

BACKGROUND

The International Organization for Migration (IOM), the UN Migration Agency, is working closely with the Congolese Ministry of Health (MoH) and the World Health Organization (WHO) to contain the 10th Ebola Virus Disease (EVD) epidemic outbreak in the province of North Kivu, Democratic Republic of the Congo (DRC), in line with the International Health Regulations 2005. IOM is also working to address the needs of communities in the affected and non-affected health zones.

On 28 August 2018, IOM conducted a participatory **Population Mobility Mapping (PMM)** exercise in **Mambasa, Ituri Province**. The objective of the mapping exercise was to analyze population mobility dynamics and patterns, and define priority sites for establishing Point of Entries (PoE), both in border and non-border locations, where active surveillance, prevention and risk communication can be focused. The Population Mobility Mapping (PMM) approach complements traditional public health risk assessments, enabling a more accurate prioritization of vulnerable locations and public health interventions.

METHODOLOGY

In collaboration with WHO, IOM applied the Population Mobility Mapping methodology for EVD outbreak response during the 9th outbreak in Equator province DRC. The methodology was based on IOM's displacement tracking matrix (DTM) and past experiences in mapping population mobility specifically for epidemic preparedness and response in West Africa and in DRC.

Key informants were selected by the National Programme for Border Hygiene (PNHF) and IOM to participate in a one day mapping exercise, based on their understanding of the region and local population movement dynamics. Participants represented the formal and informal, health and non-health sectors, including local authorities, community leaders, farmers, transportation providers, animal health officers and health workers.

The exercise began with an overview of the EVD, emphasising **modes of transmission** and **risks of spread** through travel and trade. Key informants were encouraged to relate the information shared with situations in their daily lives, and contribute their knowledge of their communities in the discussion. The objectives of the exercise were explained, as well as the importance of collective participation of all key informants, to produce critical information for the overall outbreak response.

Through facilitated group discussion, participants identified key **access points** to Mambasa Territory and **points of interest** where travellers might interact with other travellers, and/or stationary communities in **Mambasa town and 5 councils within Mambasa Territory (Babila-Babombi, Bandaka, Bakwanza, Bombo, Walese-Karo and Walese-Dese)**. This included markets, parking areas, public facilities, junction, bridges and roads with high volumes of movement. After all points of interest were listed, participants prioritised points based on risk factors including the estimated **volume** of travellers and traveller **connectivity** with EVD affected areas, large cities (eg. Bunia, Beni, Kisangani, Aru, Mahagi) and cross border towns in Uganda. Participants marked key landmarks, all points of interest and mobility flows on base maps and discussions were noted.

The exercise was concluded with a summary of the findings and feedback sought from participants. The exercise was followed by collection of GPS coordinates for points of interest and the development of an accurate map summarising the results.



