

Transhumance Hotspots Analysis

Physical Access Constraints and Food Insecurity in the CAR





World Food
Programme

The Context

Transhumance is an important activity in CAR and its impact on security, conflicts, humanitarian space, and continuous destabilization of communities can not be ignored. Transhumance in the CAR is carried out by the CAR, Cameroon, Chad, Sudan and south Sudan herder groups

SAVING
LIVES
CHANGING
LIVES

Objective of the Study

- Identify pastoralist incident location in each subprefecture.
- Map the number of fatalities in each subprefecture.
- Perform a transhumance hotspots analysis on the data.
- Analyze trends and patterns
- Overlay of transhumance hotspots areas with IPC results of Sept 2021 to March 2022, ENSA 2021, cropland change 2021, security roads classification February 2022, and prioritize programming areas.



Data and Method

- **Data and Source**

- **Armed Conflict Location & Event Data Project (ACLED)** data from 2001 to 2022, for a period of 20 years was downloaded from the ACLED dashboard.

- Data is publicly available @ <https://acleddata.com/#/dashboard>

- **Methodology**

Step 1: Data was disaggregated based on transhumance incidence Numbers and fatalities by subprefecture.

Step 2: Dataset was tested for the presence of clustering using **Moran's I technique**.

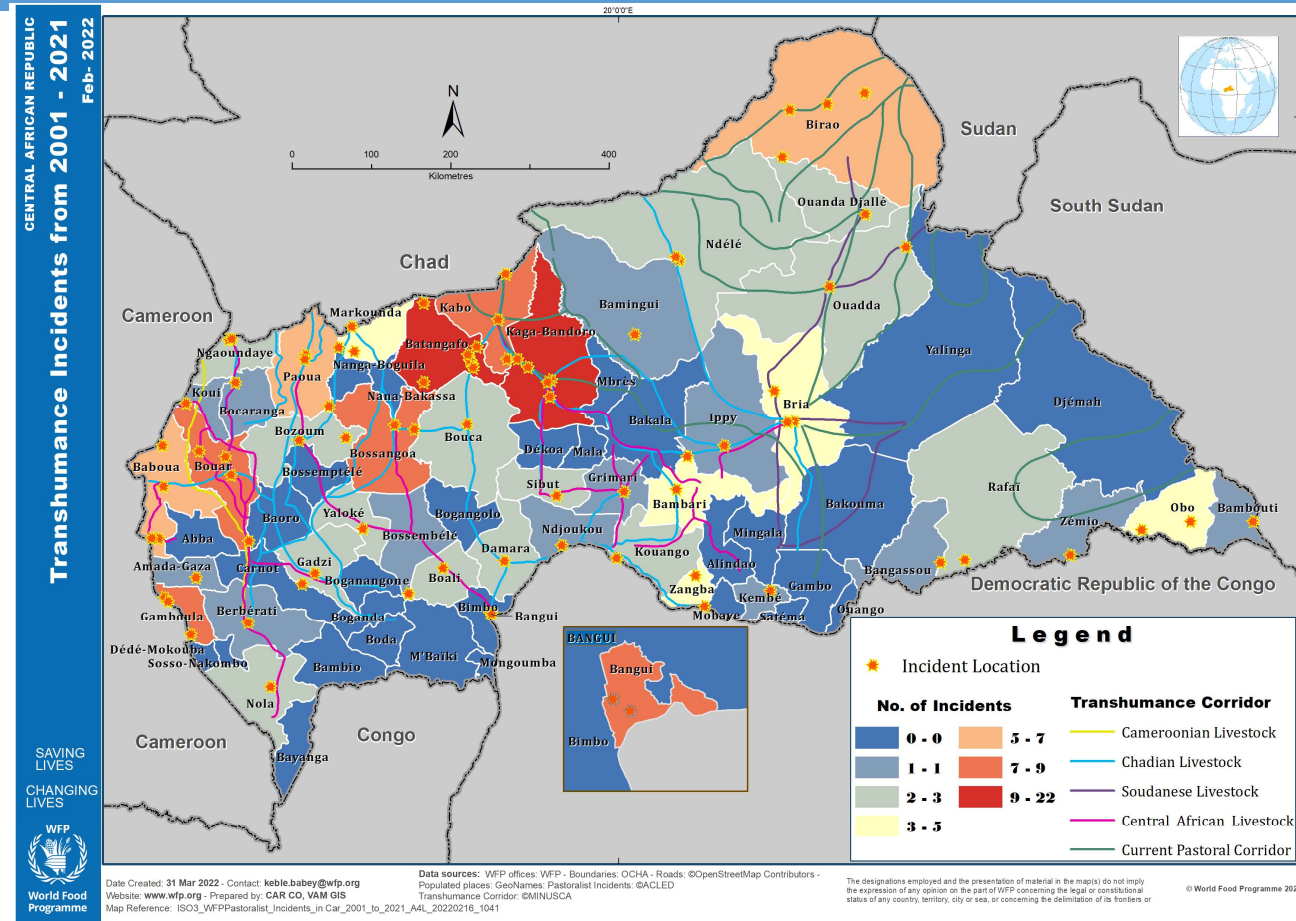
Step 3: A hotspot analysis was performed, and the output results obtained the statistical significance hotspot of each subprefecture.

