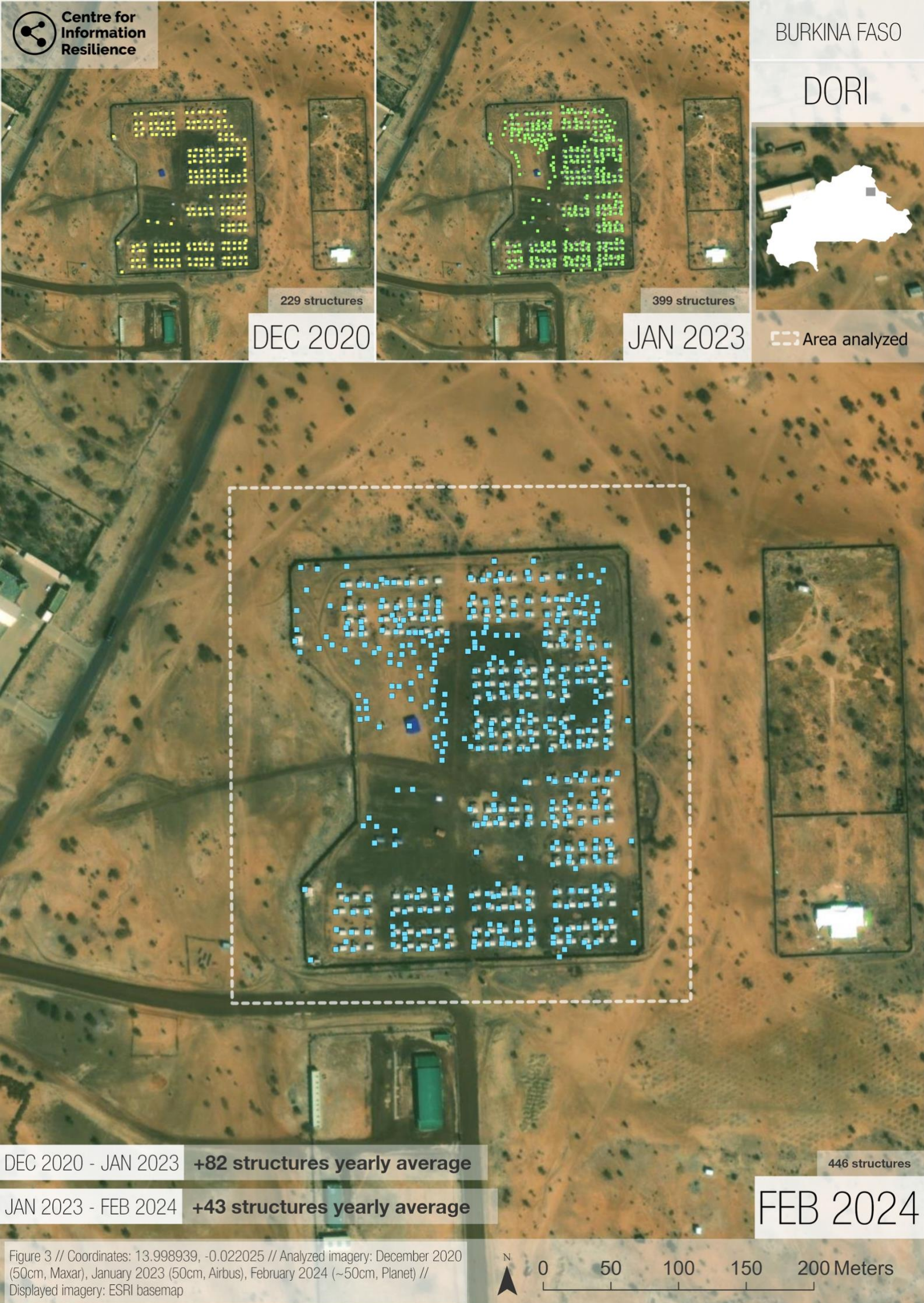

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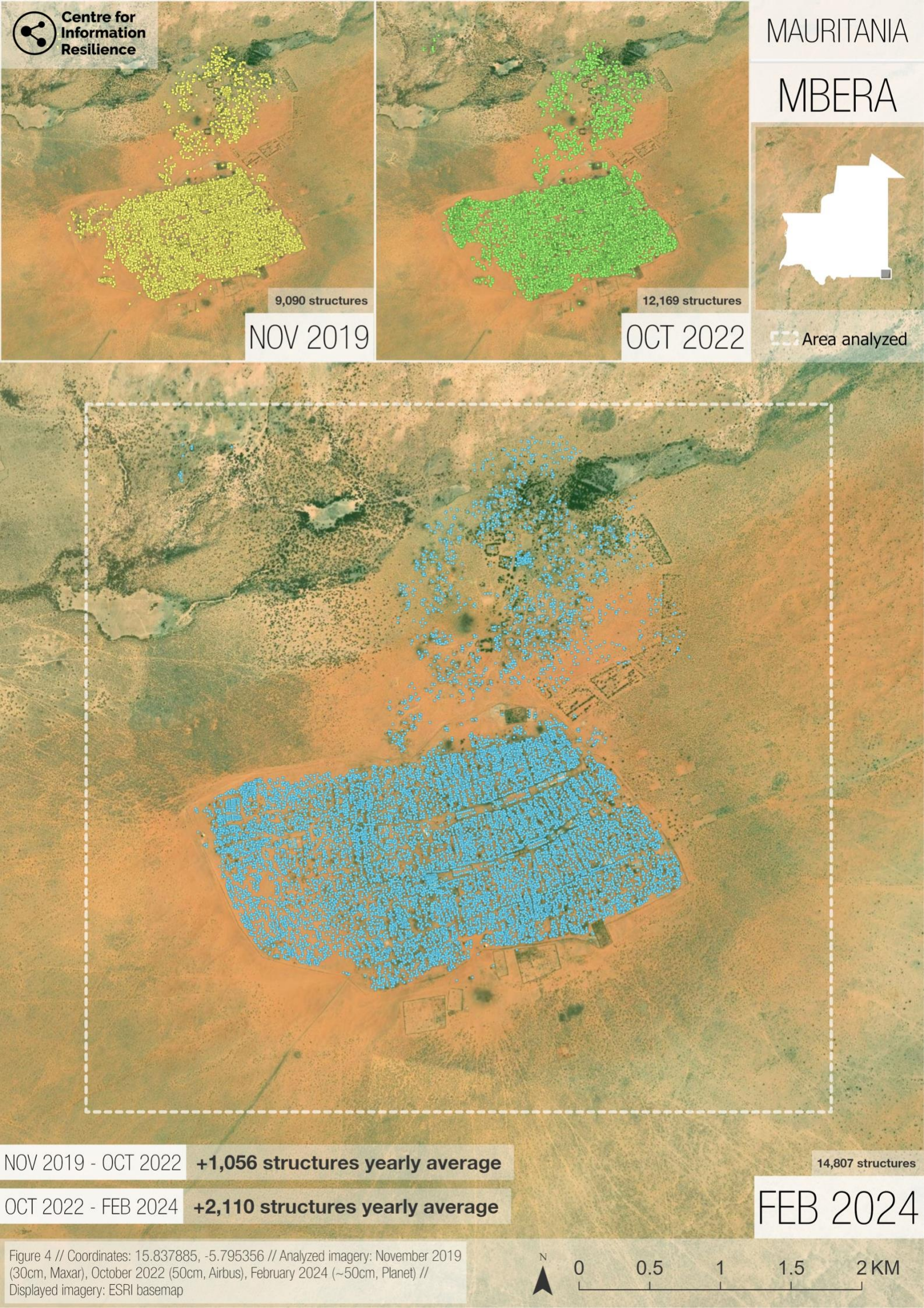

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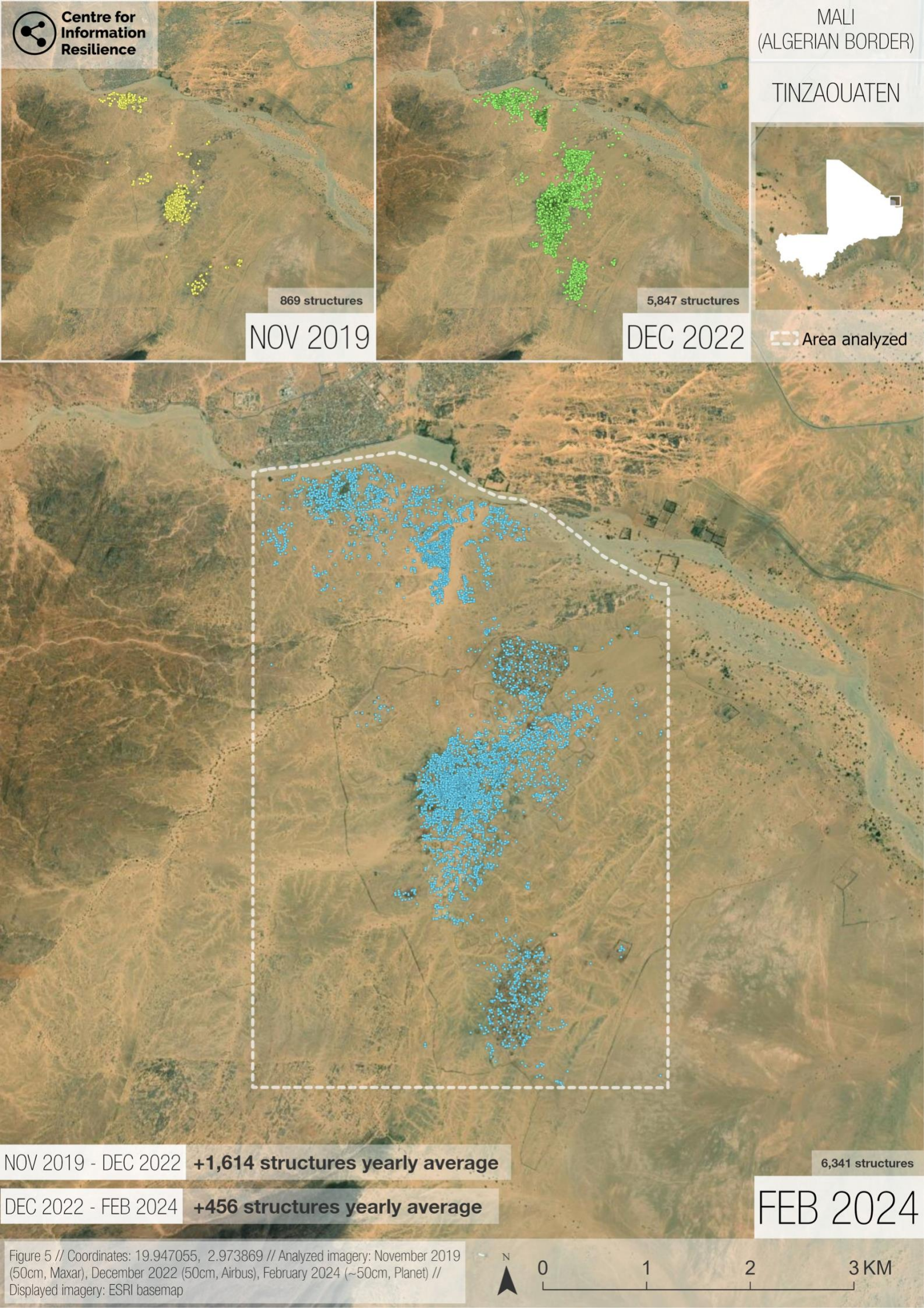

