INTRODUCTION

The lockdown restrictions in Zimbabwe due to COVID-19 has drastically reduced the number of cross border movements. As of 10 December 2020, Zimbabwe had 11,081 confirmed cases, including 9,253 recoveries and 305 deaths. As part of the response to the COVID-19 pandemic in Zimbabwe, the Ministry of Health in collaboration with its partners in health recognized a need to understand the impact mobility within and across borders can potentially have on controlling the spread of the virus. To support these activities, the International Organization for Migration (IOM) is working closely with the local government of Zimbabwe, Ministry of Health, and the Immigration Department to support the government of Zimbabwe and other key partners with regards to understanding migration flows, as well as to respond to the outbreak in a way that is sensitive to current and emerging migration and mobility realities in multiple regions in Zimbabwe.

Plumtree Border Post is the main crossing point between Zimbabwe and Botswana. People travelling from South Africa’s Mafikeng also pass through this border. Mangwe district holds a particular significance for a greater understanding of mobility trends and migration practices. Located 542 km to the West of the capital of Zimbabwe. On average, the numbers crossing through the Plumtree main border post has dropped from 5,500 to 500 persons a day due to COVID-19.

Plumtree Town is usually referred to as “ku Titji” in Kalanga which means a railway station. Its development can be drawn back to 1897 when it was still operating as a railway station in the region when the Plumtree-Bulawayo railway line was still under construction. Rapidly developed as an alternative rail route to suppliers between Bulawayo, Botswana and South Africa, the town is also known as an economic trading hub/centre for rural Bulilima and rural Mangwe districts.

The aim of the Population Mobility Mapping in Plumtree was to complement the Government of Zimbabwe’s National
Preparedness and Response plan for COVID-19 by providing the Government, communities, and humanitarian partners with information on population mobility and cross-border movements. Population Mobility Mapping (PMM) aims to inform public health interventions through the analysis of the dynamics and characteristics of population mobility. Flow monitoring aims to derive quantitative estimates of the flow of individuals through specific locations and to collect information about the profiles, intentions and needs of the people on the move. More broadly, it aimed to enhance prevention, detection, and response to the spread of infectious diseases through an improved understanding of prevailing human mobility patterns in Zimbabwe and Plumtree border districts.

The specific objectives of this exercise were to:

- Identify the points of entry and congregation areas within Plumtree and at its borders with neighboring countries.
- Based on estimations on volume of flows and other criteria, provide a list of specific points of entry and congregation areas that are prioritized for public health interventions in times of public health emergency.
- Recommend immediate public health interventions for the identified prioritized congregation areas and ports of entry.
- Assess the feasibility of implementing Flow Monitoring and recommend locations of Flow Monitoring Points for the purpose of disease surveillance, interventions strengthening health system along mobility corridors and provide information on cross border mobility trends to support Government’s evidence-based migration policy development.

A Participatory Mapping Exercise (PME) was convened from the 8th to the 10th of December in Plumtree. For this exercise, key stakeholders were selected from the Mangwe district committee and local councilors who oversee the community and are responsible for day-to-day operations in the community. Participants represented the formal and informal, health and non-health sectors, including local authorities, and community leaders. Local councilors also assisted in mapping Points of Entry (PoE) in Plumtree which help in tracking irregular and regular migrants. Key stakeholders from government also participated in the one-day workshop to ensure that Flow Monitoring Points (FMP) are selected based with their experience in dealing with migrants and flow of people. The mapping exercise was based on their understanding of nearby countries such as Botswana, Malawi, DRC and South Africa and local population movement dynamics in the country.
The exercise was being chaired by the Mangwe District Development Coordinator. The Ministry of Health gave an update on the epidemiological situation in Plumtree at the opening of the session. Following an overview of flow monitoring, data collection, target areas, and risk of communication emphasizing transmission of COVID-19 and other health related issues, key informants were then encouraged to relate the information shared with situations in their daily lives and contribute their knowledge of their communities by identifying and locating PoEs, axes of mobility (routes) and Points of Congregation (PoCs) on maps, to identify places where travellers could interact with other travellers and/or the local community.

Among the key points, participants selected priority sites for the implementation of public health measures, Flow Monitoring activities, population mobility patterns and dynamics were then characterized. The exercise was followed by an assessment of prioritized sites in the field with the following objectives:

▪ Collect GPS coordinates of the sites identified during the exercise to develop the final map.
▪ Verification of the information collected during the exercise and direct observations on site.
▪ Collection of any additional information for the prioritization of FMPs.

FINDINGS

Sixteen key informants took part in the mapping exercise in Plumtree. The connections between travellers and stationary communities in the epicenter and main town along mobility pathways were examined. Points of interest were allocated into three categories: Points of Congregation of travelers (where internal mobility is experienced such as markets, churches, universities, playgrounds), Points of Entry (PoEs) (border crossings); and major travelling routes connecting these Points of Entries and the Points of Congregations.

