



World Health  
Organization

African Region



# MONKEYPOX ON THE AFRICAN CONTINENT

-----2022 SITUATION-----

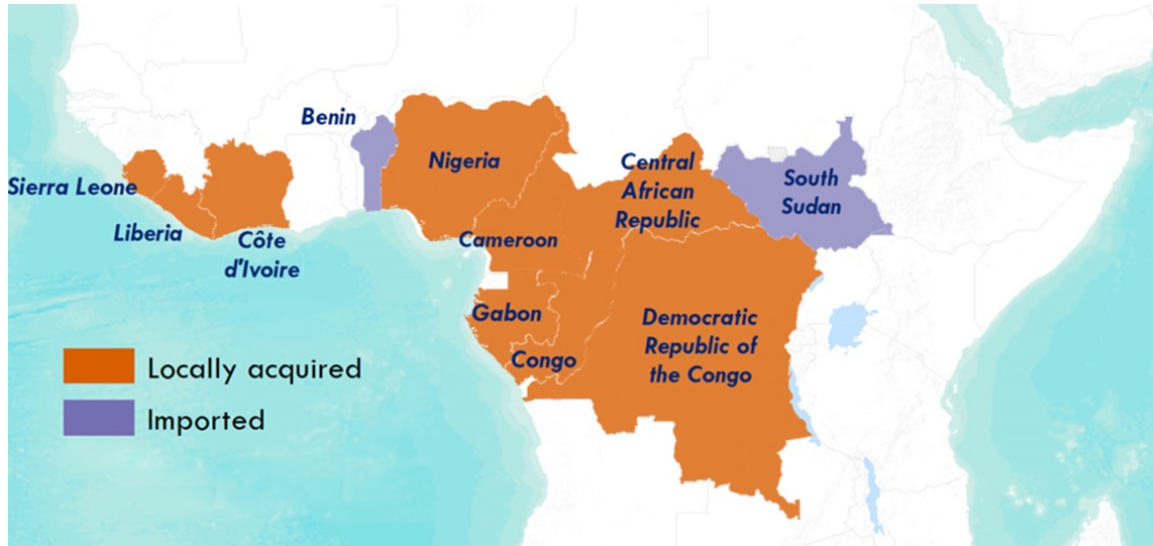
**HIR** Health Emergencies and  
Risk Assessment Programme

**EPR** Emergency Preparedness  
and Response

WHO Regional Office for Africa



# Monkeypox



- Monkeypox is a viral zoonotic disease
- Caused by a double-stranded DNA virus (Orthopoxvirus genus in the Poxviridae family)
- *Orthopoxvirus* genus includes variola virus (smallpox), vaccinia virus (smallpox vaccine), and cowpox virus.
- First human case was recorded in 1970 in the Democratic Republic of the Congo (DRC)
- 9+ African countries previously confirmed monkeypox cases.
- Reservoir unknown
- Two clades: West African and Central African clades – only Cameroon has both
- First discovered in monkeys in 1958.

# Global Situation of Monkeypox (as of 22 July 2022)

## Total Monkeypox cases, by WHO region

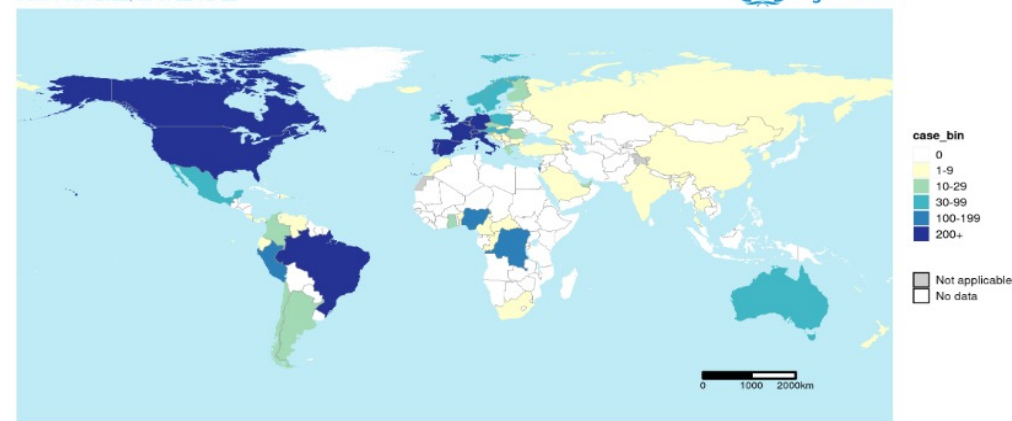
From 1 Jan 2022. Data as of 22 Jul 2022

	Total Confirmed Cases	Total Probable Cases	Total Deaths
European Region	11,865	0	0
Region of the Americas	3,772	73	0
African Region	301	0	5
Western Pacific Region	54	0	0
Eastern Mediterranean Region	21	0	0
South-East Asia Region	3	0	0
<b>Total</b>	<b>16,016</b>	<b>73</b>	<b>5</b>

Source: 2022 Monkeypox outbreaks: Global trends, WHO

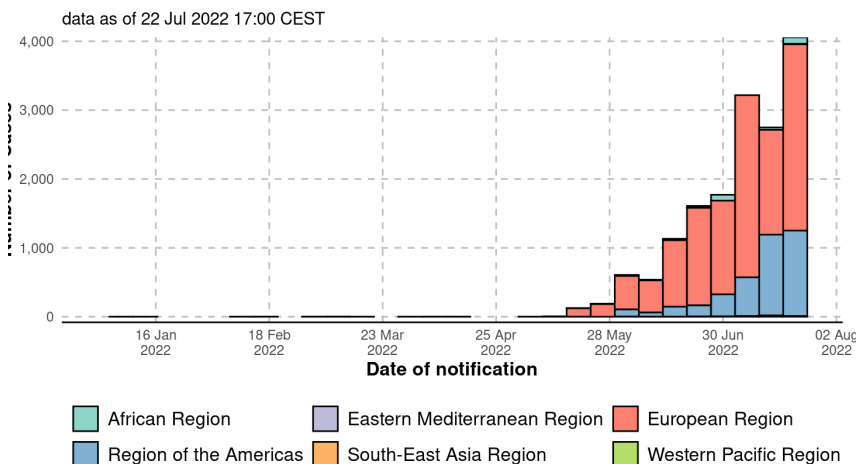
Confirmed cases of Monkeypox  
from 1 Jan 2022, as of 22 Jul 22