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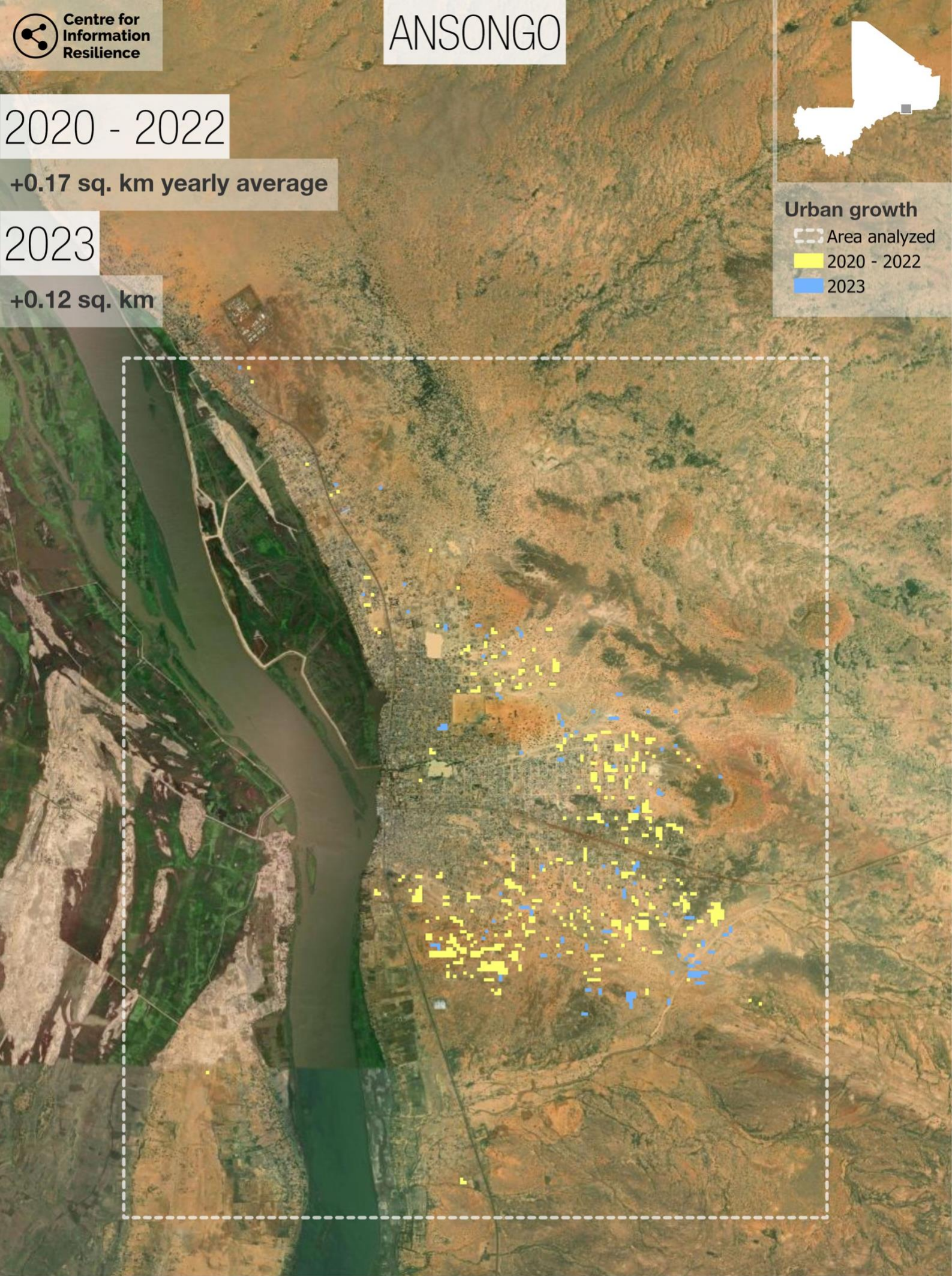

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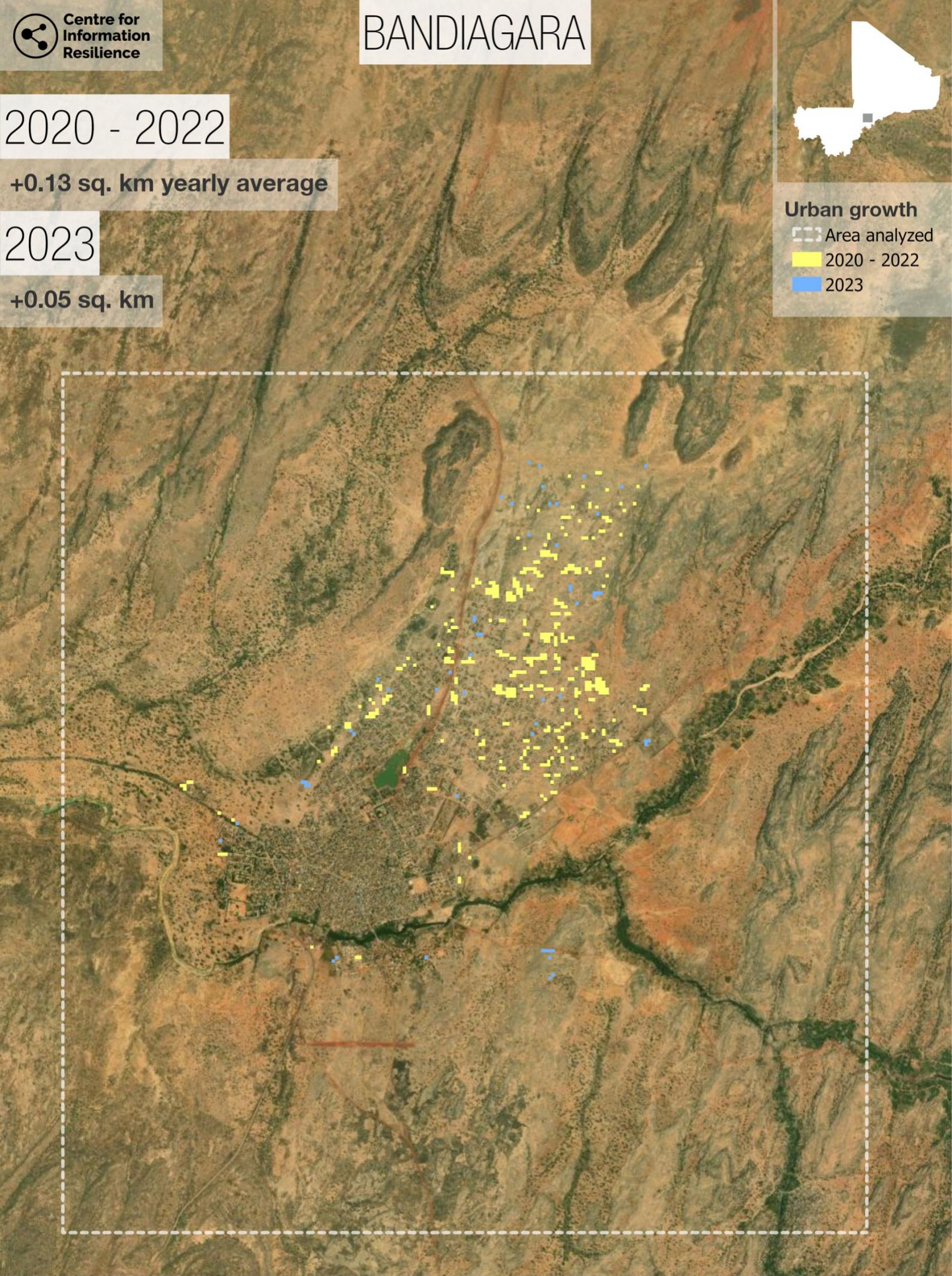

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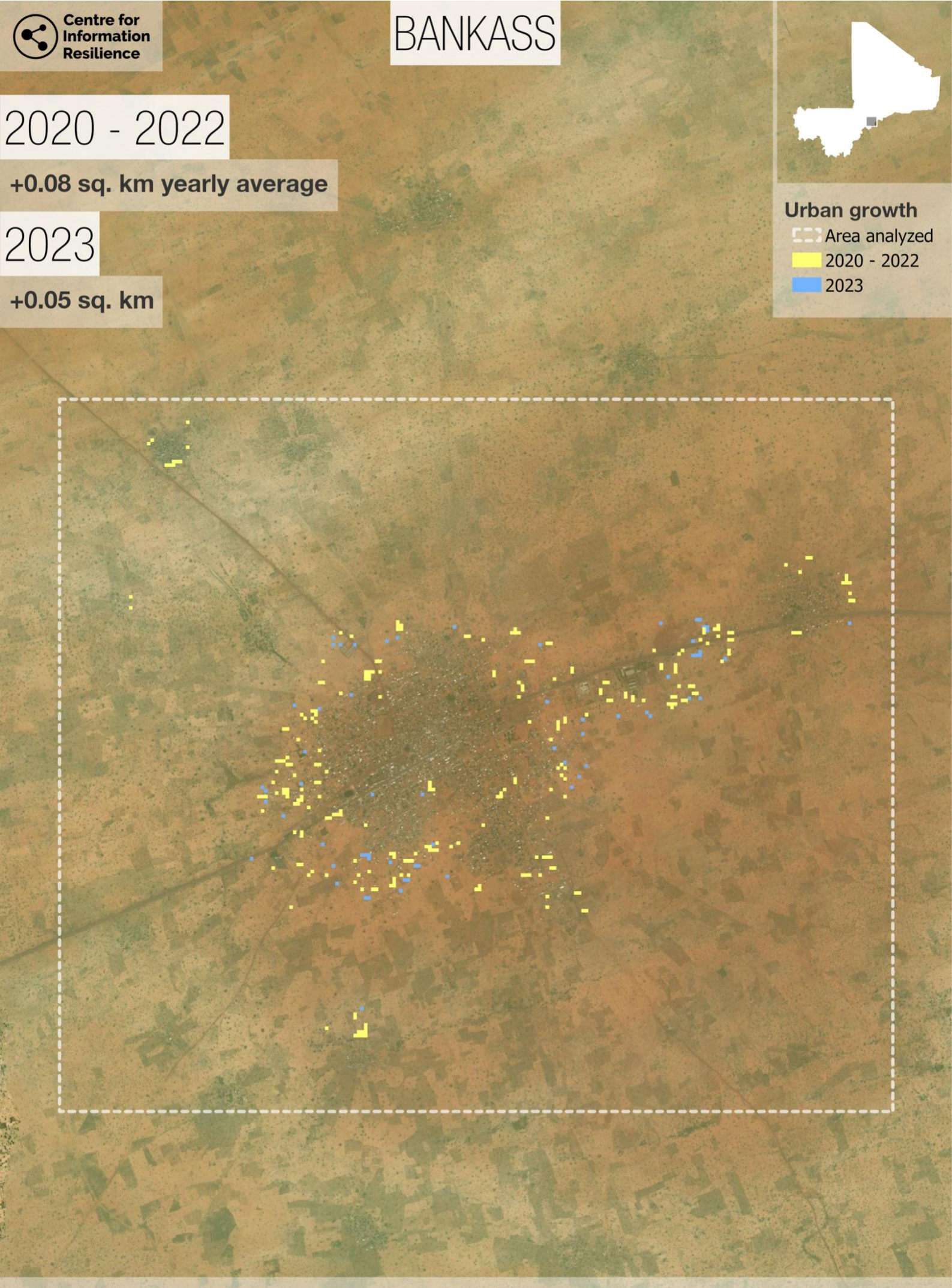

