

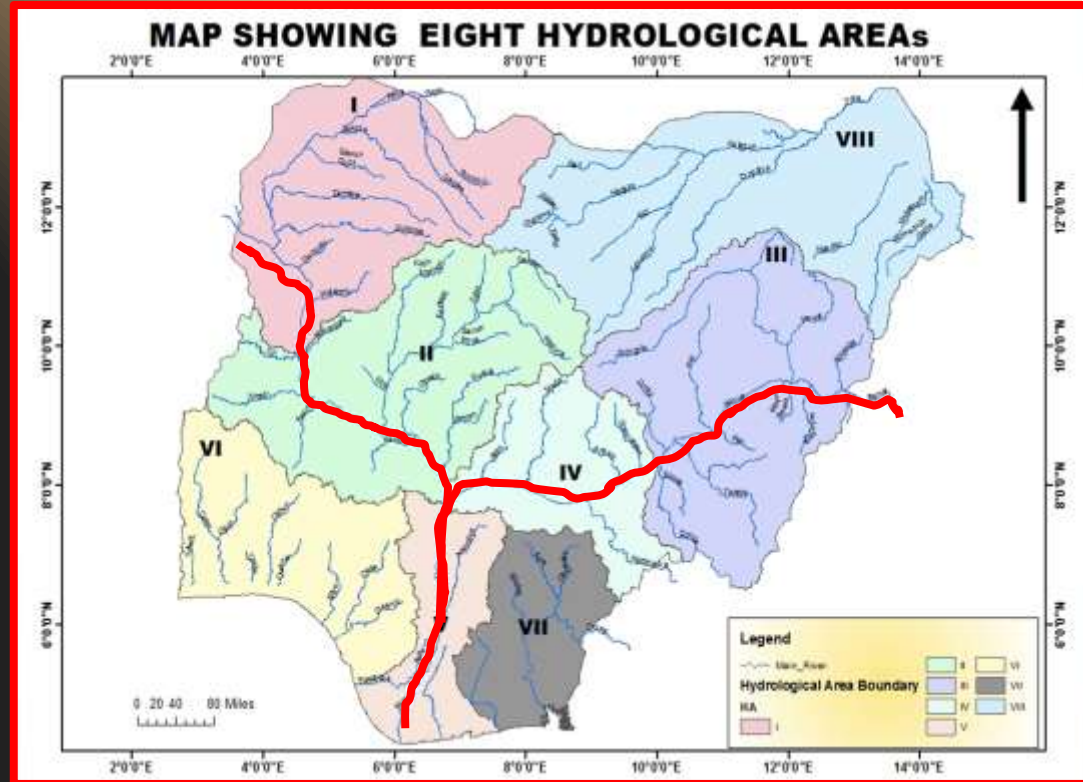


NIGERIA HYDROLOGICAL SERVICES AGENCY'S EFFORTS TOWARDS FLOOD FORECASTING IN NIGERIA

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Nigeria Drainage Basin and Hydrological Areas

□ The Nigeria Drainage System have been divided into Eight (8) Hydrological Areas (HAs) based on the drainage patterns. The HAs are being used for evaluation and assessment of the nation's vast water resources potentials and to create the disaster risk management programme for flooding in the country.



Activities of the Agency in relation to Flood Monitoring and Forecasting in Nigeria

Annual Flood Outlook (AFO)

The aim of AFO is to present probable flood scenarios in a given year. The 2022 AFO was presented in three (3) Scenarios:

- ❑ Scenario 1 (months of April – June) AMJ
- ❑ Scenario 2 (months of July – Sept.) JAS
- ❑ Scenario 3 (months of Oct. – Nov.) ON

Highly Probable Risk Areas

April – June (57 LGAs)

July – Sept. (220 LGAs)

Oct. – Nov. (38 LGAs)

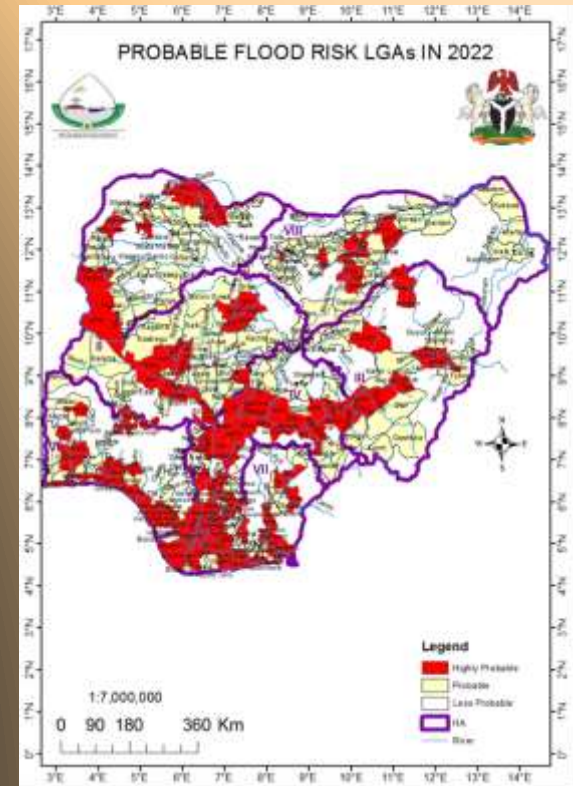
Probable Risk Areas

April – June (45 LGAs)