World Health Organization



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Data Source: World Health Organization  
Map Production: WHO Health Emergencies Programme  
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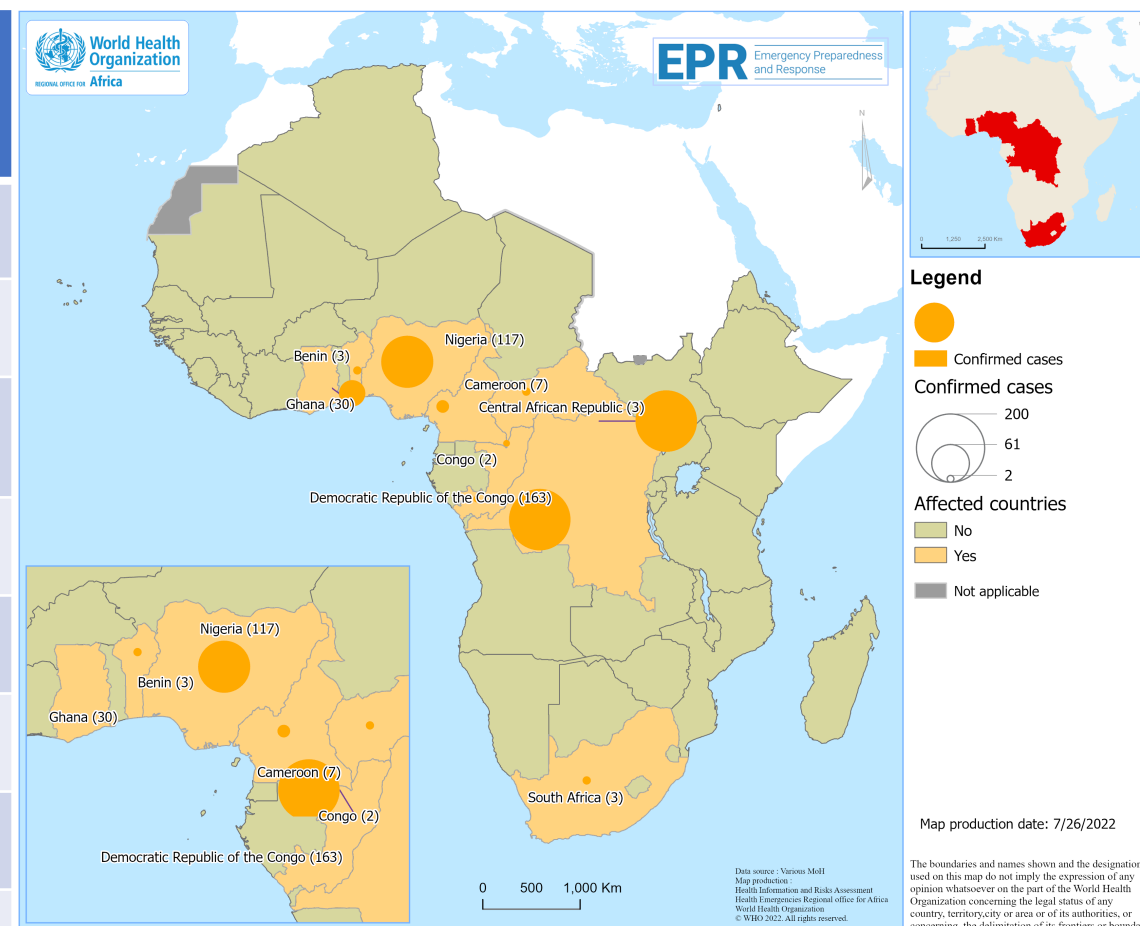


African Region Eastern Mediterranean Region European Region  
Region of the Americas South-East Asia Region Western Pacific Region

Source: WHO

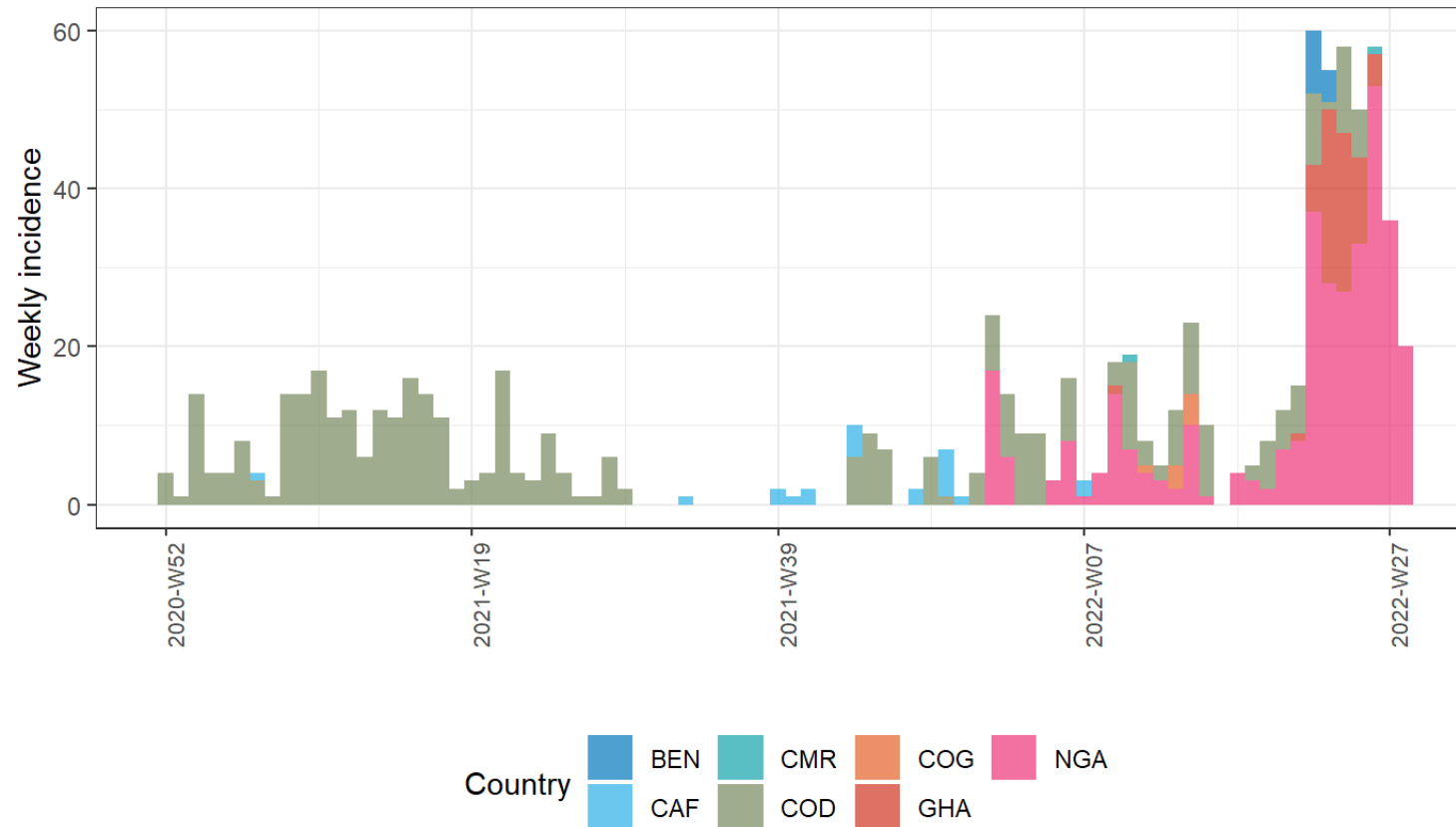
# Monkeypox Situation In Afro (Jan-July 2022)

Country	Confirmed cases	Confirmed /probable deaths	CFR (%)
Cameroon	7	0	NA
CAR	3	2	66 %
Republic of Congo	2	0	NA
DRC	163	0	NA
Nigeria	117	3	2.5 %
Ghana	34	0	NA
Benin	3	0	NA
South Africa	3	0	NA
Liberia	1	0	NA
Total	333	5	1.5 %