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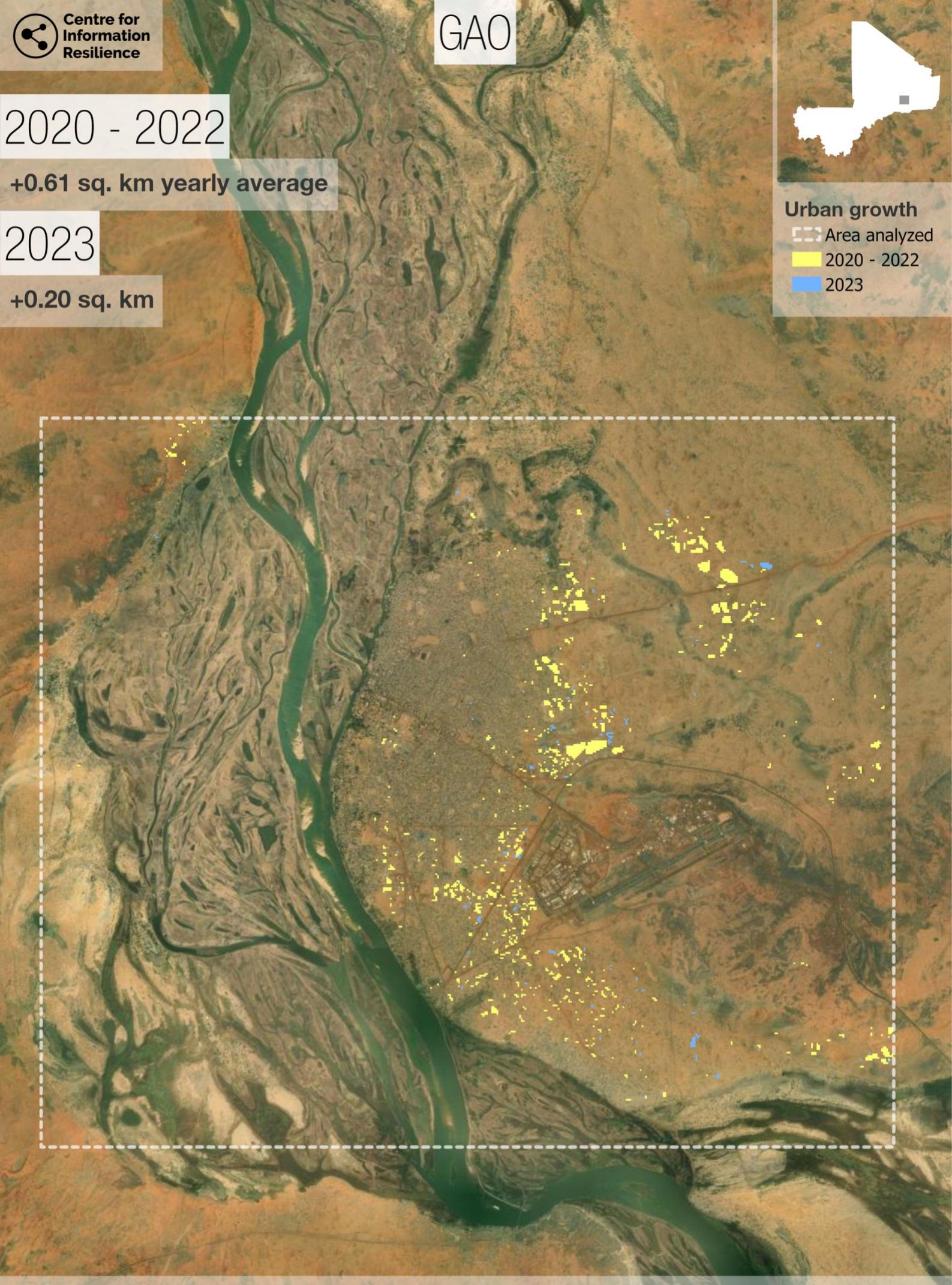

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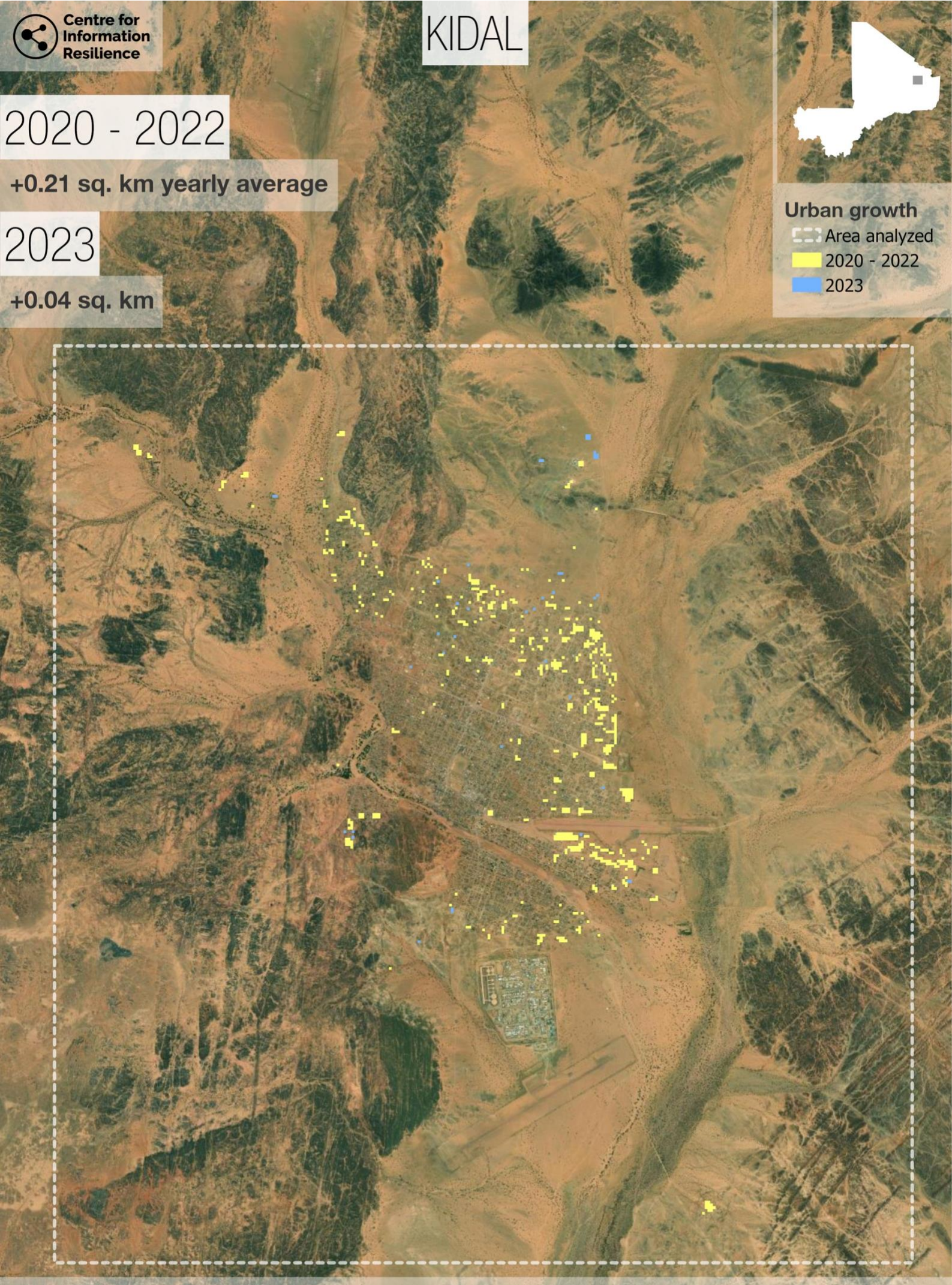

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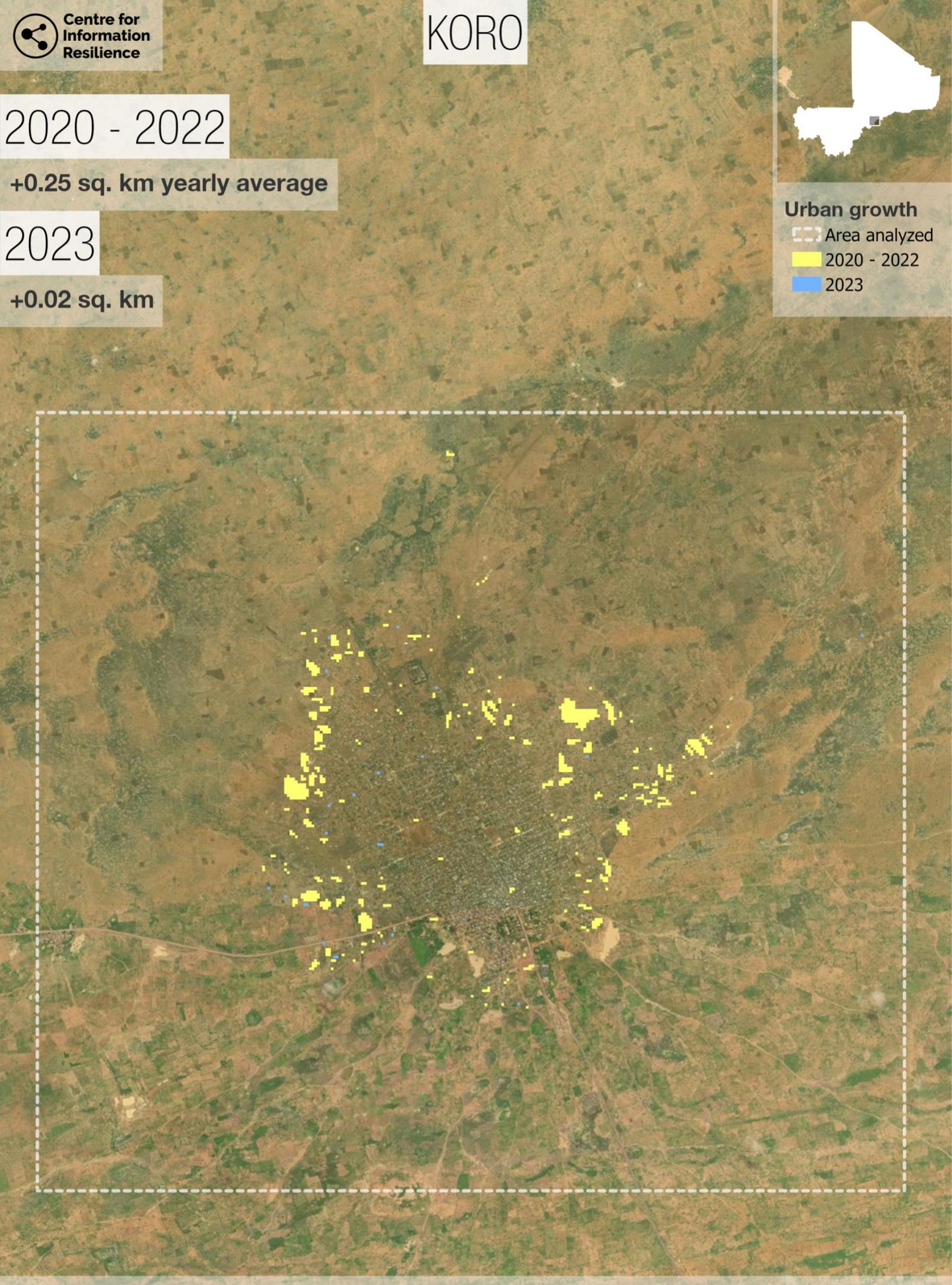