July – Sept. (140 LGAs)

Oct. – Nov. (54 LGAs)

2022 Annual Flood Outlook (AFO)



Highly Probable Flood Risk LGAs in HA I

S/N	State	LGAs		
		April – June	July – September	October – November
1.	Kebbi	Bagudo	Bagudo, Birnin Kebbi	
2.	Niger	Borgu	Borgu	
3.	Sokoto		Goronyo, Sabon Birni, Isa, Shagari	
4.	Zamfara		Zurmi	

Highly Probable Flood Risk LGAs in HA II

S/N	State	LGAs		
		April – June	July – September	October – November
1.	Ekiti		Oye	
2.	FCT Abuja	Municipal Area Council	Municipal Area Council	
3.	Niger	Mokwa	Mokwa, Gbako, Wushishi, Lavun	
4.	Kaduna		Igabi, Kaduna North, Chikun, Kaduna South	Kaduna South
5.	Kogi		Lokoja	
6.	Kwara	Pategi, Edu	Pategi, Offa, Edu, Oyun	

Highly Probable Flood Risk LGAs in HA V

S/N	State	LGAs		
		April – June	July – September	October – November
1.	Anambra	Ogbaru, Idemili North, Oyi Anambra East, Onitsha North, Onitsha South, Anambra West	Ihiala, Ogbaru, Anaocha, Idemili North, Oyi, Anambra East, Onitsha North, Orumba South, Njikoka, Orumba North, Ayamelum, Aguata, Awka South, Idemili South, Onitsha South, Anambra West	
2.	Bayelsa	Southern Ijaw, Ekeremor, Kolokuma/Opokuma, Yenegoa, Sagbama, Nembe	Southern Ijaw, Ekeremor, Kolokuma/Opokuma, Yenegoa, Sagbama, Ogbia, Nembe	Brass, Southern Ijaw, Nembe
3.	Delta	Oshimili South, Patani, Ndokwa East, Ughelli South, Oshimili North	Ndokwa West, Aniocha North, Oshimili South, Patani, Ndokwa East, Ughelli South, Ughelli North, Oshimili North, Isoko North, Isoko South	
4.	Edo	Etsako East, Esan South-East	Etsako East, Esan South-East	
5.	Imo		Oguta, Ideato South, Ideato North, Njaba, Nkwere, Ohaji/Egbema, Nwangele, Isu, Orsu, Oru East, Orlu	Ideato North, Isu
6.	Kogi	Ajaokuta	Idah, Dekina, Igalamela-Odolu, Ajaokuta, Ofu, Okene	Dekina
7.	Rivers	Ogba/Egbema/Ndoni, Degema, Bonny, Port-Harcourt, Okrika, Asari-Toru	Ahoada East, Ogba/Egbema/Ndoni, Andoni, Degema, Ogu Bolo, Ahoada West, Bonny, Abua/Odual, Port-Harcourt, Obio/Akpor, Ikwerre, Gokana, Okrika, Asari-Toru, Eleme, Opobo/Nkoro, Emuoha	Dekina, Andoni, Degema, Ogu Bolo, Bonny, Port-Harcourt, Gokana, Okrika, Asari-Toru, Opobo/Nkoro, Akuku Toru

Highly Probable Flood Risk LGAs in HA III

S/N	State	LGAs	
		July – September	October – November
1.	Adamawa	Yola North, Yola South, Numan, Larmurde, Demsa	
2.	Bauchi	Alkaleri	
3.	Gombe	Funakaye	
4.	Taraba	Gassol, Ardo-Kola, Jalingo	Ibi, Wukari
5.	Yobe	Fika	