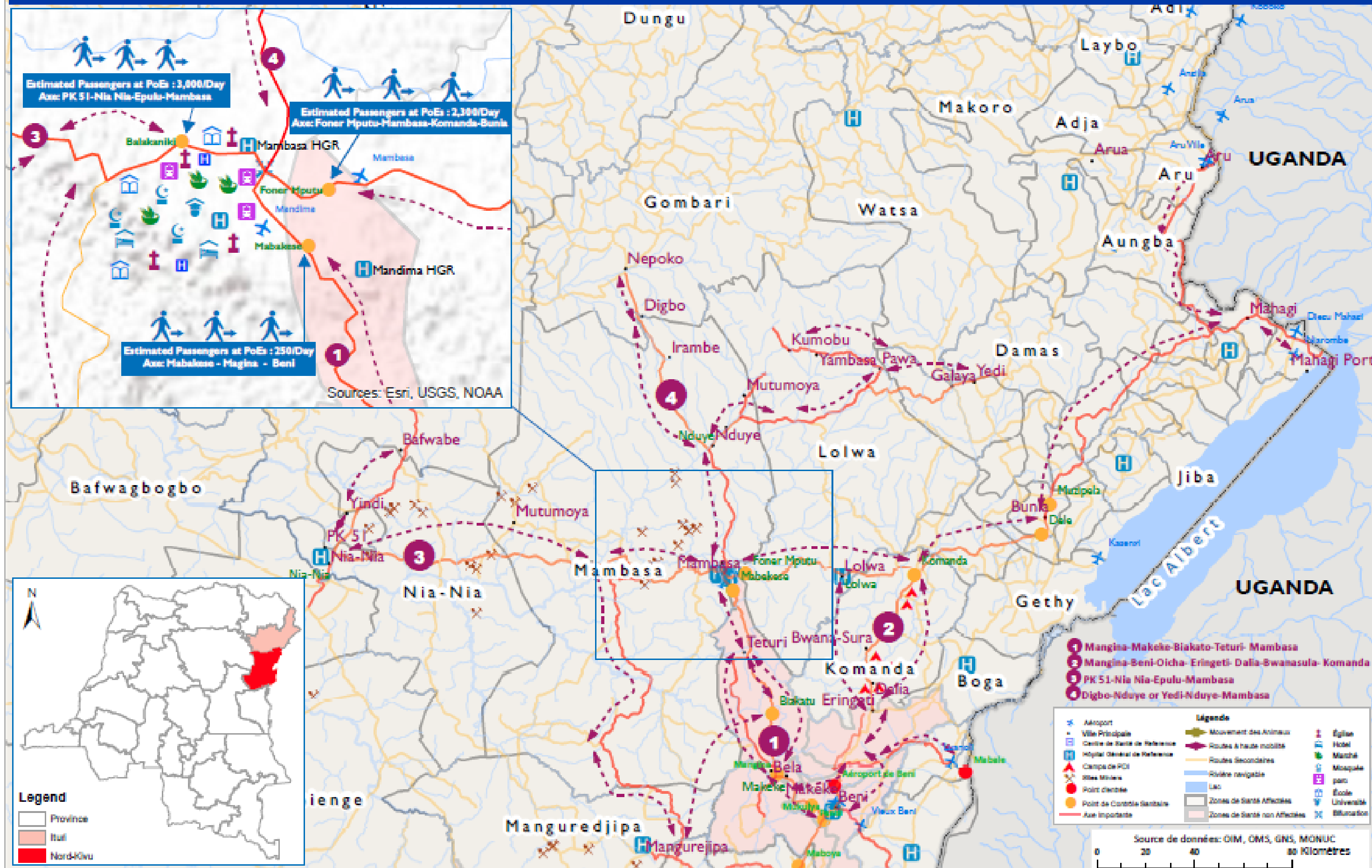
IOM'S POPULATION MOBILITY MAPPING (PMM) IN MAMBASA ITURI PROVINCE © IOM 2018

Areas of interest:

Mambasa town, Babila Babombi and Bankwanza Council

Manguredjipa, Manguina, Komamda, Beni, and Butembo

Cartographie Participative de la Mobilité des Populations - Territoire de Mambasa



FINDINGS

Twenty eight (28) key informants took part in the mapping exercise in Mambasa. The connections between travellers and stationary communities in the epicentre, main towns, 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 for both human and livestock, and entry points to towns and territories); and *major junctions and bridges*. Points were prioritized based on significant **volume** of mobility and strong **connections** to areas reporting EVD cases. A total of 289 points were identified, of which 125 priority points were selected for immediate response actions; surveillance, hand washing, risk communication and community engagement (See Table I).

Table I. Summary of Points of Interest identified during Population Mobility Mapping in Mambasa

Identified Points of Interest								
Mambasa Town			Total Mambasa Town	Mambassa Territory			Total Mambasa Territory	TOTAL
Points of Congregation of Travelers	POE	Junction and Bridges		Point of Congregation of Travelers	POE in Mambassa Territory	Junction and Bridges		
151	6	1	158	111	13	7	131	289
Priority Points of Interest								
Mambasa Town			Total Mambasa Town	Mambassa Territory			Total Mambasa Territory	TOTAL
Points of Congregation of Travelers	POE	Junction and Bridges		Points of Congregation of Travelers	POE in Mambassa Territory	Junction and Bridges		
71	5	1	77	38	5	5	48	125

Characteristic of Population Mobility:

Long distance population flows were identified from neighboring countries (Uganda) via Mambasa to major towns such as Kisangani (to the west), and passing through Bunia (to the east), and Beni (to the south) for those coming from Butembo. High population mobility from the epicenter (Manguina, North Kivu) to Territory of Mambasa (Ituri) was noted through **two axes**; **(1) Manguina-Makeke-Biakato-Teturi-Mambasa** and **(2) Manguina-Beni-Oicha-Eringeti- (2i) Dalia-Bwanasula-Komanda-Mambasa or (2ii) Elota-Lolwa-Mambasa**.