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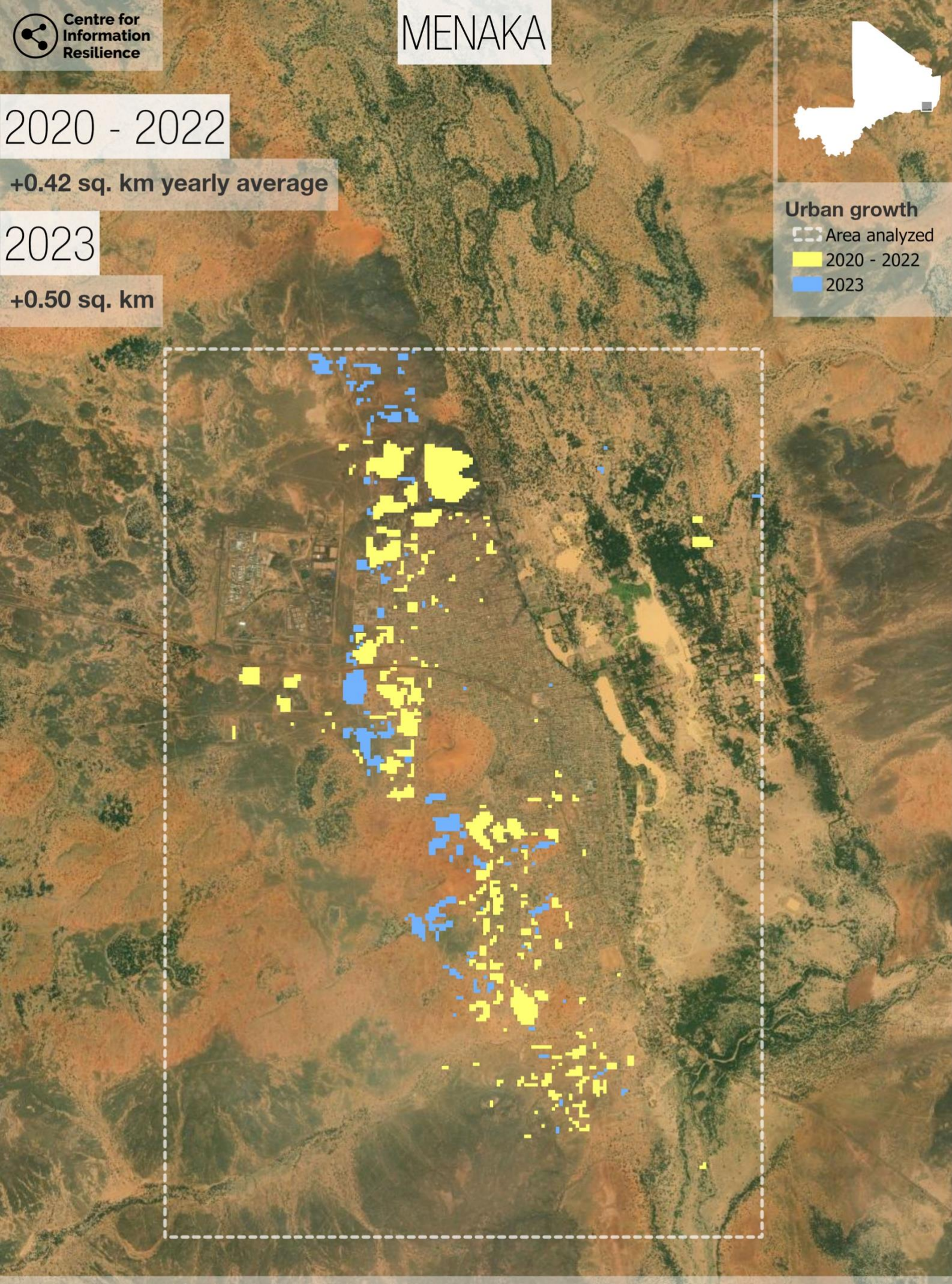

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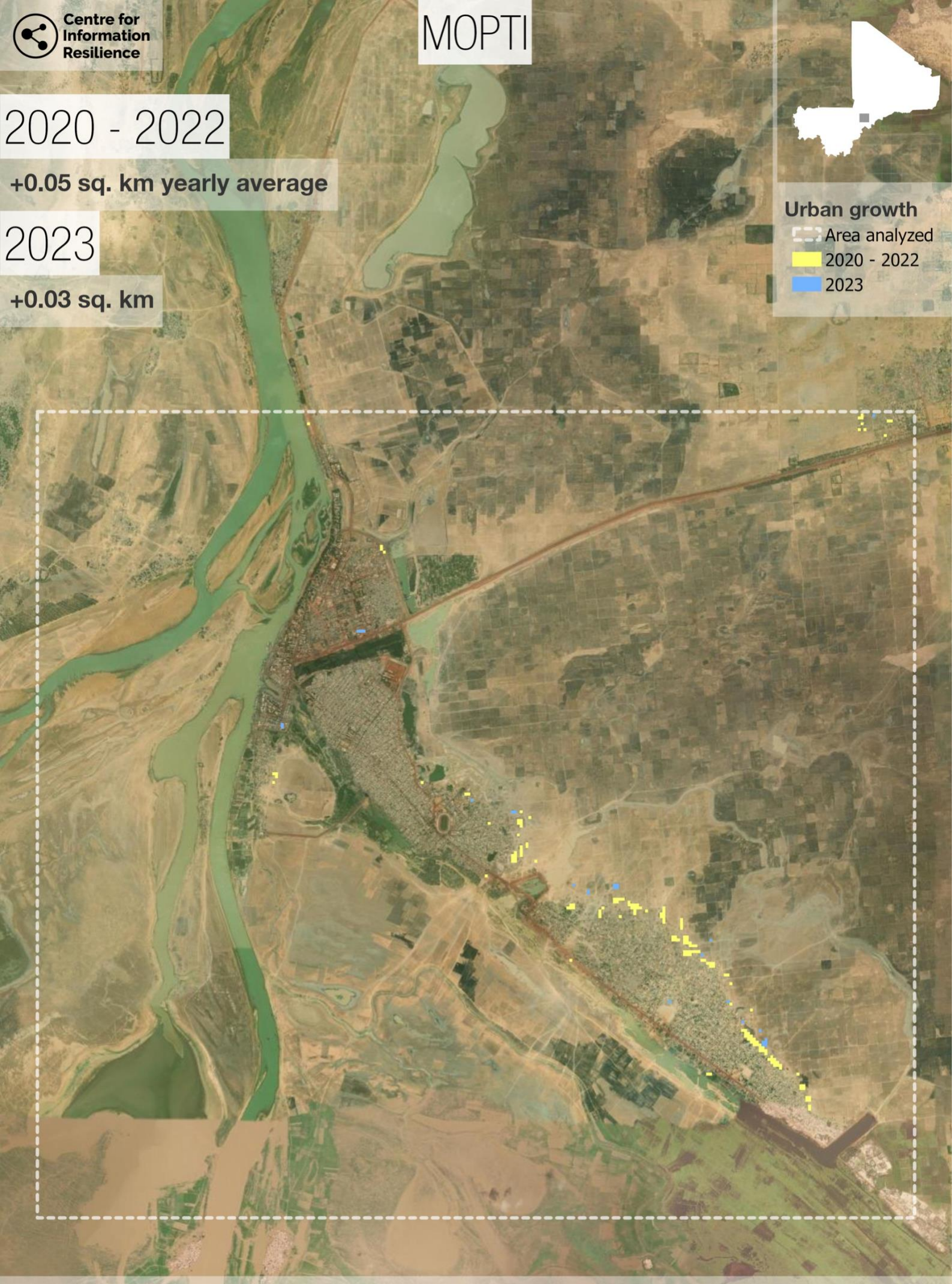

Figure 15 // Coordinates: 14.490149, -4.192471 // Analyzed imagery: January 2020, 2023, 2024 (3m, Planet) // Displayed imagery: ESRI basemap

Figure 16 // Coordinates: 14.234804, -5.970727 // Analyzed imagery: January 2020, 2023, 2024 (3m, Planet) // Displayed imagery: ESRI basemap

4 Analysis of satellite imagery findings

4.1 Tinzaouaten and Mbera

Most affected by refugee/IDP influxes around Malian borders in 2023

Out of the four locations analysed outside Mali, or close to a border with a neighbouring country, Tinzaouaten (Mali) and Mbera camp (Mauritania) are by far the locations that showed the highest increase in structure counts[5]. In Mbera camp, the 2023 average growth was 2.7 times higher than the yearly average growth of the previous three years.

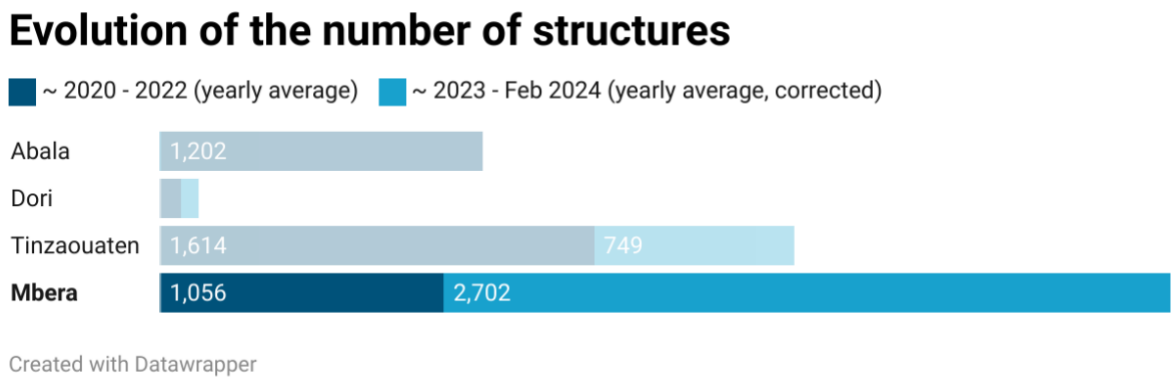

Figure 17: Evolution of the number of structures in locations of interest in 2020 - 2024 outside Mali or at border areas.