Step 4: Overlay of transhumance hotspots areas with IPC results of Sept 2021 to March 2022, ENSA 2021, cropland change 2021, security roads classification February 2022, and prioritize programming areas.

Key Findings – objective 1/

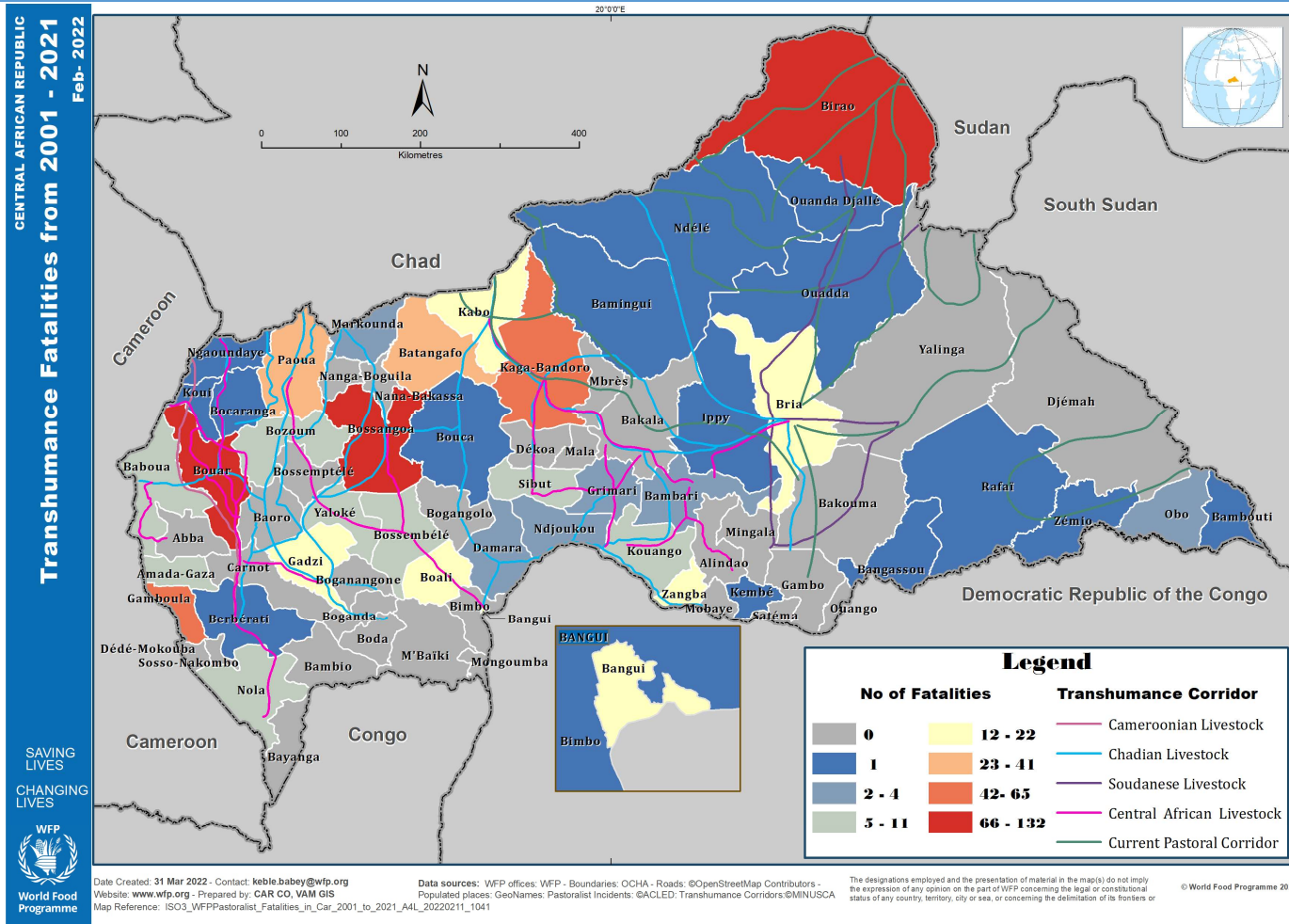
Identify pastoralist security incident location in each subprefecture