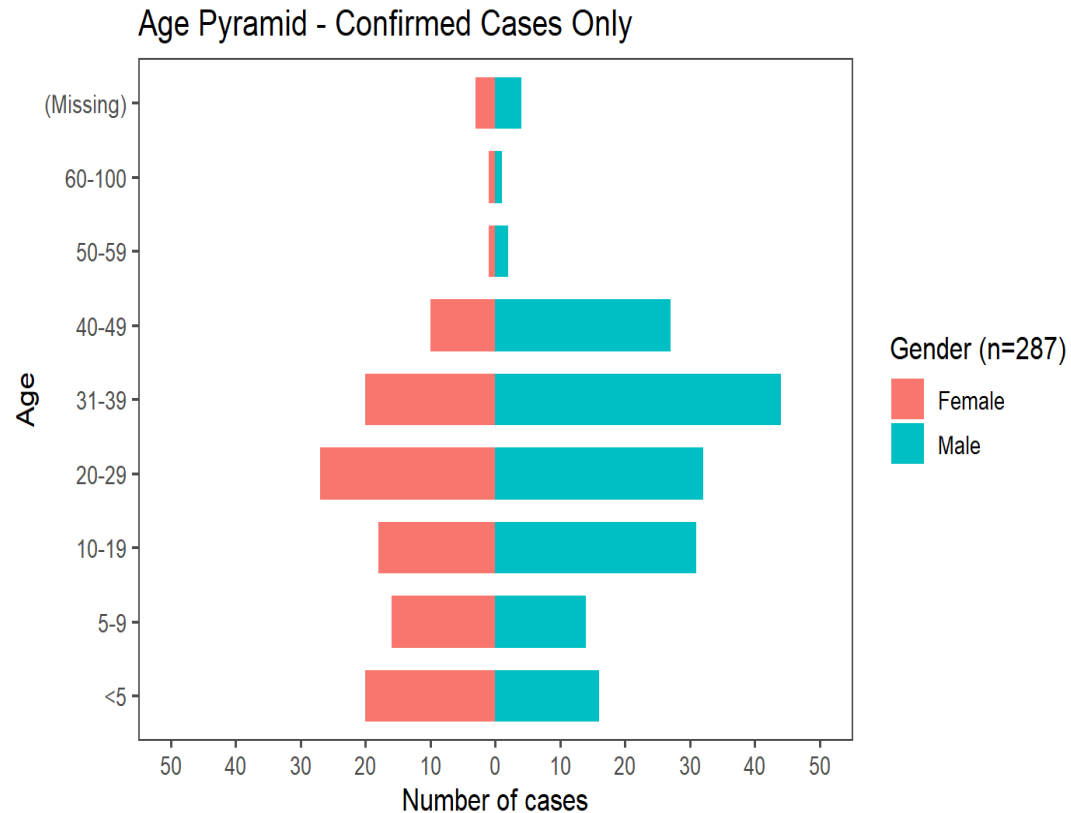
# Evolution of confirmed Monkeypox cases over time

Weekly Epi-curve: Suspected and Confirmed Cases



- Increasing trend in number of new confirmed cases starting from April 2022.
- increase driven by DRC, Ghana and Nigeria
- Nigeria and DRC have reported 87% (n=264) of all confirmed cases
- Reinforced monkeypox surveillance and laboratory capacity may explain the increase

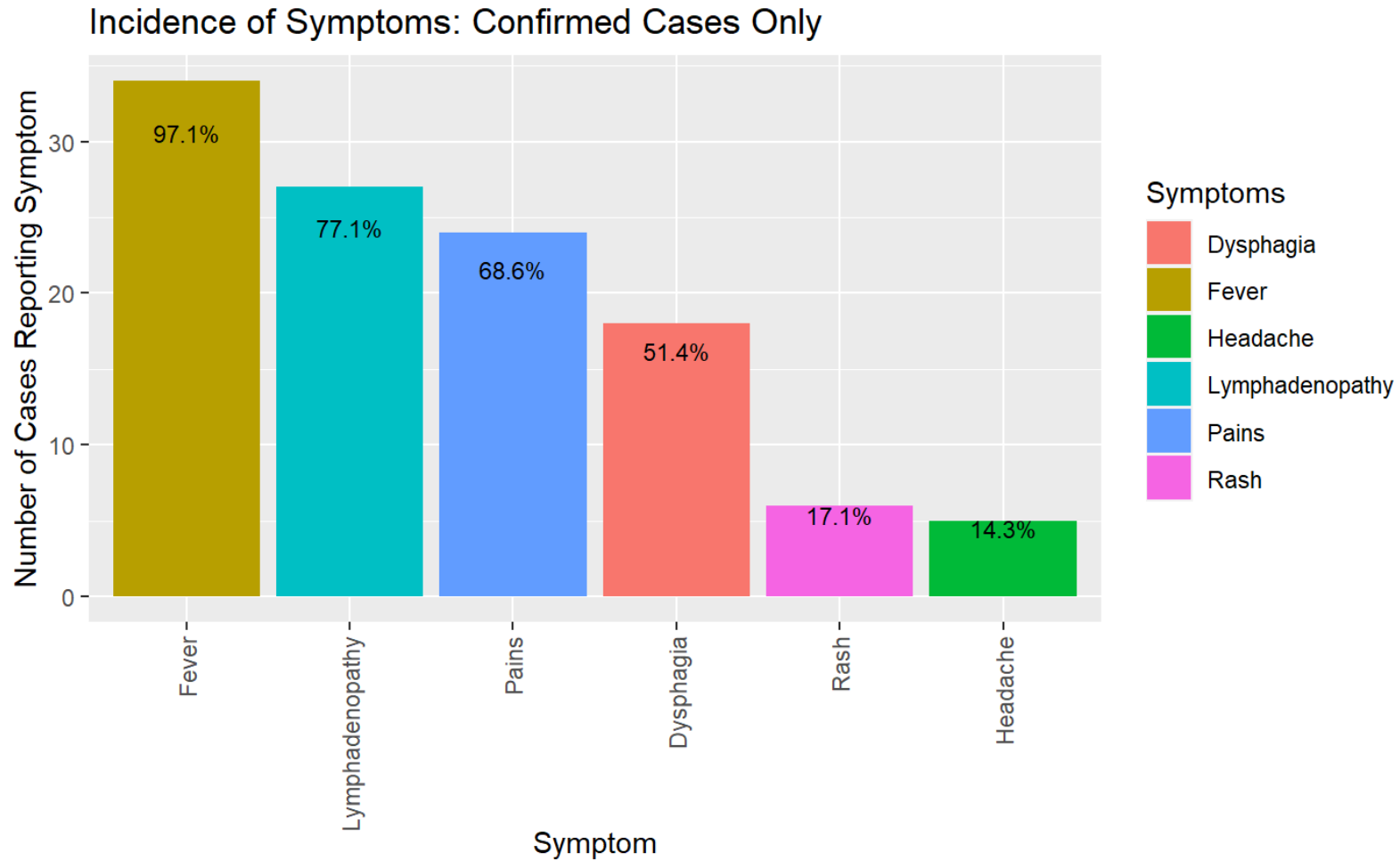
\*\*\* Four countries submitted linelists (Ghana, DRC, CAR, Nigeria and Congo). Data for Benin extracted from the laboratory report.



- 60 % of confirmed monkeypox cases are males
- Most of the confirmed cases are under the age of 39 years
- Median age of reported cases is 20 years (interquartile range: 9-32).

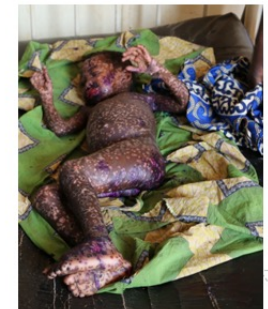
\*\*\*\*Data on gender and age are available for 86% of monkeypox cases (287 over 333) reported

# Clinical presentation of confirmed monkeypox cases



## Predominant signs and symptoms:

- Fever
- Lymphadenopathy
- Pains
- Dysphagia





## Recommended specimens for MPXV detection:

- Fluid from skin lesions (swab)
- Swabs of lesion surface
- Roofs from more than one lesion, or lesion crusts.