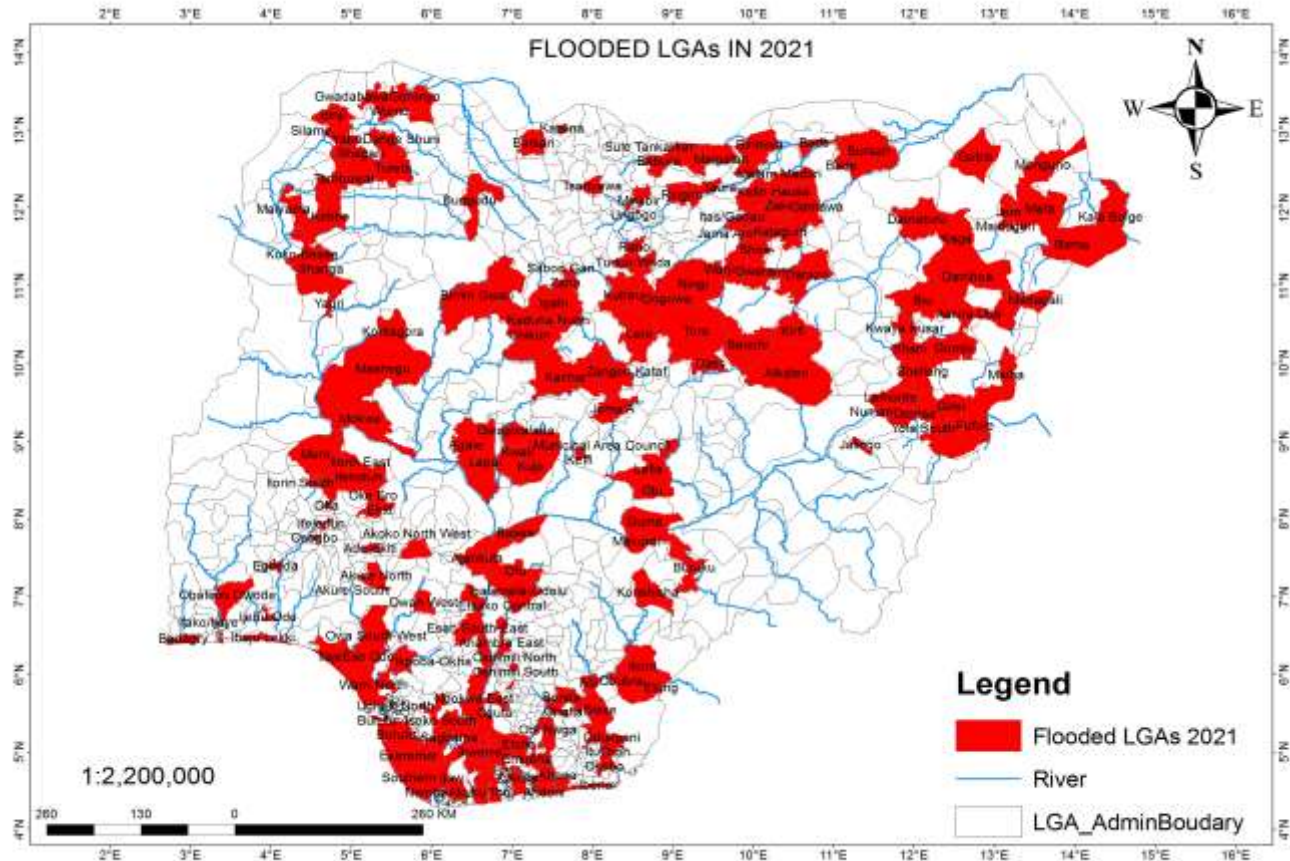
Highly Probable Flood Risk LGAs in HA IV

S/ N	State	LGAs		
		April – June	July – September	October – November
1.	Benue		Bukuru, Agatu, Makurdi, Tarka, Gwer West, Logo, Guma	Guma
2.	Kogi	Bassa	Bassa, Omala	
3.	Nasarawa		Nasarawa, Toto, Doma, Awe	Toto