However, over the entire 2020-2024 period, the Mbera camp is the location that saw the least *relative growth* in structure count (+71%). Even though it did see a large *absolute* increase in structure count (+6,457), when compared to its initial baseline (9,090 structures), this rise is not as important as in other places of interest. This was to be expected, given that it was already by far the largest settlement in 2020, with 60,000 individuals, according to UNHCR data. The camp was created in 2012 in the southeast of Mauritania and is now larger than most Mauritanian urban agglomerations[6].

A 666% increase in structure count between 2020 and 2024 in Tinzaouaten clearly shows the general intensity of IDP influxes in the area, even though 2023 appears to be a "slower" year than before.

With regards to Abala, the 384% increase in the number of structures between 2020 and February 2024 is not a surprise. It appears to have been vastly expanded around the first year of study to host refugees from a neighbouring camp, and was likely still under construction and expansion in the beginning.

[5] All 2024 counts were corrected with a 5% increase to account for the spatial resolution discrepancy mentioned in the methodology annex.

[6] European Civil Protection and Humanitarian Aid Operations: Mauritania

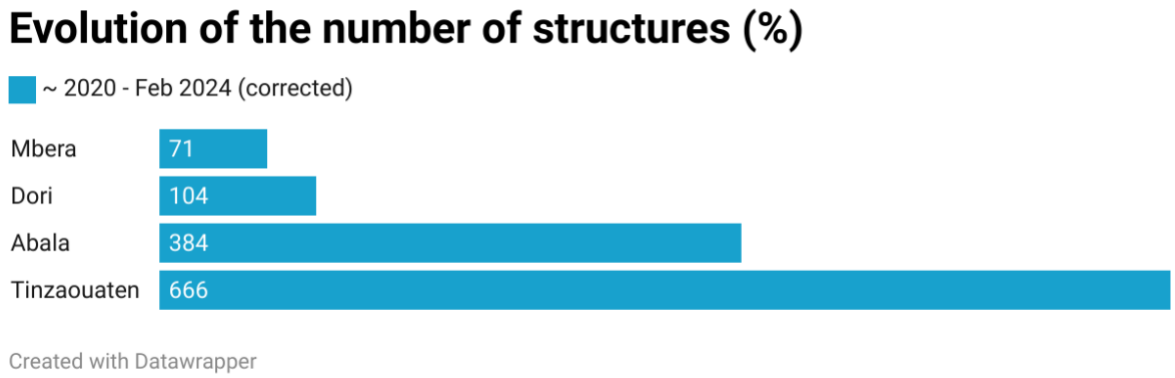

Figure 18: Evolution in percentages of the number of structures in locations of interest in 2020 - Feburary 2024 outside Mali or at border areas.

4.2 Malian towns of Ménaka, Gossi and Ansongo

Likely most affected by IDP inflows in 2023

Among the 11 locations in Mali where urban growth was analysed, results show that Ménaka, Gao and Ansongo are the towns which have witnessed the highest urban growth in 2023 in absolute value. Additionally, Ménaka and Gossi show unusual patterns, with a 2023 yearly growth rate that is superior to the average growth rate of the past three years (almost double in Gossi). Even though other factors might be at play, given that population displacements have been recently reported in both areas[7], it is reasonable to conclude that these "anomalies" are likely due at least in part to IDP inflows (see annex on methodology). One should note that these unusual trends are consistent even when adjusted for typical urban growth values based on the population of each city[8].

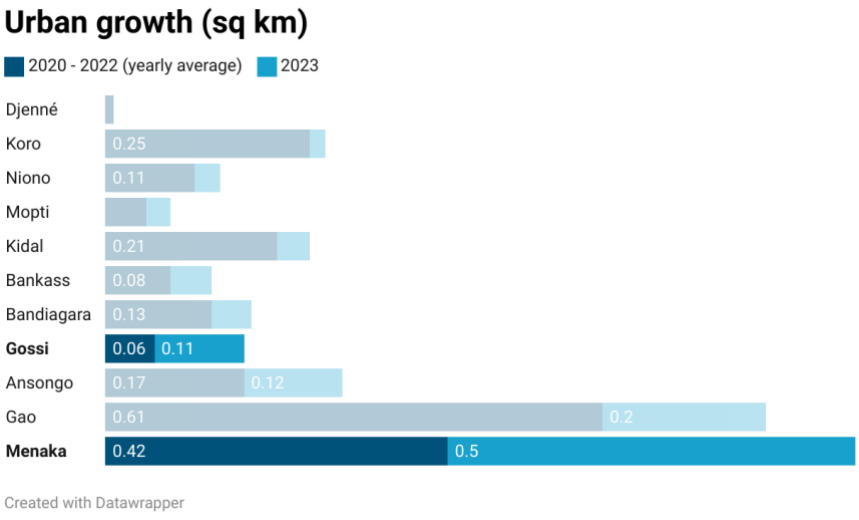

Figure 19: Urban growth in 2020 – 2023 for locations of interest in Mali.

[7] For instance, see here for Gossi, and here for Menaka, in addition to IOM and UNHCR data cited in the introduction and used to scope the initial selection of these towns.

[8] Ansongo, Gossi and especially Menaka still show a particularly large *relative* growth in 2023, when adjusted to the size of their population (using 2020 Facebook population data, accessible here).

Out of the areas analysed, Tinzaouaten (Mali), Mbera (Mauritania), Ménaka, Ansongo, and Gossi are some of the locations which saw the strongest displaced population inflows in previous years, specifically in 2023.

Notably, based on satellite imagery analysis, a few places of interest (for instance Djenné, Niono, and Mopti) do not seem to have been affected by important refugee/IDP influxes most recently. However, IOM[9] and UNHCR[10] data from previous years still list them as some of the most important host communities.

This discrepancy might originate from different causes: in some areas an important portion of IDPs may live with their extended families in pre-existing structures, in other locations some of the displaced populations may stay further away from the town (outside of the area analysed) Recent displacement trends may also have shifted due to the evolution of the conflict (for example, Kidal). Places like Tinzaouaten, Mbera, Ménaka, Ansongo and Gossi are however still more likely to have received more intense flows of displaced individuals based on satellite imagery analysis.

It is therefore relevant to assess the security context in the areas most affected by recent displaced population influxes, as well as the 15 areas previously examined. This will provide an understanding of whether IDPs and refugees are more likely to experience a greater level of safety once they have reached their destination.

[9] Mali Displacement IOM Humanitarian Data Exchange
[10] Including here for Burkina Faso, here for Mauritania, and here for Niger.

5 Security of IDPs at locations analysed

CIR analysed ACLED data to identify trends in violence against civilians over a 12-month period (14 February 2023 to 14 February 2024), in the 15 displacement sites of focus. CIR also analysed open-source incident reporting from social media and news outlets, in conjunction with satellite imagery in sections 1 and 2. The data revealed that, while some security threats remained constant regardless of location, the level of insecurity that IDPs face varies significantly depending on their location.

5.1 Security of IDPs in Mali[11]

While in some Malian cities examined with satellite imagery there were no security related incidents[12], in others, reports of abuses against civilians and IDPs specifically were frequent. In four locations under study there were no security related incidents involving civilians; in two locations, three or fewer violent events were recorded; in five locations, 10 or more incidents of violence against civilians were reported during the 12-month period. Regardless of location, there were many reports of attacks against civilians by both Violent Extremist Organisations (VEOs), criminal actors, and security services on roads and in rural areas surrounding all the locations analysed. This means that farming and herding activities, as well as travel between cities, is dangerous for IDPs regardless of where they have been displaced to. Additionally, across all locations, the arrival of IDPs to cities in Mali has put pressure on already limited infrastructural and food resources as well as labour market disruptions, according to the International Rescue Committee and the International Centre for Counter-Terrorism (ICCT).

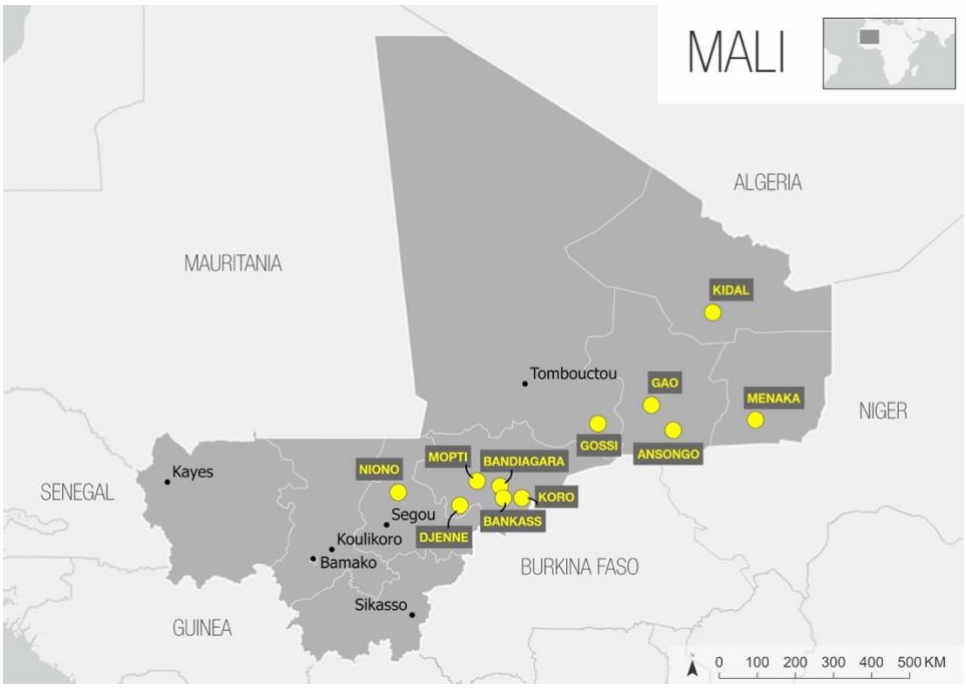

Figure 20: Urban centres analysed with satellite imagery within Mali.

[11] All trend analysis is based on ACLED data, while incident reporting has been triangulated through additional social media and news outlets.

[12] Defined as attacks against the military, reports of VEO activity, or reports of violence against civilians.

There were no security incidents reported in Bankass or Djenné towns, or the surrounding areas. In Ansongo and Bandiagara, no incidents occurred within the cities themselves, although there were reportedly attacks by VEO elements on roads surrounding the towns and near the cities' gates. In Koro, there was one attack within the city, but no civilians were involved. Given the absence of violent incidents involving civilians and the lower levels of kinetic activity in these areas, IDPs in these locations are likely less vulnerable to attacks and abuse by armed actors than in other locations under investigation. Despite the higher levels of security in these locations, satellite imagery analysis showed no or minimal urban growth in these locations between 2023 and 2024. It is possible that given the relative stability of the security situation of the areas in and around these cities, there may have been fewer recent displacements.