## Recommended methods for MPXV detection:

Real-time PCR

- MPXV primers **OR**
- Clade specific primers

## Available detection kits in the marketplace for MPXV detection<sup>#</sup>

- Shanghai ZI Bio-Tech Co. Life river Monkeypox Virus Real time PCR kit<sup>^\*</sup>
- Tib Molbiol, LightMix Modular Monkeypox + 1-step RT polymerase<sup>^\*</sup>
- RADI Monkey Detection Kit
  - validated by INRB
- Bioperfectus Monkeypox Virus PCR kits (Jiangsu Bioperfectus Technologies Co., Ltd)
  - validated by NCDC
  - Central African clade & West African clade detectable



<sup>#</sup> No kits EUL and above kits/manufacturers are not endorsed or recommended by WHO

<sup>\*</sup> selected for procurement by WHO following desk review of all available options

<sup>^</sup> being validated by selected laboratories globally



**Sequences from 8 countries in AFRO are in public databases.**

## Sequencing during the current event

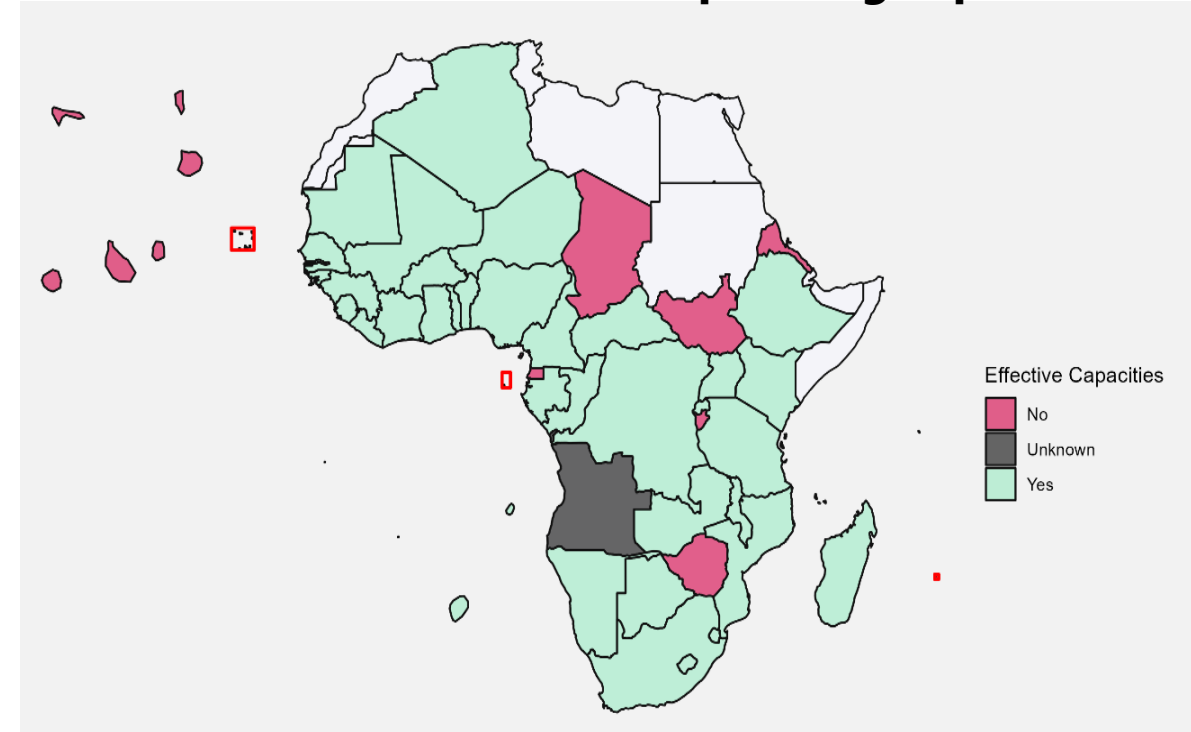
### NCDC - Nigeria

- Sequenced a total 90 samples
- All sequences are identified as Clade 2

### NICD – South Africa

- Sequenced 3 samples, not classified yet

## Countries with effective sequencing capacities



- All 32 COVID sequencing labs have the capacity to sequence any other pathogen
- Encourage labs to deposit monkeypox sequence data on public platforms such as GISAID or Genbank



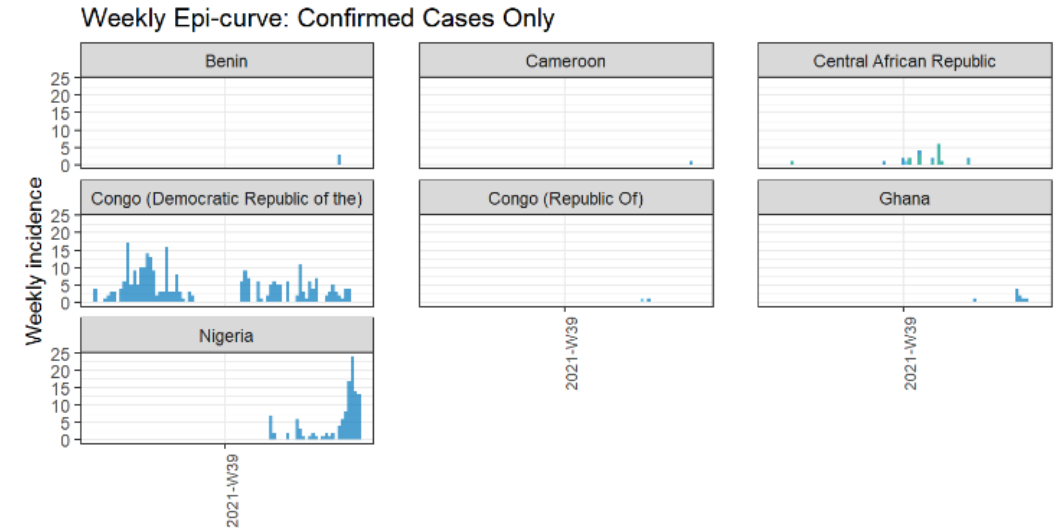
African Region

# COUNTRIES SITUATION REVIEW



# Evolution of confirmed Monkeypox cases over time (by country)

- ❓ We observe an increasing trend in confirmed cases for Nigeria, DRC and Ghana.
- ❓ Ghana reported many cases during the last months (July) : 5 to 34 confirmed cases



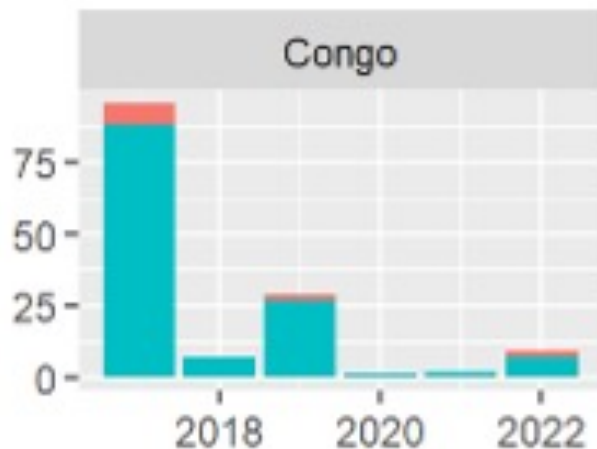
Summary of Monkeypox cases

As of 22 Jul 2022

	Total Cases	Total cases per 1M inhabitants	Cases in past 7 days	7-day % change in cases	Days since last report	Date of first reported case
African Region						
Democratic Republic of the Congo	163	2	78	1,000%	0	13 Jun 2022
Nigeria	101	0	17	-23%	0	02 Jan 2022
Ghana	19	1	0	0%	0	13 Jun 2022
Cameroon	7	0	0	-100%	0	13 Jun 2022
Benin	3	0	0	0%	0	15 Jun 2022
Central African Republic	3	1	0	0%	0	13 Feb 2022
South Africa	3	0	0	-100%	0	23 Jun 2022
Congo	2	0	0	0%	0	21 May 2022