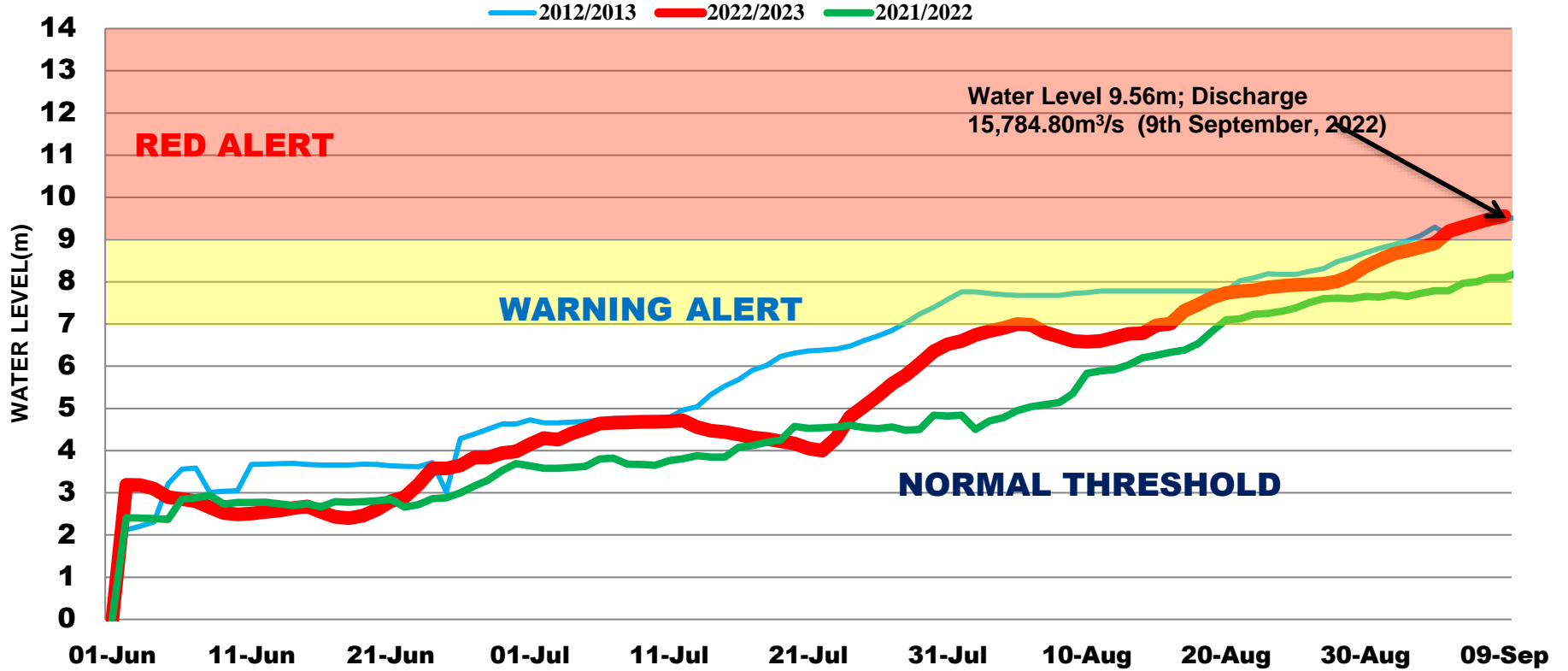
Highly Probable Flood Risk LGAs in HA VII

S/N	State	LGAs		
		April – June	July – September	October – November
1.	Abia		Osisioma Ngwa, Obi Nwga, Umu-Nneochi, Umuahia South, Umuahia North, Isiala-Ngwa North, Isiala-Ngwa South	
2.	Akwa Ibom	Mbo, Oron, Eastern Obolo, Ibeno	Mkpat Enin, Nsit Atai, Okobo, Mbo, Udung Uko, Eket, Onna, Oron, Eastern Obolo, Itu, Ikot Abasi, Ibiono Ibom, Uruan, Ibeno, Urue Offong/Oruko	Mbo, Eastern Obolo, Ibeno
3.	Cross River	Calabar South, Calabar Municipal, Akpabuyo	Calabar South, Calabar Municipal, Akpabuyo, Abi, Yala, Biase, Odukpani, Ikom	
4.	Ebonyi		Izzi, Afikpo North	
5.	Imo	Owerri West	Owerri West, Mbatoli, Okigwe, Unuimo, Isiala Mbano	Owerri West
6.	Rivers	Oyigbo	Oyigbo, Etche, Tai, Khana	