A total of three violent events were reported to have taken place within the city of Mopti during the period of interest. While the number of violent incidents within Mopti was limited, these indicate a higher level of insecurity for civilians in the town than in the areas discussed prior.

Far more conflict events were reported within Gao, Gossi, Kidal, Ménaka, and Niono than in the other areas analysed for this investigation. In all these locations ten or more security incidents reportedly injured or killed civilians within the cities' limits.

IDPs near the city of Ménaka were attacked and terrorised by suspected Islamic State - Sahel Province (ISSP) elements. RFI reporting alleged that in early 2023, civilians were forced to flee from adjacent villages and IDP settlements to Ménaka city, as ISSP took control of territory to solidify the blockade of the town. Ménaka has also been impacted by a series of blockades imposed by armed groups, chiefly ISSP, which have produced a "disastrous humanitarian situation" according to a 2 February 2024 International Rescue Committee report (CIR Weekly— Sahel Conflict Monitoring Report 11 January 2024; 18 January 2024; Human Rights Sahel Monthly Trend Analysis Report January 2024). Similarly, on 17 January 2024, the pro-government Mali Actu news website also reported that the situation was "alarming" as the blockade imposed by armed groups had "sealed off the region", making it impossible to supply basic commodities to the population. This particularly exacerbated the already dire circumstances of IDPs cutting off their access to key commodities such as food and medicine.

An additional three instances of violence against civilians specifically targeting IDPs in Ménaka were reported over the past year. Among these attacks was a grenade explosion outside an IDP site just north of Ménaka that killed at least four displaced persons in July 2023 according to Insecurity Insight.

In Gao, six kidnappings of ransom of civilians, including several IDPs took place in the past 12 months. Additionally, three separate murders were committed by suspected criminal actors. Among the victims was one IDP.

In both Gossi and Niono, clashes between Jama'at Nusrat al-Islam wal-Muslimin (JNIM) and the Malian Armed Forces (FAMa) took place inside the cities and killed civilians. FAMa has also been implicated in the killings of civilians particularly in the outskirts of both cities. In April 2023, Wagner operatives allegedly killed at least 10 civilians in the outskirts of Niono according to a local journalist on X (formally Twitter).

While in early 2023 there were limited reports of violence against civilians in Kidal, the situation drastically changed after FAMa and Wagner forces entered and recaptured the town on 14

November 2023. Since then, reports of abuses against civilians have drastically increased. In addition to civilian casualties of clashes between JNIM and FAMa, accounts of civilians being tortured and killed by FAMa and Wagner have emerged, as reported by regional analysts on social media (CIR – Human Rights Sahel Monthly Trend Analysis Report December 2023; January 2024).

Analysis of violence and urban growth trends

The trend of higher rates of urban expansion detected in locations with more insecurity, as exemplified by Ménaka, could be the result of VEOs and criminal groups targeting settlements outside these cities. In areas like Bankass and Dijenné, IDPs are more spread out, living outside the limits of the city in small villages and encampments. However, as discussed above, near Méneka, ISSP elements have forced displaced persons to move closer to, and ultimately into cities, as has been the case across Mali. This pressure from groups like ISSP, as well as the high level of insecurity, motivates or forces populations of displaced persons to congregate in more densely populated and well secured areas, where they are less vulnerable to attack. This partly explains the difference in trends in urban growth observed in more and less secure locations.

This trend seems most pronounced in areas where ISSP is particularly active, and ISSP and JNIM frequently target civilians. ISSP has been minimally active in Segou and around Niono since 2020 (CIR Situation Report – VEO Penetrations Mauritania, 1 December 2023), while JNIM has since become present in Segou, the group largely attacks security services and state officials as well as plants IEDs on roads. However, the group appears less involved in targeted attacks on civilians than in other area. This could explain the lack of urban growth in Niono. The trends that have likely driven displaced persons further into cities like Ménaka and Gao appear less present in Niono. Kidal is also a logical exception to this pattern given the ongoing conflict between FAMa and Tuareg separatist groups in the area that has motivated local civilians to move away from Kidal to other areas less conflict affected.

5.2 Security of displaced persons in border settlements

The security situation for displaced Malians appears more stable in the IDP and refugee settlements in border areas under investigation than in the cities examined within Mali. No security incidents were reported within Mbera, Tin Zaouatene, Abala, or Dori settlements. However, insecurity surrounding the settlements still has the potential to affect and harm displaced persons.

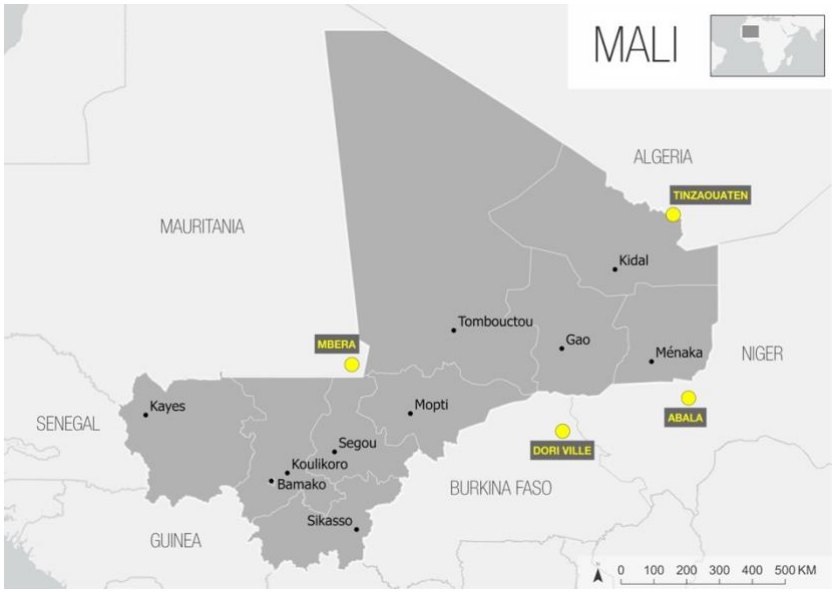

Figure 21: Displaced persons settlements analysed with satellite imagery in border areas and neighbouring countries.

Mbera, Mauritania (map)

Of all four locations examined, displaced persons in Mbera camp appear to be the least insecure. There were no security incidents in or surrounding the camp reported in the past 12 months. The increase in the yearly average of new structures added to the camp between 2022 and 2023 can in part be explained by the violence in Northern Mali and FAMa's move to retake Kidal. Many individuals who have fled Kidal and other areas of Northern Mali have gone to Mbera camp, as reported by the European Civil Protection and Humanitarian Aid Operations.

Tinzaouaten, Mali (map)

There were two security incidents near Tinzaouaten that involved displaced persons. In November 2023, Algerian soldiers shot and wounded a female Malian refugee on the Algerian side of the border. In October, two Malian civilians were allegedly killed by police near the settlement. Additionally, FAMa reportedly carried out airstrikes in Tinzaouaten in December 2023. According to news outlets including the Arab News, a strike on 21 December 2023 killed Colonel Hasan Ag Fagaga, a key Tuareg figure and former head of the Interim Authorities in Kidal. Airstrikes in this area have the potential to harm civilians fleeing to Tinzaouaten, or mistakenly target informal IDP settlements on the Malian side of the border. Malians fleeing violence in Northern Mali have also reportedly fled to Tinzaouaten. The risk of attack by FAMa airstrikes on the roads from Kidal and other northern cities now under FAMa control has risen significantly and may be detering Malians from attempting to reach Tinzaouaten. This could account for the lower urban growth between 2023-2024 when compared to prior years.

Abala, Niger (map)

While no security incidents were reported in Abala camp, armed groups, including ISSP, Nigerien armed forces, and unidentified armed actors, were implicated in violent incidents in Abala town including shootings of civilians. Additionally, Nigerien armed forces are actively involved in counter terrorism operations against ISSP near the town including airstrikes against suspected terrorist camps. Thus, while displaced persons may be safe within Abala

camp itself, travel into and out of the town of Abala or on the roads surrounding the camp carries a risk of violence.

Many of the individuals moved from Intikane camp, which was closed in June 2021 due to the deteriorating security situation and repeated attacks against the camp. The transition of individuals from Intikane to Abala could explain the high rate of new structures being added to the camp between 2019 and 2022: structures were built to accommodate the arrival of Intikane's population. Whether the expected population from Intikane arrived or decided to remain in Abala camp remains unclear. However, given Intikane was home to nearly 35,000 displaced persons, according to Al Jazeera, it is likely that structures were built to accommodate a large portion of this group. The lack of structures being added from 2023 to 2024 could be explained by the rapid growth in the preceding years that made new structures unnecessary.

Dori, Burkina Faso (map)

As with the other camps analysed, there have been no attacks within the Dori camp. However, there have been more violent incidents involving civilians in Dori town than in any of the other locations. ISSP is active in the area and has carried out several attacks against medical infrastructure including attacks on ambulances and the killings of doctors, according to Insecurity Insight. Most of the other attacks reported were committed by criminal actors or unidentified armed individuals. The highest concentration of these attacks occurred in a neighbourhood called Petit Paris, according to both ACLED and international reporting. This neighbourhood lies on the other side of the town from the Dori camp. While this suggests individuals are relatively safe within Dori camp, travel outside the camp or engagement with medical services in the town places individuals at risk.

While the Dori camp has not been attacked, other camps in the region have been closed due to repeated incursions by VEO elements. In 2021, Goudoubo refugee camp, situated approximately 18 km from Dori city, was closed and its residents moved into the city. This came after armed groups conducted a series of raids, abductions, and killings within the camp, according to UNHCR and Voice of America. Attacks against IDP camps have continued in Burkina Faso. In September 2023, the Defense Post reported a large-scale assault against a camp in the Sahel province that killed at least eight displaced persons.

Growth within Dori camp has remained relatively stable over the past few years. This is in line with expectations, particularly given that, unlike Abala, residents of Goudoubo largely moved into Dori city and to surrounding towns, rather than into Dori camp, according to reporting by UNHCR.

Conclusion

The insecurity experienced by displaced persons is highly location dependent. Overall the security situation displaced individuals face in border settlements appears more stable than that experienced by IDPs living in Malian cities. In urban centres in Mali, displaced individuals do not appear to be deterred from settling in areas with higher levels of insecurity. Rather, higher rates of urban expansion were detected in locations with more insecurity. This is likely the result of VEO actors and criminal groups frequently attacking settlements outside the cities in insecure locations, forcing IDPs to congregate in relatively secure areas within cities.

6 Drivers of population departure

Displacement in Mali is driven by a combination of acute climate-related challenges, profound economic insecurity, and protracted armed violence. While violent conflict remains the leading cause of displacement according to ACLED, all three elements intersect, exacerbating the already dire humanitarian situation and forcing people to flee to neighbouring regions or countries.

CIR examined the factors motivating displacement, using brief case studies to serve as examples of both the drivers as well as the intersections and compounding nature of climate change, economic hardship, and conflict.

One should note that this section is not closely tied to our satellite imagery findings, but rather complements satellite imagery analysis, by providing context surrounding motives for departure across Mali as a whole. As mentioned above, remote sensing is generally not well-suited to detect departures: structures generally remain unchanged. Rather, satellite imagery serves as a way to identify new arrivals, where new structures are built.