Points were prioritized based on significant volume of mobility and strong connections to areas reporting COVID-19 cases. A total of 4 points were identified as Flow Monitoring Points, of which 1 priority point (the main border post) was selected for immediate response actions and an IOM tent had been erected there for support in terms of COVID-19 screening, surveillance, hand washing, risk communication and community engagement.
Characteristics of population mobility (migration routes)

Long distance population flows were identified from the neighboring countries via Plumtree to major towns such as Bulawayo, Gweru and Harare (the capital). The following high population mobility routes were noted through two axes:

1. Francistown-Plumtree-Bulawayo
2. Harare-Gweru-Bulawayo-Plumtree-Gaborone
3. Beitbridge-Plumtree-Botswana
4. DRC-Plumtree-South Africa

Plumtree is an important transit point for long distance travelers, especially traders to access neighboring towns (Bulawayo, Gweru, Harare). Traders of commercial goods, the majority of whom are from Matabeleland South province, to be specific, transit in Plumtree before heading to Francistown or Gaborone (two cities in Botswana) resulting in long distance movement across multiple countries with interactions with migrants.

The state of business in Plumtree attracts daily travellers from Botswana (Francistown, Mosetse, Sebina and nearby-border communities) as well as nearby semi-rural and rural communities such as Bulilima and Mangwe rural. Traders include Batswana, South Africans and Zimbabweans. Various trades such as vegetables markets, are also popular in Plumtree, attracting the same communities mentioned above.

More than 6 isolation centres are present in Plumtree to curb the spread of COVID-19 and the community at large takes precautionary measures against COVID-19.

Regional Mobility routes

The first theme identified routes of mobility and mobility patterns observed in Mangwe district. The information gathered during the exercise include the main axes of mobility, the characteristics of this mobility and the main origin and destination of travellers.

Axes of mobility

One main mobility route traversing Plumtree was identified during the exercise:

**Route A7**: The main route that connects Botswana to Zimbabwe through the Plumtree official Border post. This route includes commercial vehicles, buses and pedestrians travelling to Zimbabwe. This route connects to A1 in Botswana and proceeds to Francistown. On the Zimbabwean side, the route proceeds to Bulawayo and to Harare as route A5. Small traders and irregular migrants from Botswana and South Africa are listed as the most common groups using the irregular crossing point. The local routes pass through local towns such as Bulawayo, Gweru and Harare.
Travellers using this axe, from Zimbabwe to Botswana or South Africa stop and congregate for a variety of reasons including rest, sleep, meals and for administrative reasons. Also, the cross borders usually board buses in Plumtree which ferry them to their various destinations with their goods from Plumtree.

**Points of entry**
The second session of the exercise used participants knowledge to identify all known official and unofficial Points of Entries (PoEs), estimated daily cross-border movements, characteristics, and those selected for prioritized public health interventions.

Participants identified a total of 10 official and unofficial PoEs in Zimbabwe’s West region (1 official, 9 unofficial), and further selected only 1 (Plumtree Border Post) to be prioritized for additional public health measures based on estimated daily flows of traffic across these points.

The Ramokgwebana river separates the two countries, however family members can be found on either side of the border. It was the general consensus by participants that whilst the official PoE had witnessed a drop in cross-border flows due to the COVID-19 pandemic, the overall number of cross border movements at all unofficial PoEs had also dropped drastically. However, with the COVID-19 lockdown measures, many

<table>
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<tr>
<th>Points of entry</th>
<th>Category</th>
<th>Estimated traffic daily before COVID-19</th>
<th>Estimated traffic daily during COVID-19</th>
<th>Details</th>
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| Plumtree Border Post | Official | 2000 | 300 | - The border post receives mainly commercial truck drivers and day traders.  
- Screening and handwashing stations |
| Unofficial crossings near main PoE | Unofficial | 400 | 20 | - There are multiple unofficial crossings. In terms of numbers, Mpoeng and Nxele are the two unofficial crossings borders with the highest number of crossings.  
- No screening or handwashing stations. |
people are resorting to using unofficial border crossing points.

The main centre of congregation in Plumtree is the formal border post. This is a point which attracts large volumes of people both local and foreigners. Due to time constraints, PME participants only visited the official point of entry and no unofficial points were visited. The local Plumtree health clinic is located 1 km from the border post. At the border post, there are functional water sources, ablution facilities, medical facilities and security forces. Before COVID-19, the border post attracted at least 2,000 migrants (truck drivers, deportees, returnees and travellers) per day. COVID-19 precautionary measures are in full force at the border post with multiple hand washing facilities available and an automated sanitizing booth which wasn’t functional at the time of assessment.