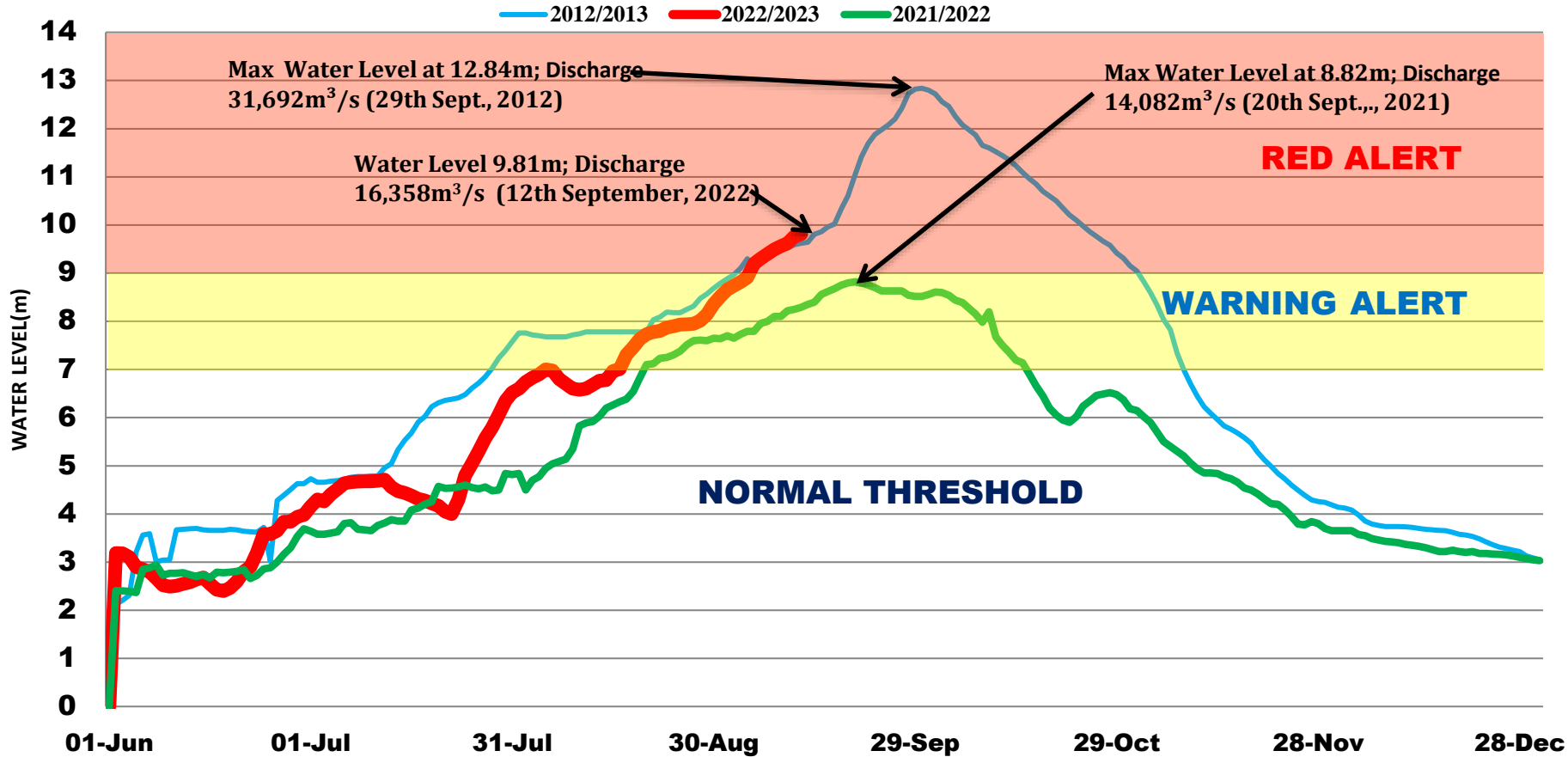
Flood Incidence Map of 2021 – 2022 Hydrological Year