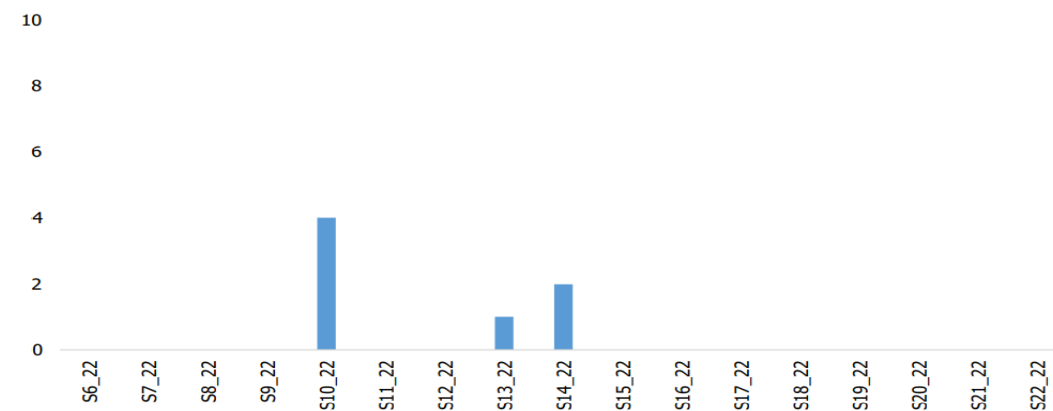
## Republic of Congo situation



- Monkeypox outbreaks were previously reported in Congo.
- 132 cases: 9 confirmed and 7 deaths reported in the last 5 years
- 80% of all cases reported in Likouala province
- Cuvette and plateau provinces reported cases in 2019

**Source:** Monkeypox investigation report, Republic of Congo

## Monkeypox outbreak in 2022

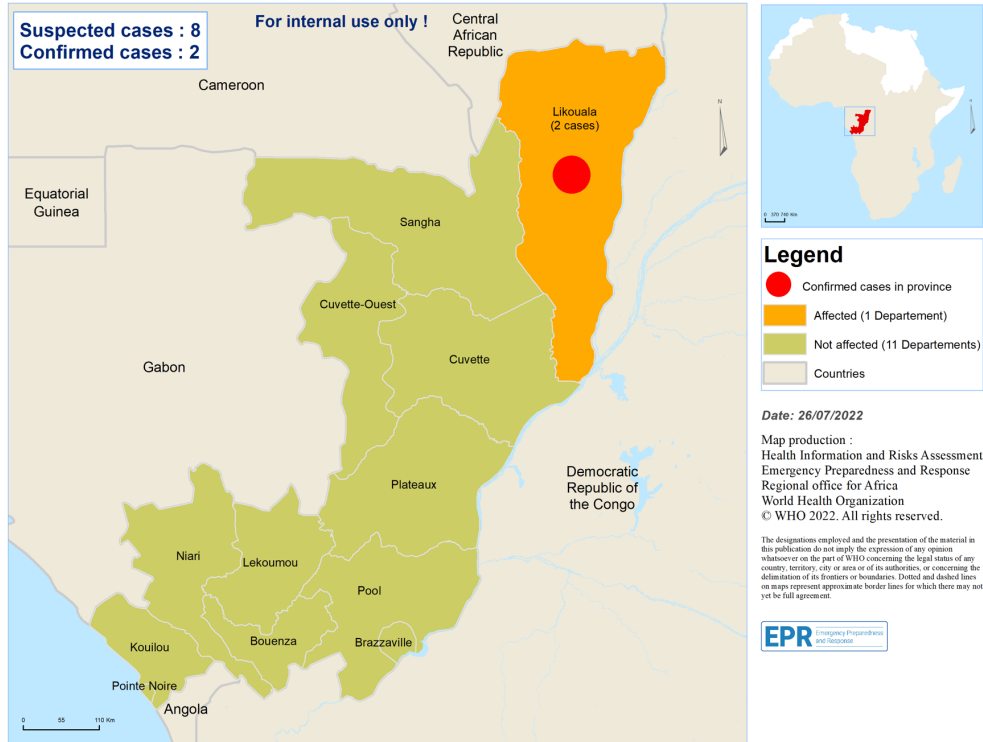


- Eight suspected cases
- Two confirmed cases
- 75% of suspected cases were females
- Four cases from the same family
- Consumption of meats of a local animal: Katoukatou or potto (the animal had an abdominal wound)

# Origin of cases(Congo)

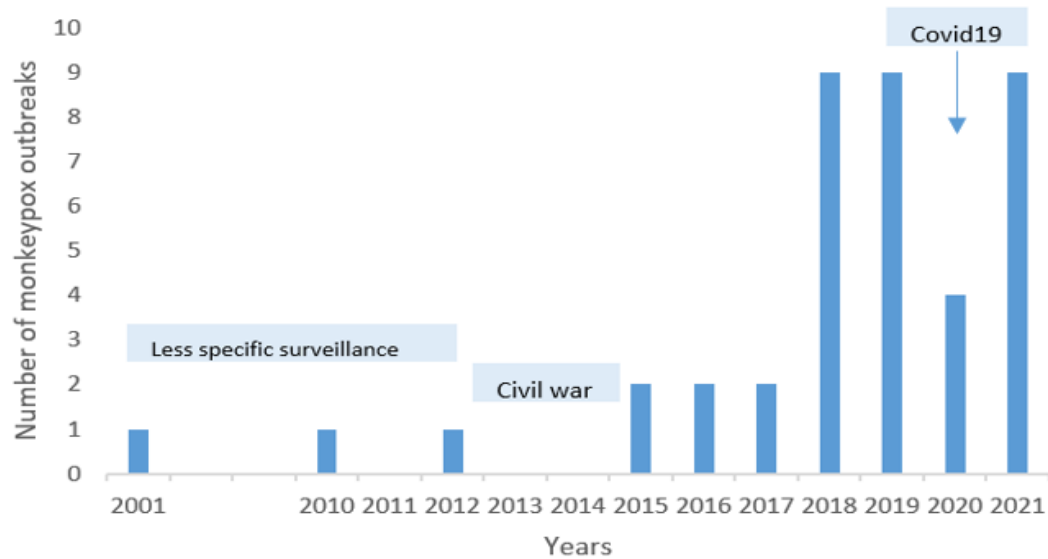
- All cases were reported from Bohona health area
- Gangania village(Bush)
- Likouala department