Mambasa is an important **transit point for long distance travelers, especially traders** to access neighboring towns (**Kisangani, Beni, Bunia**). Traders of commercial goods and fuel (a Somali lead trade), majority of whom come from Kenya through Uganda via Kasindi, Aru, or Mahagi, transit in Mambasa before heading to Kisangani; resulting in long distance movement across multiple countries with interactions with migrants from mix origins.

The number of **mining** sites (gold) in Mambasa also attracts young daily workers coming from Lubero (Butembo and Mamgurudjika) and Beni. Buyers include Chinese, Kenyans and Ugandans. Around the mining sites, commercial sex workers were also identified, coming from North Kivu, Haute Uele and Kinshasa. Timber trade, also popular in Mambasa, attracts Ugandan, Kenyan and Rwandan traders. Traders from the Territory of Beni and Lubero also travel to Mambasa Territory to buy honey and smoked bush meat.

Eighteen (18) camps of internally displaced persons (~2,985 families) were formed following armed conflicts in the Territory of Beni. They have been displaced for more than 5 years on the Eringueti—Komanda axis.

High mobility routes:

- ♦ Two main mobility routes from Mangina (epi center) to Mambasa: **(1) Mangina—Makeke—Biakato—Teturi—Mambasa** and **(2) Manguina—Beni—Oicha—Eringeti—Dalia—Bwanasula—Komanda** (Territory of Irumu)—**Mambasa**. Both routes include **18 camps of internally displaced people** (~2,985 families).
- ♦ Two important routes between Mambassa and neighboring areas: **(1) PK 51(Wamba/Haut Uele)—Nia Nia—Epulu—Mambasa (Ituri)** and **(2) Axis Digbo—Nduye or Yedi—Nduye—Mambasa**. Entry into the Territory of Mambasa is mainly through PK51 in the west, Tipe Muche in the east, Yedi and Digbo in the north and Makeke and Bakeuku in the south. The entrance to the town of Mambasa from the west is through Balakaniki on the Nia Nia route, from the East at the Foner Barrier on the Komanda route, from the South at the Mabakese Bridge on the Manguina route and from the north at Kangabili. Note, there are multiple alternative (yet minor routes) that are used to access the Territory of Mambasa.

Priority points of interest:

Points of interest identified in the town and Territory of Mambasa included: hospitals, health centers, markets, motorbike parks, schools, colleges and universities, churches, mosques, traditional healers, hotels, bar-restaurants, road junctions/ bifurcations, bridges and playgrounds. At five locations, POE surveillance sites, referred to as Points of Control (PoCs) due to their location not being on international borders, were identified for rapid establishment:

Additional Points of Control to be established (5):

Foner: on the route between Mambassa and Komanda which attracts the largest volume of travelers entering Mambassa from Beni via Oicha and Eringueti. **Pont Mabakese:** on the route between Mambassa and Manguina. It attracts a small volume of travelers entering Mambassa, but has a strong link with Manguina (EVD epicenter) via Teturi and Biakato. **Binase:** on the route between Mambassa and Pedé, and attracts mainly miners and workers from Butembo and Beni. It also has a strong link with the EVD affected health zone of Mabalako. **Bavalakaniki:** on the Mambassa to Nia Nia route. **Biakato:** on the route Mambassa - Teturi - Manguina.