Armed conflict forces displacement

Armed conflict is the most significant driver of displacement in Mali according to USAID, the Africa Center for Strategic Studies, and IOM. The scale of violence against civilians in Mali has only increased in recent years: ACLED reported a 38% increase in violence targeting civilians in Mali between 2022 and 2023. The indiscriminate violence local populations face as they are trapped between competing armed groups is forcing ever-growing numbers of civilians to flee their homes. In 2023, ACLED reported that the main perpetrators of attacks against civilians in Mali were JNIM (over 180 events, 33%), FAMa and/or Wagner (nearly 160 events, 29%), and ISSP (nearly 90 events, 15%). The ICCT describes displacement as a primary “symptom” of the security crisis with the scale of displacement serving as an indication of the scale of violence throughout the country.

Conflict in Mali has been most heavily concentrated in the regions of Ségou, Mopti, Gao, and Ménaka (Figure 22). Since late 2023, VEO activity was most heavily concentrated in the centre and south of the country. This is likely a result of the FAMa and Wagner activity increasing in the north, as they devoted resources to the recapture of Kidal and areas of the north, to the detriment of counter terrorism operations in other parts of the country.

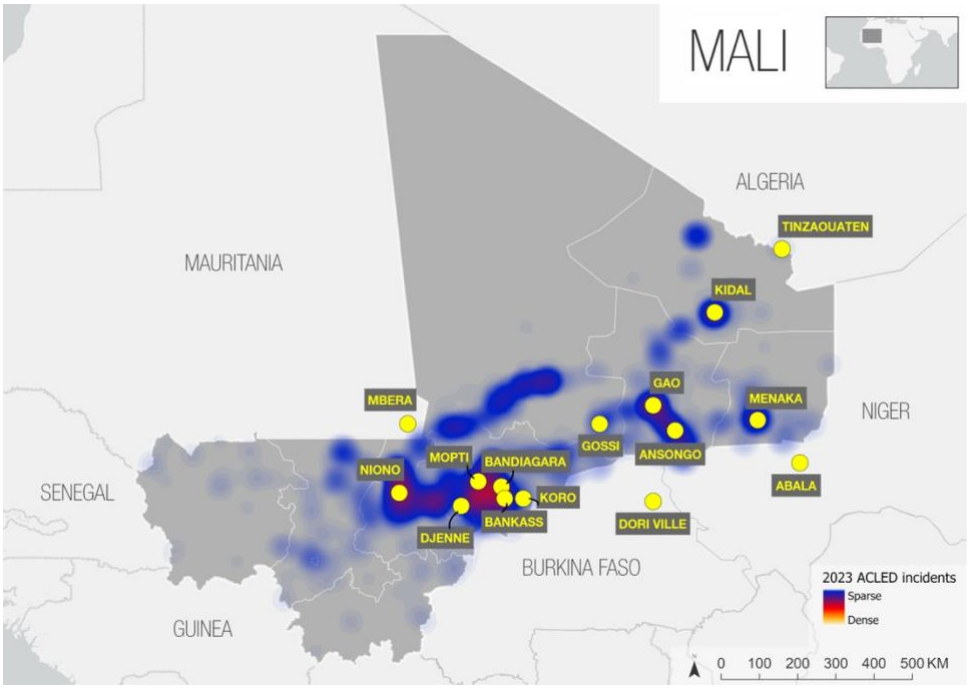

Figure 22: Heatmap of 2023 ACLED incidents in Mali.

VEO attacks

VEO violence is widely viewed as the most significant driver of displacement in Mali. According to ACLED data, between 1 February 2023 and 1 February 2024, there were over 850 incidents in Mali involving JNIM and/or ISSP. While this includes clashes between ISSP, JNIM, and security services, VEO activity that does not explicitly target civilians has still led to displacements. Civilians have frequently been caught in the crossfire of military and VEO clashes, according to ACLED and the Africa Center for Strategic Studies. Over 380 of the aforementioned incidents involved the targeting of civilians by JNIM and ISSP. Reports from Amnesty International, UNHCR, and Human Rights Watch (HRW), have shed light on the ways in which ISSP and JNIM frequently force civilians from their villages under threat of violence.

For instance, on 27 January 2024, Ogota and Ouèmbè, two villages approximately 2 km apart in the Mopti region, were attacked by JNIM, killing at least 30 civilians, as reported by news agency Reuters and CIR Analytical Report – Sahel Monthly Human Rights Trends Analysis January 2024. JNIM members then came back on 30 January to burn more structures. CIR's satellite imagery analysis confirmed that both villages sustained fire damage during this period.

Facing this type of indiscriminate violence, populations have fled from areas where groups are particularly active. According to OECD West Africa reporting, the scale of displacements has increased in Mali and Burkina Faso as VEO actors have increasingly targeted civilians in addition to security services. This aligns with ICCT reporting, which describes mass displacement as frequently being "the only coping strategy available" to civilians in the Sahel in the face of VEO violence.

FAMa and Wagner abuse

FAMa and combatants from its Russian paramilitary ally, Wagner, have been implicated in a host of abuses against civilians, forcing large numbers of individuals to flee their homes. HRW has described this violence as widespread with reported cases only accounting for a "fraction" of the abuses FAMa and Wagner have committed.

FAMa has increasingly used drone strikes to support and carry out security operations in remote areas where armed group presence is considerable. These strikes often involve targeting unidentifiable vehicles or groups of individuals that the military claims are terrorists (CIR Weekly – Sahel Conflict Monitoring Report 11 January 2024; Human Rights Sahel Monthly Trend Analysis Report January 2024). However, given FAMa's apparently low targeting threshold, these strikes have frequently killed and injured civilians, contributing to population displacement and grievances against the military regime. These strikes have compounded the insecurity faced by populations in parts of the country already severely impacted by VEO activity.

FAMa and Wagner have also been implicated in a series of massacres and attacks on civilians which local sources say have contributed to recent population displacements (CIR Weekly – Sahel Conflict Monitoring Weekly Report 11 December 2023). For instance, FAMa and Wager reportedly attacked civilians in the Timbuktu region on several occasions in early December 2023 leading local populations to flee. Pro-coordination of Azawad Movements (Coordination des Mouvements de l'Azawad, CMA) sources on X claimed that FAMa and Wagner bombed three houses, abducted several civilians, and killed others (including an elderly man, a woman, and a child) in Tebatit on 7 December. The sources also reported that on the same day FAMa/Wagner killed two minors, including one with a disability, in Kaga, and damaged the town hall in Arlal. One of the sources said many civilians fled the area, fearing further violence. On 10 December, according to a CMA source, FAMa/Wagner again attacked Arlal, destroying houses and killing a civilian. Another X user reported that, in what looked like an official communique, the Arlal municipality asked the local population to return to the area, assuring them that FAMa would provide protection. The degree to which this directive was followed was not reported.

Intercommunal violence

Violence in Mali has taken on an intercommunal dimension with civilians often targeted based on their ethnicity, forcing the large-scale displacement of certain communal groups. Fulani and Dogon civilians have been particularly impacted by the communal violence and members of groups have been heavily displaced. Caught in a spiral of reprisal attacks Dogon and Fulani populations have both been forced to flee their homes: Dogon militias have attacked Fulani communities which are perceived to be associated with violent extremist groups, while Fulani populations seek revenge on Dogon communities, as reported by Fulani-Dogon Killings in Mali: Farmer-Herder Conflicts as Insurgency and Counterinsurgency.

According to a 2021 article in the African Security Journal, by mid-May 2020, 212 Fulani and 90 Dogon settlements had been destroyed and abandoned in the Seeno plains with populations displaced to surrounding cities. This trend has continued with violence and destruction forcing large numbers of displacements.

One Dogon militia, Dan Na Ambassagou, has been implicated in a number of massacres against Fulani populations forcing survivors to flee their homes. According to the International Committee of the Red Cross (ICRC), over 160 Fulani civilians were massacred in Ogossagou (Seeno plains in central Mali) in March 2019. Survivors were forced to flee fearing further violence. Only months later, in 2020, HRW reported another massacre of Fulani in Ogossagou, which killed 35 civilians and forced more displacements. Many of these displaced individuals resettled in the outskirts of Mopti city in the neighbourhoods highlighted in the satellite analysis of Mopti. More recently, an armed self-defence group composed of Dozo traditional hunters who belong to the Dogon community were responsible for three separate attacks which killed a total of 29 Fulani civilians in Mali's Ké-Macina cercle in the Segou region in January 2024 (CIR Analytical Report – Sahel Monthly Human Rights Trends Analysis January 2024).

This violence has become cyclical. The African Security Journal has reported that following attacks on Fulani communities, Fulani self-defence groups often launch counterattacks on groups like Dan Na Ambassagou and Dogon villages displacing more civilians and exacerbating the tensions between these groups.

Climate events amid active conflict

Environmental shifts in Mali are a major factor contributing to food and water insecurity, a central motive for displacements in Mali, according to reporting from the ICCT, Welthungerhilfe, and the International Monetary Fund. The Organisation for Economic Co-operation and Development has reported that Mali is facing environmental shifts that have produced higher temperatures and more frequent extreme weather events. This has contributed to an increase in food insecurity; almost a quarter of the population was facing or at risk of food insecurity in 2023 according to the International Monetary Fund. This alone has driven displacement with individuals leaving their homes in search of more secure access to food or escaping extreme weather events like floods and droughts.

However, it is water scarcity as a result of climate change in the context of active conflict that has most exacerbated the humanitarian crisis across the country. The ICRC has reported on the intersection of conflict and water access in Mali. Women and children must often travel long distances across dangerous terrain, exposed to attacks by armed groups to reach water access points. However, insufficient rainfall means there is not enough precipitation to replenish the water table. This has forced civilians to travel further and further to collect water. These water access points are frequently the target of attack by armed groups. Amnesty International conducted interviews with IDPs in Meneka in 2022; several reported that ISSP attacks on villages surrounding Meneka and Inchinanane had targeted civilians at water collection points. With no safe points of access to water, civilians were forced to flee.

Violence exacerbates economic hardship

Economic factors are another key contributor to displacements in Mali. Displaced persons are often driven to move given the absence of economic opportunities in their place of origin or motivated to go to locations with more livelihood pathways.

In 2021, 15.9% of the Malian population fell under the World Bank's categorisation of extreme poverty[13], according to World Bank data. This increased to 19.1% in 2022. Increases in poverty levels are often due to the deterioration of the security situation, with economic opportunities severely diminished in some regions due to high levels of insecurity, according to the OECD and World Bank. Specifically, key livelihood activities such as farming and herding are frequently impeded in conflict-affected regions.

While armed conflict is the most significant driver of displacement, violence paired with environmental degradation and economic hardship has created untenable conditions for civilians in Mali forcing many to flee their homes.

[13] Extreme poverty is measured as the number of people living on less than $1.90 per day.