## Confirmed cases of monkeypox by departement in Congo

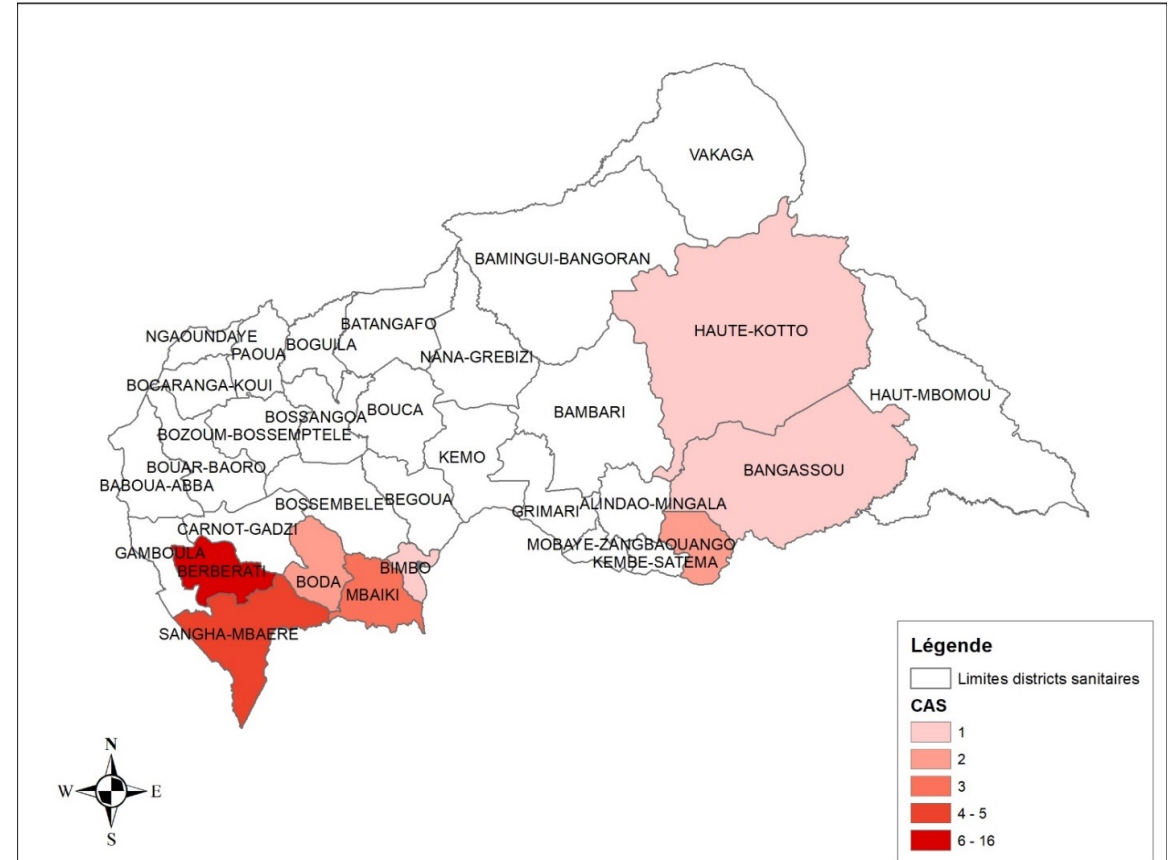


Confirmed cases : 3 | probable cases: 2

Figure 2: Annual distribution of monkeypox outbreaks in the CAR, 2001-2021 (n=40)

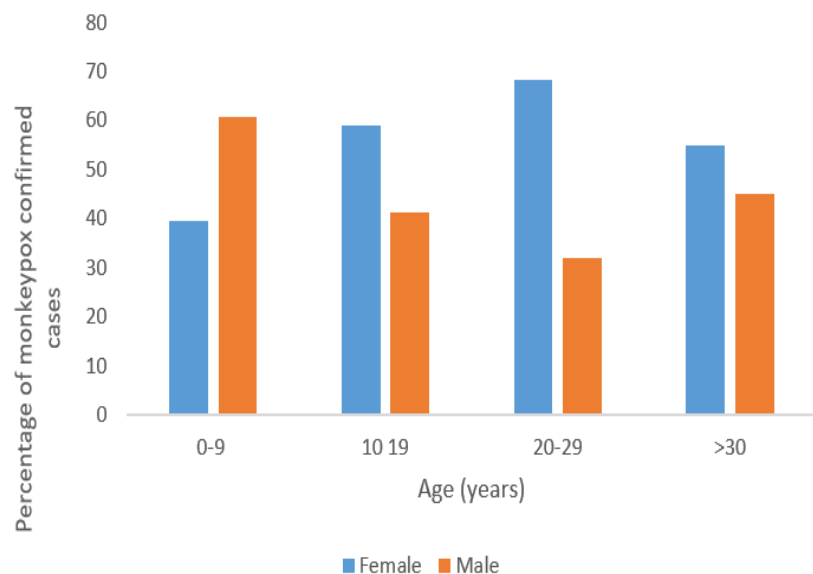


Source: country presentation



Répartition des cas confirmés de MPX par district sanitaires entre 2021-22 en RCA





## Mean age DRC:

11.9 years (Rimoin AW et al., 2010)

or 15,4 years (Rimoin AW et al., 2007)

## Mean age Nigeria :

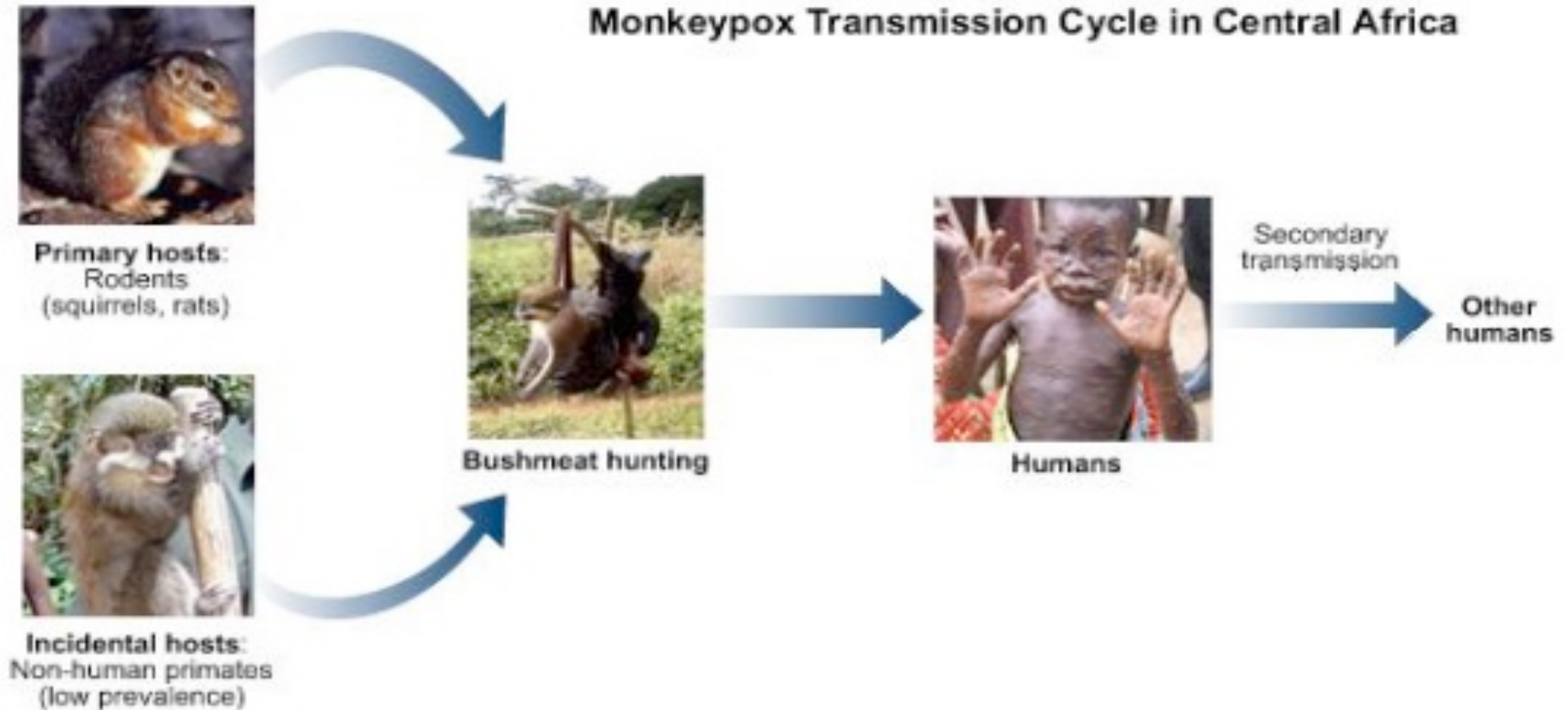
29 years (Yinka Ogunleye A et al., 2019)

Table 1: Characteristics of the participants investigated during monkeypox outbreaks in the CAR, 2001-2021 (n=538)