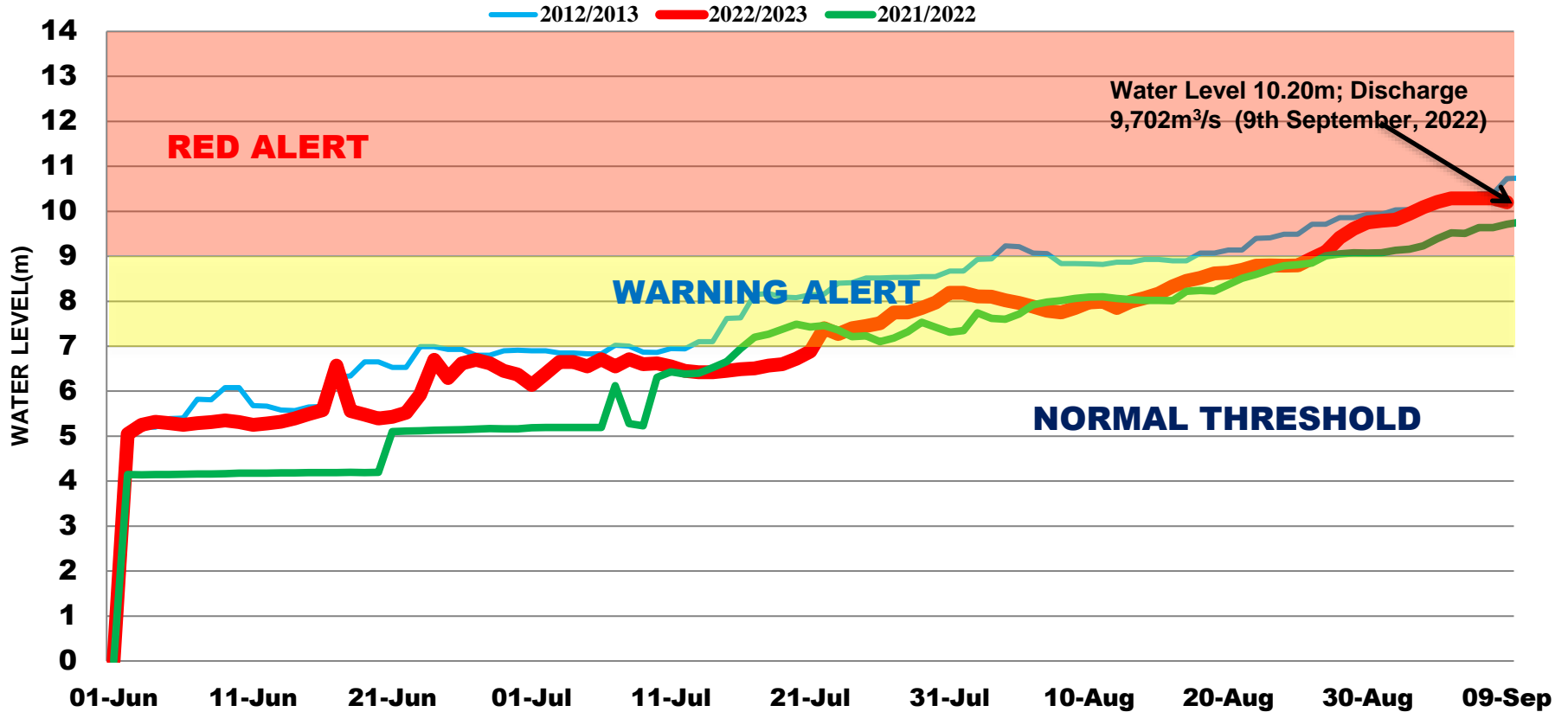
COMPARATIVE HYDROGRAPHS OF RIVER NIGER AT LOKOJA FOR 2012/2013, 2021/2022 & 2022/2023
HYDROLOGICAL YEARS SHOWING DIFFERENT ALERT LEVELS