- 172 security incidents in CAR were related to transhumance.
- 22 incidents were particularly related to foreign pastoralists (Transboundary).
- CAR pastoralists were involved in 150 incidents, Chadian in 13 Sudanese in 7, and Cameroonian in 2 incidents
- Subprefectures with high pastoralist incidences included Kaga Bandoro, Batangafo, Kabo, Bossangoa, Bangui, Paoua, Bouar, Gamboula, Baboua, and Birao which recorded 5 to 22 incidents
- About 30 subprefectures didn't record pastoralist incidents despite the presence of transhumance corridors.



Key Findings – Objective 2/ Number of human fatalities in each subprefecture

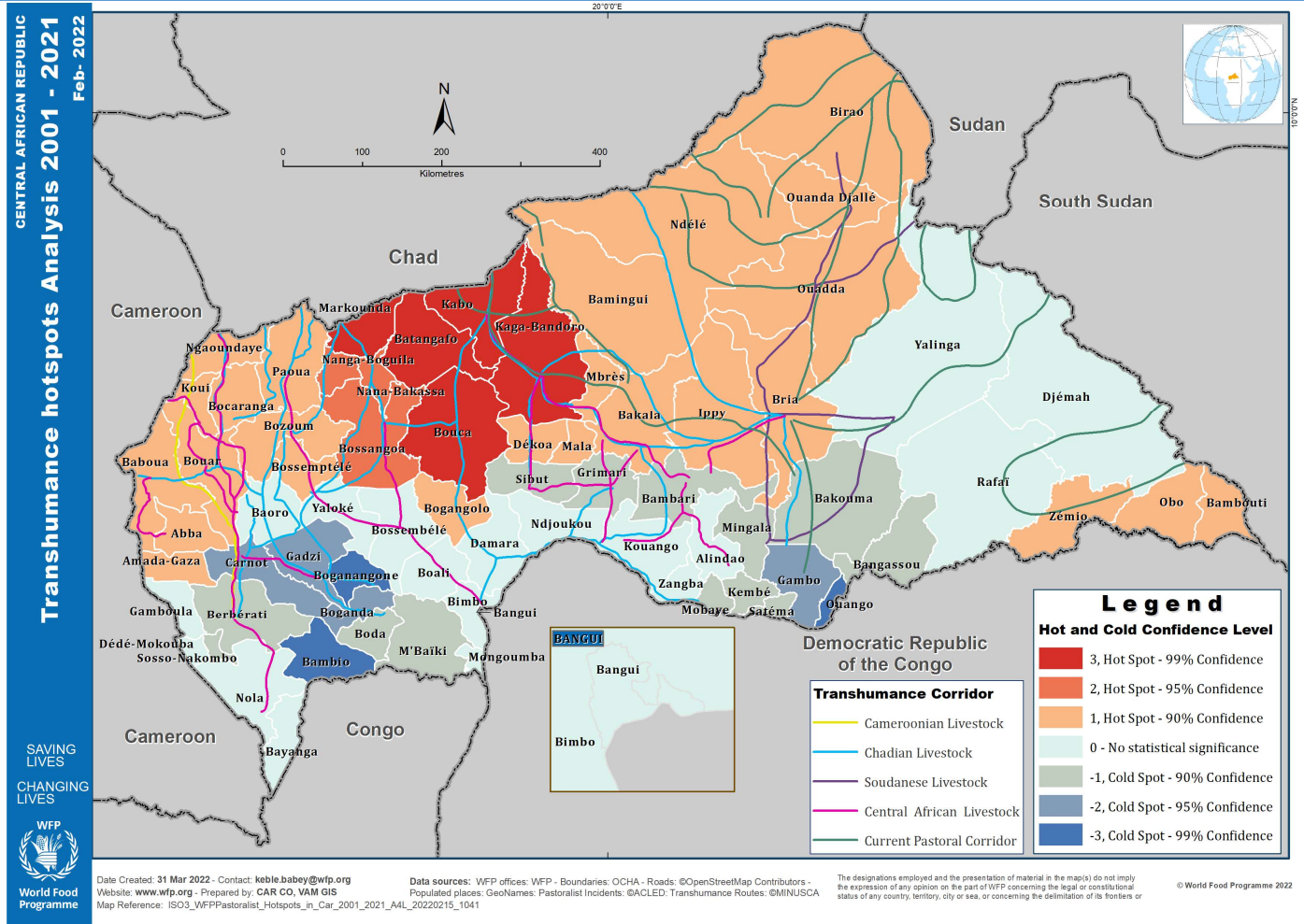
- 739 fatalities were recorded in the entire country.
- Incidents involving pastoralists from CAR led to 524 fatalities
- Fatalities involving transnational pastoralists ; -
Sudanese -129
Chadian -71
Cameroonian -10
- Fatalities from pastoralist incidents is very high in the subprefectures of Birao, Bossangoa, Bouar, Kaga Bandoro, Gamboula, Batangafo, and Paoua, Gadzi, Zangba, Kabo, Bria and Boali with total fatalities ranging from 13 to 132



Key Findings – Objective 3/ *Transhumance hotspots analysis*

- Results show a total of 33 subprefectures fall in the transhumance hotspot.
- 5 subprefectures as hotspots with a 99% confidence level. They include Batangafo, Kabo, Kaga Bandoro, Markounda, and Bouca.
- The rest of the northern and southeastern parts of the country (Zemio, Obo, and Bambouti) are hotspots at a 90 percent confidence level.
- Subprefectures of Gamboula, Nola Yaloké, Bossembele, Boali, Damara, Njoukou, Kouango, Zangba and Rafai registered pastoralist incidences but are not statistically significant.
- Bokouma, Gambo, Satéma Mobaye, Mbres, Bakala, Dekoa, Mala, Bogangolo, M'baiki, Boda, Boganda, Carnot, Sosso-Nakombo, Bimbo, Mingala, Alindao didn't register incidents and turn to cluster towards cold spots.
- Abba, Mbres, Dekoa, Mala, Nana Bakassa, Bakala, Bossemtélé did not register incidents and turned to cluster towards hotspots of 90 percent confidence level because they are surrounded by subprefectures with high values.