Characteristics	Confirmed cases (n= 99)	Suspected cases (n = 61)	Contacts (n=378)	P value
Gender				P= 0.65
Female	51 (53.1 %)	37 (60.7 %)	212 (56,1 %)	
Male	45 (46.9 %)	24 (39.3 %)	166 (43,9 %)	
Missing data	3	0	0	
Age (years), Median (IQR)	15.5 (5.5-27)	8 (2-23)	20 (10-35)	
Age groups (years)				P< 0,001
0-9	33 (35.9 %)	30 (50.9 %)	81 (23.5 %)	
10-19	17 (18.5 %)	9 (15.2 %)	88 (25.5 %)	
20-29	22 (23.9 %)	11 (18.6 %)	55 (15.9 %)	
> 30	20 (21.7 %)	9 (15.3 %)	121 (35.1 %)	
Missing data	7	2	33	
Born before 1980*				P= 0.04
Yes	2 (2.2 %)	1 (1.7 %)	27 (7.8 %)	
No	90 (97.3 %)	58 (98.3 %)	318 (92.2 %)	
Missing data	7	2	33	

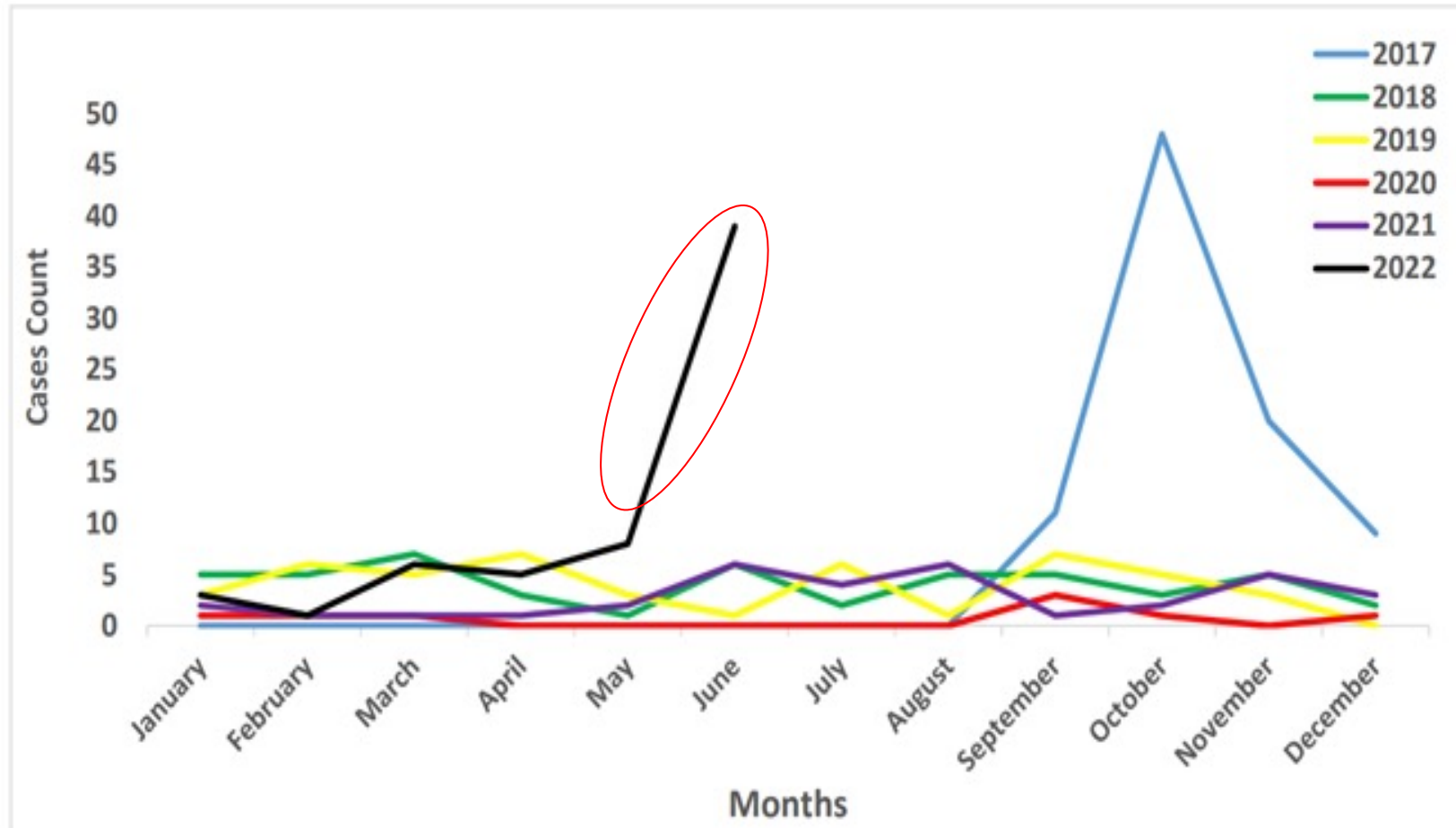
Source: country presentation

# Monkeypox Transmission Cycle in Central Africa



Source: country presentation

# Monkeypox situation in Nigeria

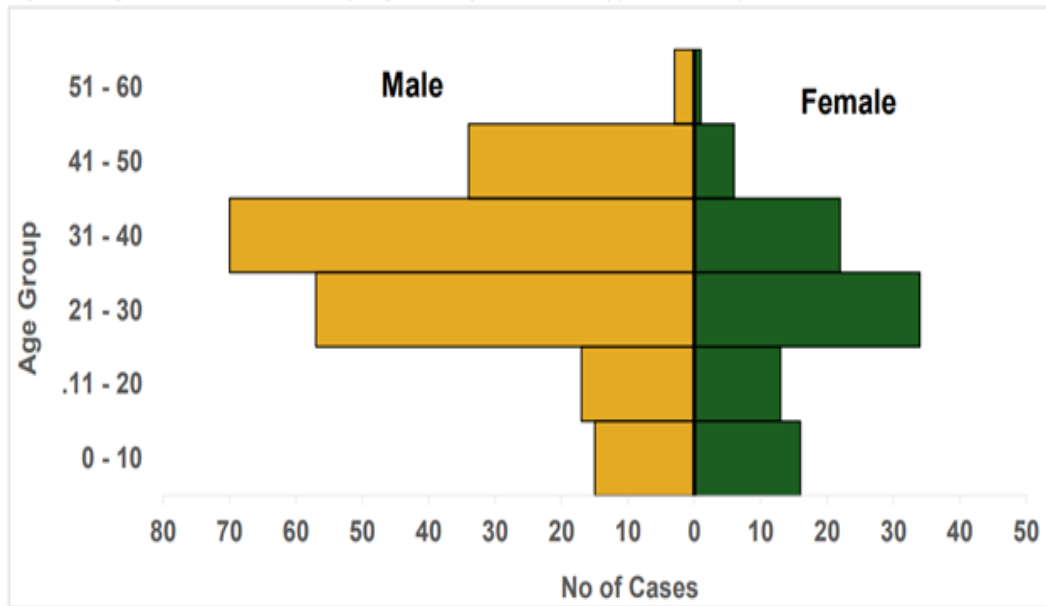


Source: NCDC situation report

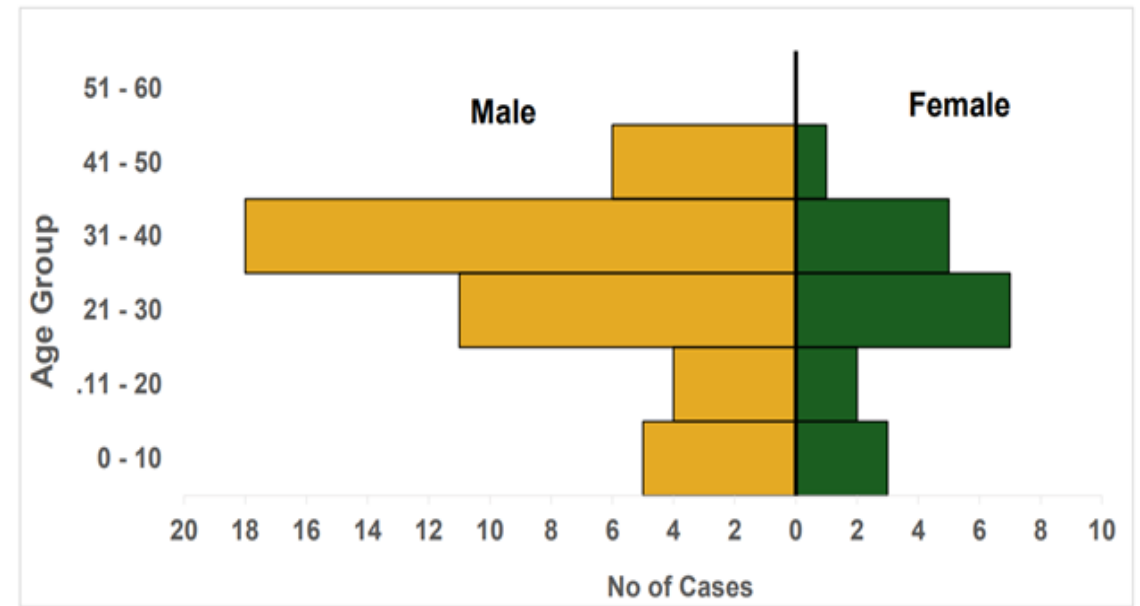
- One of the re-emerging diseases in Nigeria
- First human in 1970, Two cases in 1978
- Re-emergence of the disease in 2017
  - Cases occur in central and west Africa in proximity to tropical rain forest
- The uptick in Monkeypox cases starts in May 2022.
- We have now surpassed the peak number of cases seen in 2017 when MPX re-emerged.
- Ongoing efforts to strengthen surveillance increased awareness from global news headlines, and investments in RCCE may explain partially the increase.
- Confirmed cases:101
- Deaths:3
- All cases are **West African strain**



# Age-sex distribution of confirmed Monkeypox cases in Nigeria, 2017 – 2022



Age and sex distribution of confirmed monkeypox cases from 1 st January to 26th June 2022



Age and sex distribution of confirmed monkeypox cases September 2017 – 26th June 2022

The uptick in Monkeypox cases starts in May 2022.

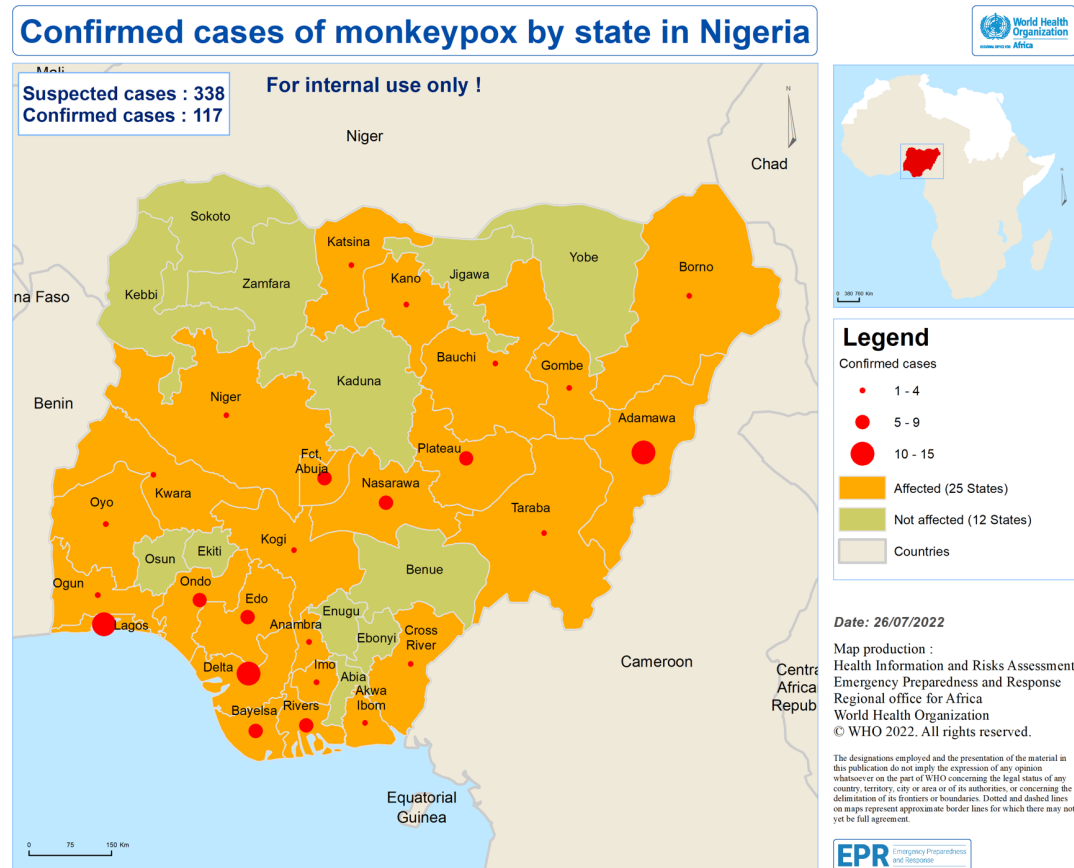
We have now surpassed the peak number of cases seen in 2017 when MPX re-emerged.