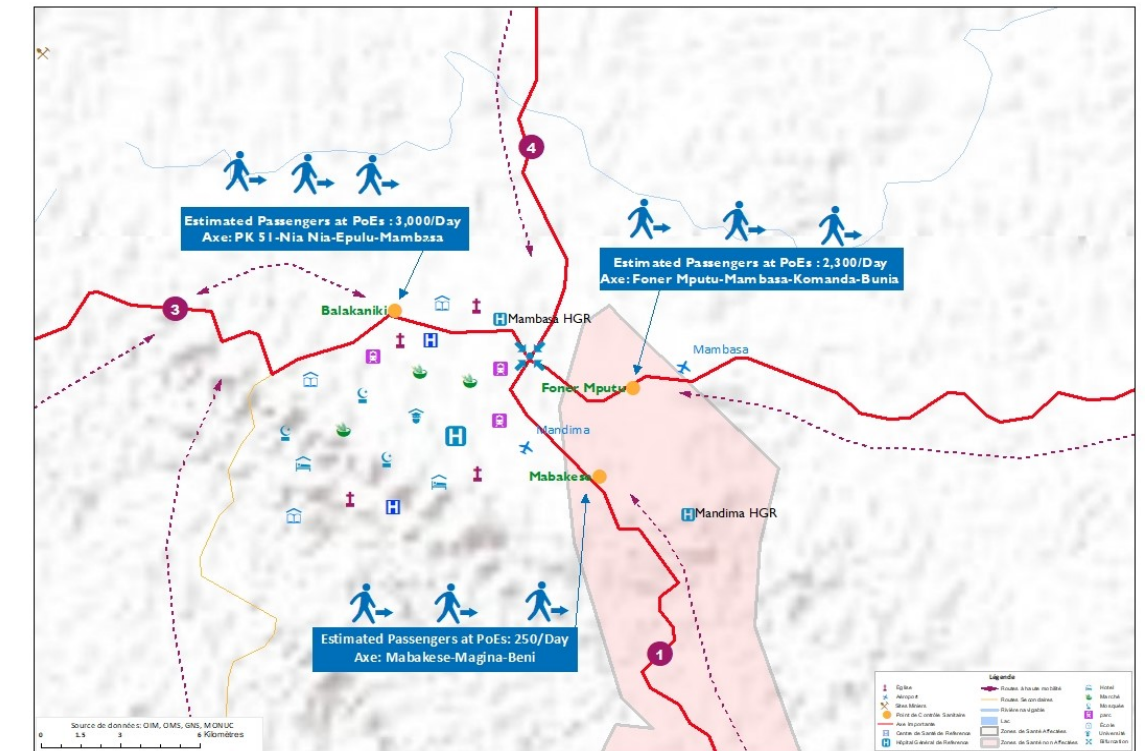
CONCLUSION AND RECOMMENDATIONS

Population Mobility Mapping (PMM) was conducted to provide key and timely information on priority PoE/POCs and vulnerable areas to be considered in the current EVD response. Data has allowed the Congolese MoH, PNHF, WHO and other public health and humanitarian actors on the ground to better understand population mobility trends in the region and their link to transmission risks, and response vulnerabilities of communities and points of entry. The increase in EVD reported cases in the North Eastern part of the territory where population mobility is primarily affected by **insecurity**, will constitute a major challenge for the response, both for DRC and its neighbour, Uganda.

Specific recommendations based on mapping results include;

- **Surveillance:** Strengthen surveillance along the pathways through POE/POCs: (1) Manguina - Mambassa in Biakoto and on Mabakese Bridge; (2) Mambassa—Komanda at the Foner gate (3) Komanda to Oicha at Komanda entrance ; (4) Komanda—Bunia at Dele and Muzipela (5) at the main Point of Entry in Aru and Mahagi Territory.
- **Prevention:** Reinforce **Infection Prevention and Control (IPC) and Risk Communication** in the sanitary structures of the Territory of Mambassa and on the eastern part of the Territory of Iru-mu on the Oicha – Komanda route, the North-Western part of the Territory of Lubero and around Mangurudjika.
- **Response Plan of internally displacement populations (IDPs)** to prevent risk of contamination at settlement sites on the Komanda - Eringeti route.

The results have been shared with Democratic Republic of Congo Ministry of Health (MoH) and key partners for response planning purposes.



IOM'S POPULATION MOBILITY MAPPING (PMM) IN MAMBASA ITURI PROVINCE © IOM 2018

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