Health Hazards Emerging from Unofficial Points of Entry
There are high chances that the activities at the informal ports of entry and nearby congregation areas may increase the cross-border COVID-19 infections between Zimbabwe and Botswana. The factors that contribute to increased COVID-19 transmission within unofficial points of entry include lack of COVID-19 screening mechanisms, no sanitation, lack of water sources and lack of personal protection equipment (PPE) including masks. The presence of irregular migrants also means that COVID-19 preventative measures and other health services may not be available for such populations, including COVID-19 screening and referral mechanisms. The unofficial points of entry were not part of the local authority development plans and there is a lack of basic public health facilities which include safe water sources, ablution facilities and waste disposal facilities. This poses a serious health risk for COVID-19 transmission as well as other diseases with epidemic potential including cholera, typhoid, etc.

Points of interest/congregation
Points of Congregation identified in the town and territory of Mangwe included: bus stations, health centers, markets, shopping centres, schools, churches, lodges, bar-restaurants, road junctions/bifurcations, playgrounds, government offices and border posts. Five flow monitoring points were identified:
**Taxi Rank**

Just outside the Plumtree border post, there is a taxi rank located where travellers from Botswana board their transport to Plumtree town and other cities. This Station also serves for dropping off travellers from town and various nearby communities who want to cross the border. There are vendors at the rank who provide services these travellers, and there are no handwashing facilities at the rank.

The taxi rank is found less than a kilometer from the border which means almost all travellers pass through this station. The PME participants observed that people at the taxi rank do not consider COVID-19 prevention measures hence posing a risk to the community of Mangwe and Bulilima district and the travellers. The taxi rank was prioritized as a flow monitoring point.

**Bus stations**

The two bus terminuses assessed attract intercity travellers from Harare, Bulawayo, Gweru and Francistown in Botswana, vendors and other local persons just roaming around. There is only one functional ablution facility at each bus station which are less than 1 km apart and are all close to the town clinic. There is no hand washing station at the bus station and per day, the bus station can attract +/-1,000 migrants and at least 10 buses from major cities such as Bulawayo. During the lockdown period, the numbers had dropped to 100 per day since intercity movement had been restricted. The absence of handwashing facilities poses a high risk to the community hence there is a need for immediate response action. These bus stations were each selected as a flow

<table>
<thead>
<tr>
<th>Location</th>
<th>Estimated Number Stopping</th>
<th>Distance to nearest health facility</th>
<th>Details</th>
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| **Border Post Rank** | 2000/daily                | <0.5 km                             | • The station is outside the border post and less than a km from the border. This is where people board taxis to the town and dropped when coming to the border.  
• No screening or handwashing stations. |
| **Bus station**    | 1000/daily                | <0.5 km                             | • There are 2 bus stations.  
• These bus stations are the main bus stations in the town, located less that a kilometre apart.  
• Buses depart to Bulawayo, Gweru, Harare, Bulilima and Mangwe rurals throughout the day.  
• No screening or handwashing stations. |
| **Shopping centre** | 800/daily                 | <0.5 km                             | • This shopping centre includes nightclubs, bars, post office, business centre, food courts, grocery shops and government offices.  
• Handwashing stations present in almost each shop. |
monitoring point.

**Shopping Centre**
The shops are located less than a kilometre metres away from the district hospital. There are food courts, bars, night clubs, grocery shops, vegetable market and vendors at the shopping centre. A lot of handwashing facilities were observed at almost every shop entrance and people entering the shops had their face masks. The shopping centre is close to the bus stations and attracts at least 700 people a day. Plumtree is a small town with almost all activities in the same location at the shopping centre. The shopping centre was selected as a flow monitoring point due to the large volume of people it attracts and the various activities that takes place at the site.

**Conclusion and recommendations**
Population Mobility Mapping (PMM) was conducted to provide key and timely information on priority high mobility corridors and vulnerable areas to be considered in the current COVID-19 response. Data gathered has allowed the Government of Zimbabwe, Ministry of Health and Child Care, IOM and other public health and humanitarian partners on the ground to better understand population mobility trends in the region and their link to transmission risks, and vulnerabilities of communities and points of entry. Specific recommendations based on the mapping results include:

- **Strengthen surveillance along the pathways through POE/POCs and reinforce community-based surveillance.**
- **Reinforce Infection Prevention and Control (IPC) and risk communication with community engagement plans and strategies that follow bottom-up and decentralised approaches, putting communities first for the planning and roll-out of activities.**
- **Provide a greater level of mental health and psychosocial support to travellers for combatting COVID-19 associated stigmatisation, including the correct training in dealing with positive COVID-19 cases.**
- **Provide handwashing facilities to the stations next to screening points where there is none.**
- **Distribution of face masks and sanitisers to border workers.**