Ongoing efforts to strengthen surveillance increased awareness from global news headlines, and investments in RCCE may explain partially the increase.

**Source:** Nigeria CDC situation report

# Map of Nigeria Showing Confirmed Cases by states, Sept. 2017 – 26th June 2022

## Nigeria Map Showing States with Confirmed MPX Cases from January – 17<sup>th</sup> July 2022





- ❑ Nine countries have reported confirmed outbreaks of monkeypox in the region from January to July 2022
- ❑ Most cases (> 90 %) have been reported in countries that have notified monkeypox cases previously.
- ❑ Ghana and South Africa need more attention since they have not reported cases of Monkeypox outbreaks previously.
- ❑ High burden areas for human monkeypox cases are mostly clustered across Nigeria, DRC, Congo, Central African Republic, and Cameroon
- ❑ WHO AFRO is providing necessary support to improve surveillance and laboratory capacity including genomic surveillance in affected countries.



Country	Year	Location	No of cases	No of deaths
Cameroon	1979	Mfou District	1	0
	1980	Nkoteng	1	0
Central African Republic	1984	Sangha Administrative Region	6	0
	2001		4	
	2010		2	0
	2015	Mbomou Prefecture, Bakouma and Bangassou subprefectures	12	3
	2016	Haute-Kotto Health District, Yalinga	11	1
	2017	Mbaiki Health District	2	0
	2017	Ouango Health Districts	6	0
	2017	Abengourou	1	0
Côte d'Ivoire	1971		1	
	1981		1	
Democratic Republic of the Congo	1970-2017	Multiple provinces	>1,000/year	
Gabon	1987	Region between Lambarene and N'Djole	5	2
Liberia	1970	Grand Geddah	4	0
	2017	Rivercess and Maryland counties	2	0
Nigeria	1971	Aba State	2	0
	1978	Oyo State	1	0
	2017–2018	Multiple states	89	6
Republic of Congo	2003	Likouala Region	11	1
	2009	Likouala Region	2	0
	2017	Likouala Region	88	0
Sierra Leone	1970	Aguebu	1	0
	2014	Bo	1	1
	2017	Pujehan District	1	0
Sudan	2005	Unity State	19	0