Key Findings – Objective 3/ Transhumance hotspots analysis



Key Findings – Objective 3/ *Trends and Patterns*

- Nana Bakassa, Nangha Boguila didn't experience pastoralist incidence but fall in the hotspot 95 percent
- Bossangoa recorded high number of incidents and fatalities but turns to cluster towards a hotspot of 95% confidence instead of 99% confidence.
- Gamboula and Kabo have registered the same number of incidents but fall within different statistical significance confidence levels
- Abba, Mbres, Dekoa, Mala, Bakala, Bossemtélé did not register incidents and turned to cluster towards hotspots of 90 percent confidence level.
- Subprefectures of Gamboula, Nola, Yaloké, Bossembélé, Boali, Damara, Njoukou, Kouango, Zangba and Rafai registered pastoralist incidences but are not statistically significant.
- Bokouma, Gambo, Satéma Mobaye, Bogangolo, M'baiki, Boda, Boganda, Carnot, Sosso-Nakombo, Bimbo, Mingala, Alindao didn't register incidents and turn to cluster towards 95 % cold spots

Key Findings – Objective 4/

Overlay transhumance hotspots areas with IPC results of Sept 2021 to March 2022, ENSA 2021, cropland change 2021, security roads classification February 2022, and prioritize programming areas.

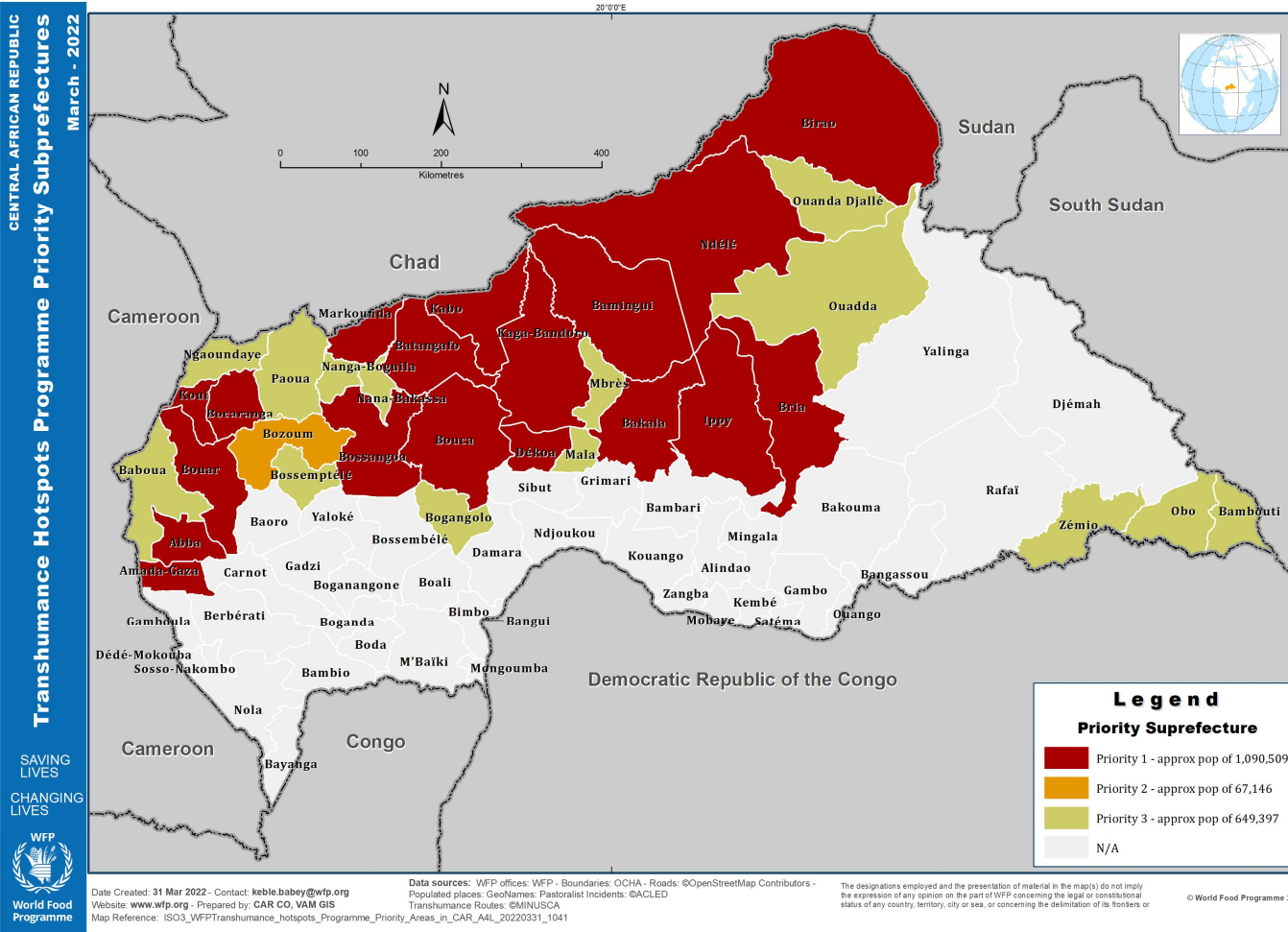
- The IPC results show that subprefectures in IPC phase 4/3 fall under transhumance hotspots areas
- ENSA 2021 results show that majority of subprefectures that scored high food insecure and high hunger index phase 3 and more (crisis, emergency, or famine) are found in transhumance hotspots areas.
- Cropland change results show, Ndele, Birao, Ippy, Bria, Bouca, Batangafo, Kabo, and Bouar which fall in the transhumant hotspots experienced significant decrease of cropland.
- The security road classification map of February 2022 made available by MINUSCA show majority of the roads of high risk and potential risks falling in areas of transhumance hotspots. This means travelling in these roads are costly, requiring careful planning, special equipment, and at times military escort. The roads of medium low risks fall in areas of cold spots and in areas of no statistical significance, except for the road of medium to low risk south of Bouca and Bogangolo which fall in a 95% hotspot.