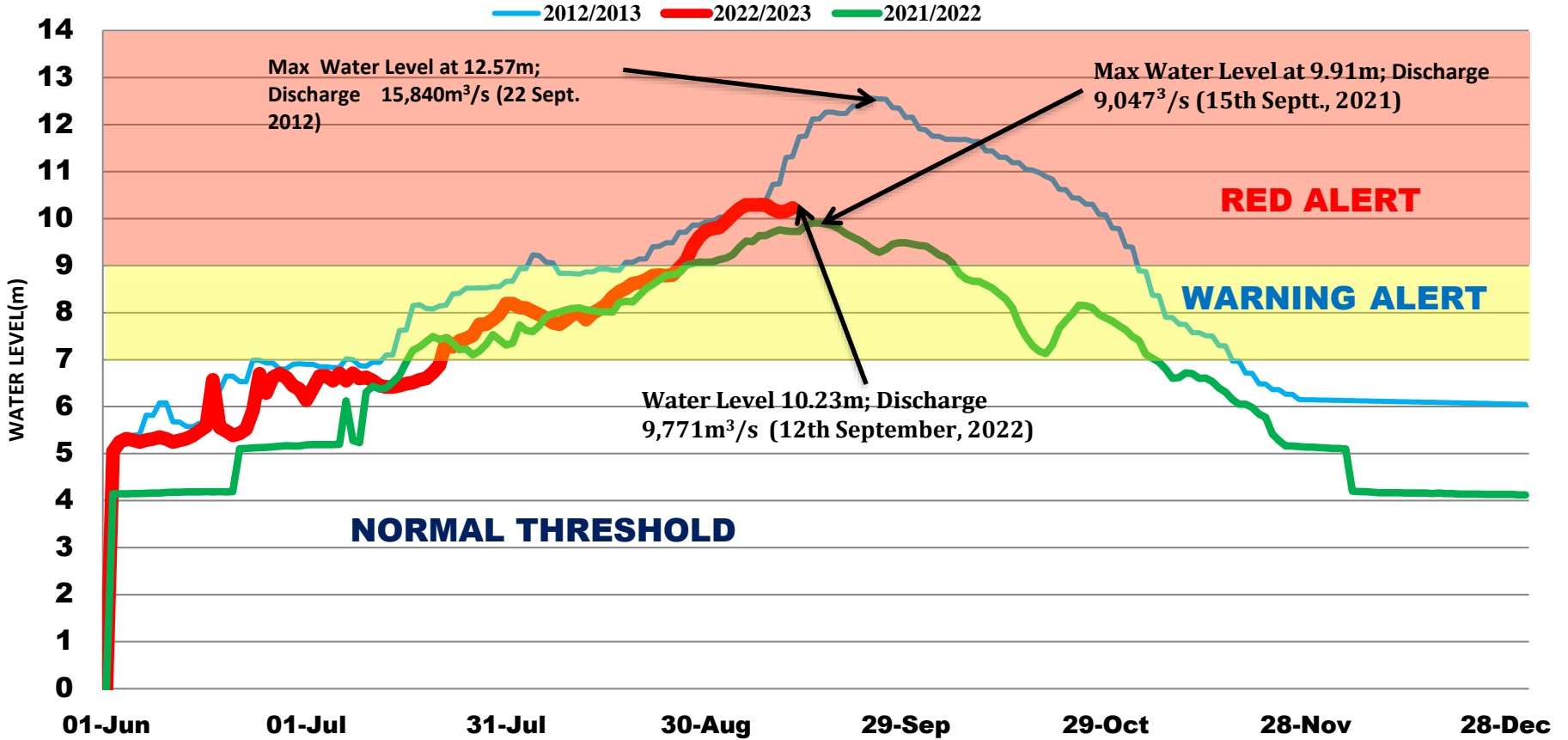
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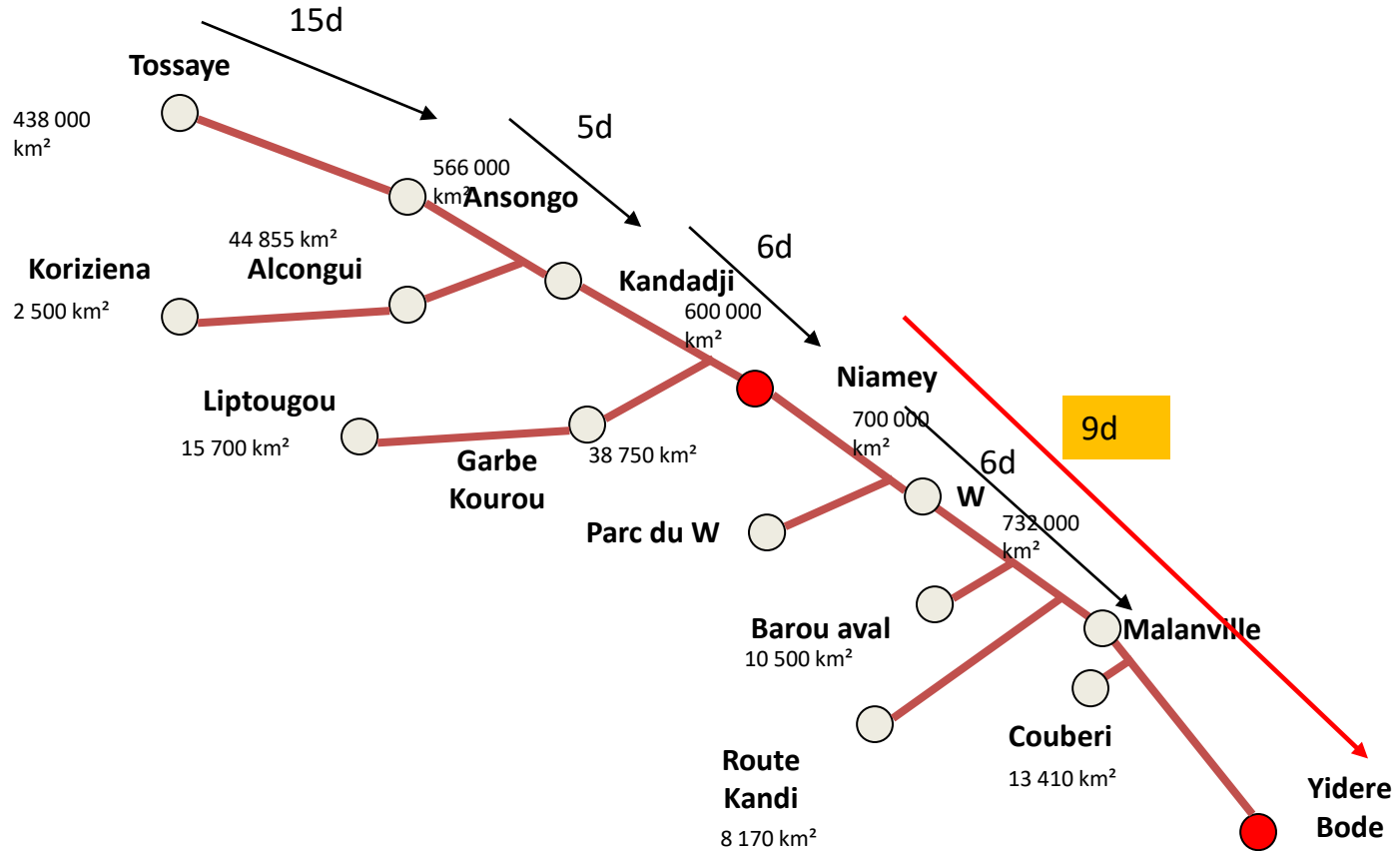
COMPARATIVE HYDROGRAPHS OF RIVER BENUE AT MAKURDI FOR 2012/2013, 2021/2022 & 2022/2023
HYDROLOGICAL YEARS SHOWING DIFFERENT ALERT LEVELS