7 Gender and population displacements

According to the IOM's Displacement Tracking Matrix data, the majority of displaced persons in Mali are women and children. As of August 2023, children under the age of 18 accounted for 57% of the total IDP population in Mali, and women accounted for 63% of internally displaced adults aged 18 to 59.[14] UNHCR population surveys have recorded similar demographic compositions of displaced populations in neighbouring countries where many Malians have resettled.

Women and children as targets of violence

This trend can be in part explained by the nature of violence against civilians in the Malian conflict. Women and children are frequently the targets of violence by both state and non-state armed groups, leading them to flee to areas where they are less likely to face abuse.

In August 2023, a United Nations panel of experts reported that both FAMa and its security partners, chiefly members of the Wagner group, were implicated in a series of human rights abuses, including targeted violence against women and children. Security forces allegedly committed "systematic" acts of sexual violence, including rape, mass rape, abduction and torture (CIR – Human Rights Violations Summary Report Sep-Dec 2023). Multiple reports from the UN Secretary-General on children and armed conflict in Mali have discussed the widespread nature of sexual abuses committed by criminal actors and VEOs, mainly JNIM and ISSP, against women and girls, as well as young boys.

Given fear of reprisals and stigmatisation, this violence is perpetually underreported making it difficult to determine the extent to which the targeting of women and children has driven their displacement. However, human rights investigations have revealed that reports of mass sexual violence and abuses against women and children are often followed by large numbers of displacements. A report by HRW recorded that, in early 2023, VEO actors in north-eastern Mali carried out a series of attacks on villages, killings civilians and committing mass rapes of women and girls, leading thousands of people to flee their homes.

Children are the demographic most impacted by displacement. Not only are over half of all IDPs in Mali children, but they are the most vulnerable displaced population. According to a UNICEF report in June 2023, there has been an increase of intercommunal violence and presence of both state and non-state armed groups throughout the country. This has resulted in frequent attacks which have killed and maimed children, as well as displaced children, separating them from their families. Reporting from both UNICEF and the Child Protection Area of Responsibility in Mali states that the number of unaccompanied displaced children in Mali is unknown, but estimates based on surveys from years prior place the number at over 20,000. These children are extremely vulnerable to exploitation and abuse.

Displacement and gender

The disproportionate impact of violence and displacement on women and children is not unique to Mali. According to the Gender Dimensions of Forced Displacement (GDFD)

[14] In 53 locations, over 70% of adults were reportedly women. In only 10 locations did women comprise less than 50% of the population.

research programme, not only are women and children more often displaced than men globally, but they are far more vulnerable once displaced.

A substantial body of literature has explored the ways in which displacement and violence impact women compounding their vulnerability. Research from the Forced Migration Review, The World Bank Group, and the Oxford Journal of Refugee Studies has explored the mechanisms behind this trend.

Beyond the violence that forces displacement, economic factors both drive the displacement of women as well as compound their vulnerability once they have been displaced. As men are often engaged in armed groups or killed in conflict, women are left to support themselves and their dependents in adverse economic conditions. United Nations Population Fund research has shown that households are more often female led within displaced populations and in conflict affected areas. These women carry the burden of financially supporting their families. For most displaced persons and civilians in conflict affected areas, economic opportunities are scarce and often, even less available to women than men. In Mali specifically, the IOM reported that displaced female and minor headed households frequently reported no income or an irregular source of income.

In the face of providing for dependents amid limited access to goods and services, many women are forced to turn to illicit activities and economies. A series of reports by organisations such as the World Food Programme and InterAction have addressed the prevalence of displaced women engaging in 'survival sex' or trading sex for aid in Mali and across the Sahel. Women in these situations are caught in cycles of perpetual abuse, exposed to further violence and trauma following their displacement.

Gender analysis in areas of investigation

Considering the locations within Mali analysed with satellite imagery in this report, the trends discussed above remain consistent. Displacement Tracking Matrix data shows that women consistently account for a larger portion of the displaced population than men in these locations under study. Children under the age of 18 make up the largest demographic of displaced individuals across all locations analysed (Figure 21).

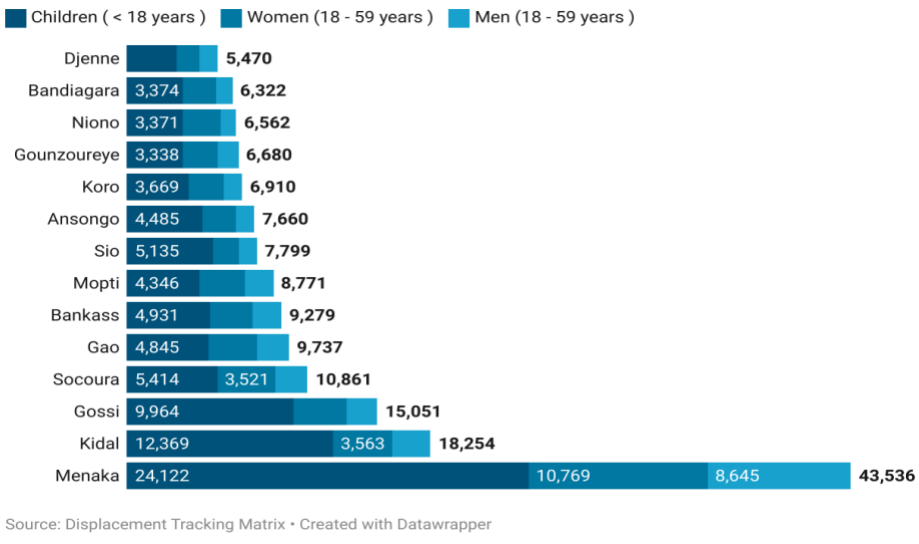

Figure 21: IDP population disaggregation for locations in Mali investigated through satellite imagery. Data from 2023 IOM's Displacement Tracking Matrix.

The data analysed above was collected in 2023. While the overall number of displaced individuals increased between 2020 and 2023 (from 287,496 to 396,805), the demographic makeup of individuals displaced to these locations varied only slightly. Regardless of the changes in the scale of the conflict over the past four years, women and children remain the groups most impacted by displacement in the locations of study.

Conclusion

Women and children are disproportionately impacted by the factors motivating displacement: violence, environmental degradation, and economic hardship. As a result, both in Mali and globally, women and children make up the majority of displaced persons and are more vulnerable once displaced.

8 Annex - Methodology

This report's methodology combines the analysis of satellite imagery with other types of open-source data to provide an assessment of Malian IDP and refugee dynamics since 2020, with a primary focus on 2023.

Satellite imagery analysis methodology

Satellite imagery-derived findings offer a detailed panorama of some of the main sites linked to Malian population displacements. They are produced by two distinct methodologies, depending on the type of location examined.

For settlements almost exclusively composed of IDPs or refugees, CIR systematically acquired three very high-resolution satellite images (30 to 50 cm) covering the 2020-2024 period, and analysed them visually to detect individual structures and assess their yearly evolution. This provides a very detailed estimate of the growth of these areas, and in turn, of the significance of population displacement phenomena in such regions. In general, the most recent image (2024) had a slightly lower spatial resolution, making smaller structures harder to identify, and resulting in slightly reduced structure counts for this period. This caveat should be considered when analysing results. In-house tests show that the discrepancy is generally around 5%.

This type of analysis was performed for Abala camp in Niger (14.921855, 3.415580), Dori camp in Burkina Faso (13.998841, -0.021822), Mbera camp in Mauritania (15.838732, -5.791741), and Tinzaouaten in Mali, on the border with Algeria (19.944520, 2.977339). With regard to Dori, the camp was built in late 2020, which explains why the first satellite image dates from 2021.

For relatively large cities within Mali, CIR acquired high-resolution (3m) satellite images from January 2020, 2023 and 2024 and analysed them visually to detect areas of urban growth between 2020 and 2023, and 2023 and 2024, and assess their yearly evolution. The objective was not to count all signs of urban growth as IDPs influx, since other factors certainly contribute to it, but rather to identify anomalies. If a specific location shows an unusually high rate of urban growth in 2023, and further research based on other types of open sources (news reports and UNHCR or IOM data) suggest a high influx of IDPs in the same area, one may reasonably conclude that such urban expansion is probably linked to an increased IDP settlement trend.

Although 3-metre resolution imagery is not as precise as the 0.5m products used for the analysis of IDP and refugee settlements, it is sufficient in the case of large cities. These areas are especially prone to urban growth caused by factors other than population displacement (such as natural population increase), and the difference between these phenomena is not necessarily visible on satellite images. It is thus not relevant to detail structure counts, since individual structures may be linked to various types of population growth, without the possibility to distinguish between them with confidence. Therefore, it is the general growth patterns that matter, and the overall assessment of trend anomalies. In this sense, coarser analysis using coarser imagery is thus adequate. The main downside to this method is that the smallest types of temporary shelters may be overlooked when they are set up in low density areas, away

from other shelters. This results in a very slight underestimation of urban growth, particularly affecting displaced populations.

This type of coarser analysis was performed for Ansongo (15.672935, 0.504521), Bandiagara (14.348948, -3.609117), Bankass (14.078652, -3.519596), Djenné (13.905395, -4.555995), Gao (16.260612, -0.038251), Gossi (15.822218, -1.301143), Kidal (18.446747, 1.408939), Koro (14.074741, -3.082667), Ménaka (15.919550, 2.397063), Mopti (14.492408, -4.192436) and Niono (14.226116, -5.975327).

Notably, Bamako is absent from the list of analysed areas. This is because it was relatively low-ranking in terms of number of IDPs in the past few years according to IOM, and because manual analysis of such a large area would have proven extremely long, and would have been performed at the expense of other (more affected) areas. Unfortunately, automated solutions for detailed urban growth analysis in the Sahel are not yet reaching a sufficient degree of accuracy, and correcting them manually still takes as much time, if not more, than manually performing the entire analysis from scratch.

A few common methodological points were shared by both types of satellite imagery analysis. First, since satellite images were not acquired for every single year between 2020 and 2024, and because available imagery dates may vary between cases, yearly averages were calculated to allow for comparison and evolution assessment. Second, for consistency purposes, the area analysed for each place was kept the same from one year to the other, as were the thresholds of what counts as a structure or an urban area. Third, military sites were excluded from the analysis. Finally, the displayed satellite imagery on all maps featured in this report come from the ESRI basemap. These images were not the images analysed but provide a good point of reference for data visualisation and comparison.

Open-source research methodology

CIR applied a three-pronged open-source research methodology to provide insights into the broader context of displacements in Mali.

First, CIR investigators conducted a literature review of research focused on drivers of displacement both broadly and within the Malian context. This was paired with brief case studies to illustrate the mechanisms driving displacement in Mali.

Next, to better understand the level of violence displaced Malians face, the team analysed ACLED data. The team looked at trends in violence against civilians and general insecurity (violent criminality, military activity, and VEO attacks) over a 12-month period (14 February 2023 to 14 February 2024) focusing on the locations analysed with satellite imagery. Findings were overlaid with satellite analysis to understand the links between insecurity and IDP settlement patterns.

Finally, using IOM's Displacement Tracking Matrix data from September 2023, CIR analysed the demographic composition of the Malian IDP population across the country generally as well as in the locations of focus. This data was selected because it is the most recent, comprehensive data and is disaggregated by location, gender, age, and location.


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