Key Findings – Objective 4/

Prioritized programming areas.

- The results show 18 subprefectures in hotspots areas with challenging conditions ranging from high food insecurity to roads at high risks. Amada-Gaza, Abba, Bouar, Kouï, Bocaranga, Bossangoa, Bouca, Batangafo, Markounda, Kabo, Kaga-Bandoro, Dekoa, Bamingui, Bakala, Ippy, Bria, Ndélé, and Birao are considered priority 1 subprefectures
- Bozoum is a priority 2 subprefecture because it has medium challenges.
- The rest of the 14 subprefectures of Baboua, Bossempaté, Paoua, Ngaoundaye, Nana Bakassa, Nanga Boguila, Bogangolo, Mala, Mbres, Ouadda, and Ouanda Djalle are priority 3 because they have lesser challenges
- Overall, these 33 subprefectures have approx. 1,807,052 people living in transhumance hotspot areas.

Key Findings – Objective 4/ Pioritize programming areas.



Conclusion

- For immediate and long-term food security initiatives, physical access, asset creation, and transhumance conflict resolution mechanisms considerations, the priority levels should be considered.
- Priority 1 : These 18 subprefectures have a total population of approx. 1,090,509.
- Priority 2 : Bozoum is a priority 2 subprefecture because it has medium challenges, and it has a population of approx. 67,146.
- Priority 3 : All Priority 3 areas have a population of approx. 649,397.
- Nevertheless, in-depth analyzes are still necessary at the field level to better understand the recurrences of these incidents on the different corridors. Qualitative analysis would be needed with relevant stakeholders.

• **Merci / Singuila** 😊