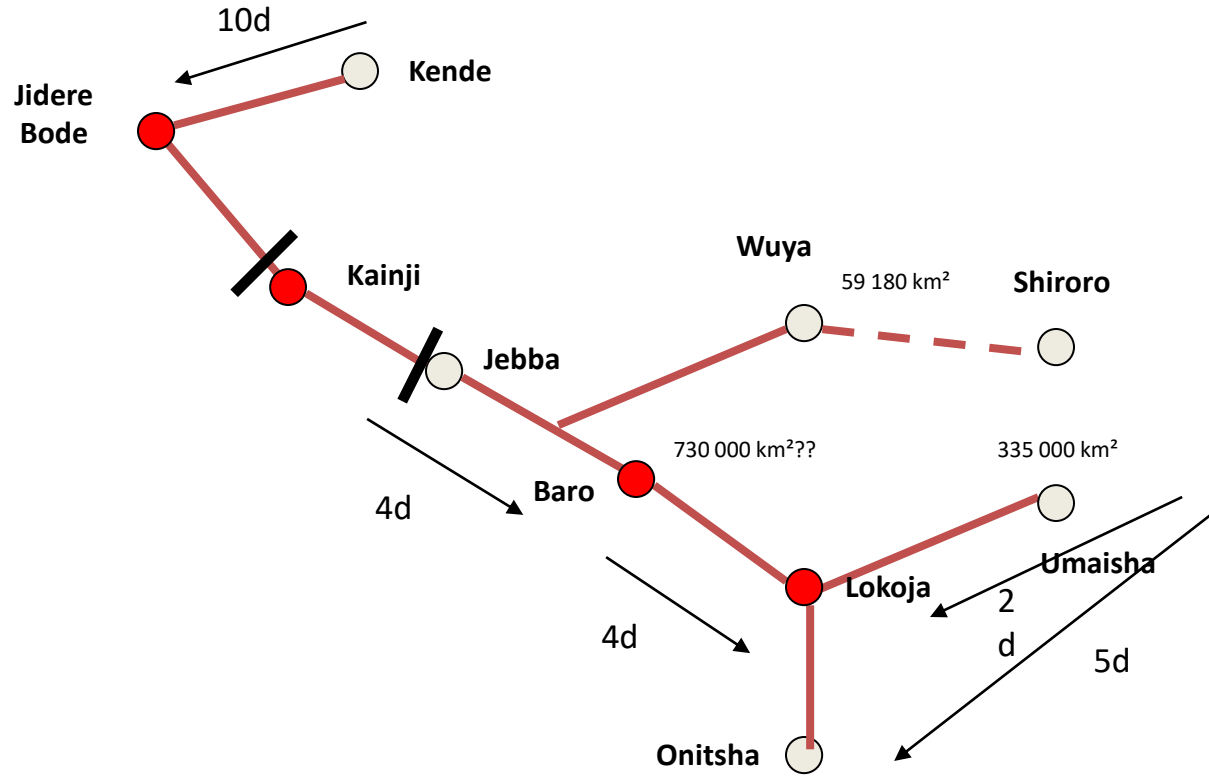
COMPARATIVE HYDROGRAPH OF RIVER BENUE AT MAKURDI FOR 2012/2013, 2021/2022 & 2022/2023 HYDROLOGICAL YEARS SHOWING DIFFERENT ALERT LEVELS



EVOLUTION OF FLOOD ON RIVER NIGER FROM NIAMEY TO JIDEREBODE IN NIGERIA



EVOLUTION OF FLOOD ON RIVER NIGER FROM JIDEREBODEI TO ONITSHA IN NIGERIA



- From Niamey in Niger to Jidere Bode, it takes 9 days for the flood to flow into Nigeria.
- From the tributary of Kande, it takes 10 days to reach Jiderebode
- From Jiderebode to Kainji through Jebba to Baro, it takes 4 days.
- From Baro to Lokoja to Onitsha, it takes 4 days.
- There are other tributaries of River Niger that contributes to the flood from Wuya and Shiroro
- Also, from Umaisha to Lokoja, it will take 2 days for the flood to reach Lokoja.
- And 5 days from Umaisha to Onitsha.



**Thank
You**