

World Food Programme

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West and Central Africa

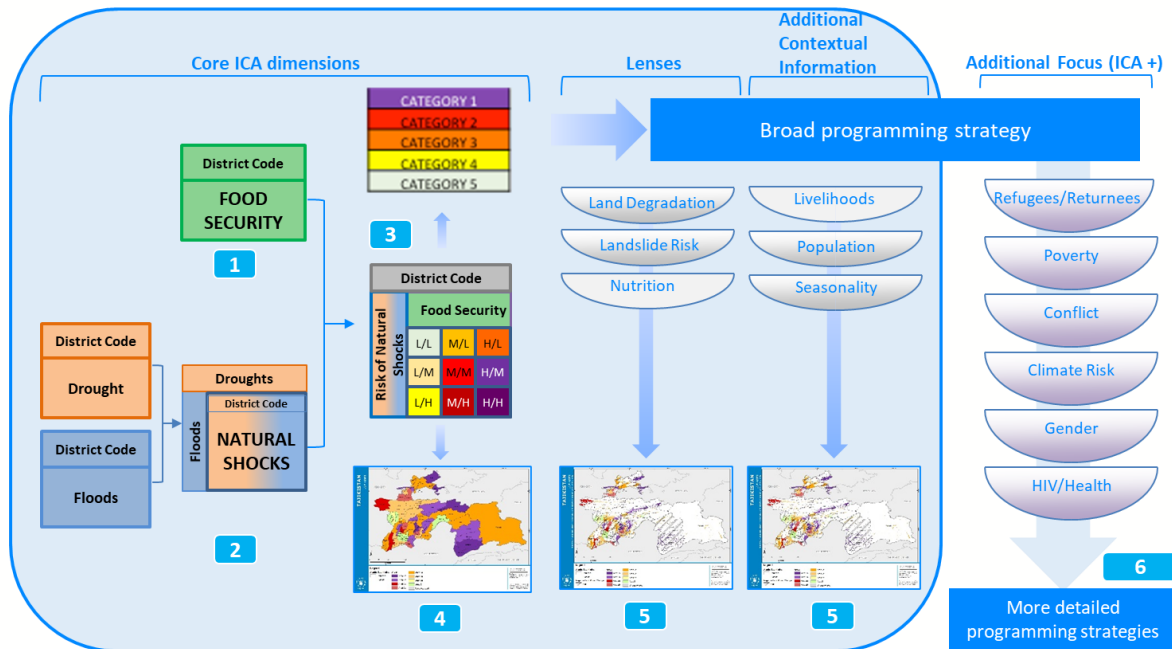
Regional Integrated Context Analysis (ICA), 2023

August 2023

SECTION 1: **METHODOLOGY**

Methodological approach: Integrated Context Analysis (ICA)

The ICA is one of the pillar's of WFP's three-pronged approach (3PA), which combines the risk of natural shocks (droughts, floods, landslides) with the recurrence of food insecurity to identify priority areas for resilience interventions. Additional analysis layers can be added (nutrition, land degradation, conflict...) to refine the programmatic strategy. The following infographics outline the ICA approach and the definition of ICA categories (more detailed information on the ICA approach and methodology can be [found here](#)):



		Recurrence of Food Insecurity		
		LOW	MEDIUM	HIGH
Risk of Exposure to Natural Hazards	LOW	Area 5 CATEGORY 5 In the absence of a clear long-term food insecurity entry point (noting that pockets of food insecurity may exist) programme themes should focus on early warning/preparedness relative to risk, as well as mitigating land degradation and other risk reduction measures.	Area 3B CATEGORY 3 Locations identified as Area 3A show persistent food insecurity that can justify safety nets; Area 3B locations more likely link to seasonal factors where safety nets may also be applicable or recent hazards where recovery is more of a focus. Whilst natural hazard risk is lower, local contexts may benefit from early warning/preparedness to reduce risk from possible events.	Area 3A
	MEDIUM	Area 4B CATEGORY 4 In the absence of a clear long-term food insecurity entry point (noting that pockets of food insecurity may exist), protective infrastructure and early warning/preparedness is a priority. Further, attention should be paid to land degradation given that this could worsen future hazards, potentially affecting food security.	Area 2B CATEGORY 2 Intermittent food insecurity patterns may relate to either hazards (natural or human-made) or seasonal factors. If seasonal, seasonal hazard responsive safety nets can reduce predictable food insecurity. A recovery focus may be suitable if hazards are a cause. At the same time, high-hazard risk requires protective infrastructure, early warning and preparedness.	Area 1B CATEGORY 1 Persistent food insecurity suggests that year-round hazard responsive safety nets providing predictable support to vulnerable populations may be appropriate, whilst high-hazard risk justifies including protective infrastructure, early warning/preparedness themes.
	HIGH	Area 4A	Area 2A	Area 1A

Methodological approach:

Specificities of the regional ICA approach

Recurrence of food insecurity:

- Given the difficulty in aggregating data on food security indicators from a variety of HH surveys in the region, as well as gaps in coverage and the availability of historical HH-level data, the **CH/IPC data** was used to determine the recurrence of food insecurity.
- RBD maintains a **database of CH/IPC results**, which is updated after each analysis round. The database currently covers the period 2014-2022. Results are available at the lowest level of representativity, which is determined by the CH analysis. For the purpose of the regional ICA, the **CH/IPC results for the period 2019-2023** have been used.
- Specifically, the regional ICA analysis has used the **% of populations in Phase 3-5**, which has been **aggregated to the Admin2 or Admin1 level** (depending on the most commonly used level of analysis for each country). This aggregation allows to take into account subdivisions below the Admin2 level which can change from one analysis to the next, particularly in the case of areas with limited access that are analysed separately (e.g. in Mali, Niger etc.).
- For each year (2019-2023), the highest **prevalence of food insecurity** recorded by the CH/IPC analyses was used to determine the recurrence of food insecurity. As per the ICA manual, only areas for which at least 3 datapoints were available over the 5-year period were classified.

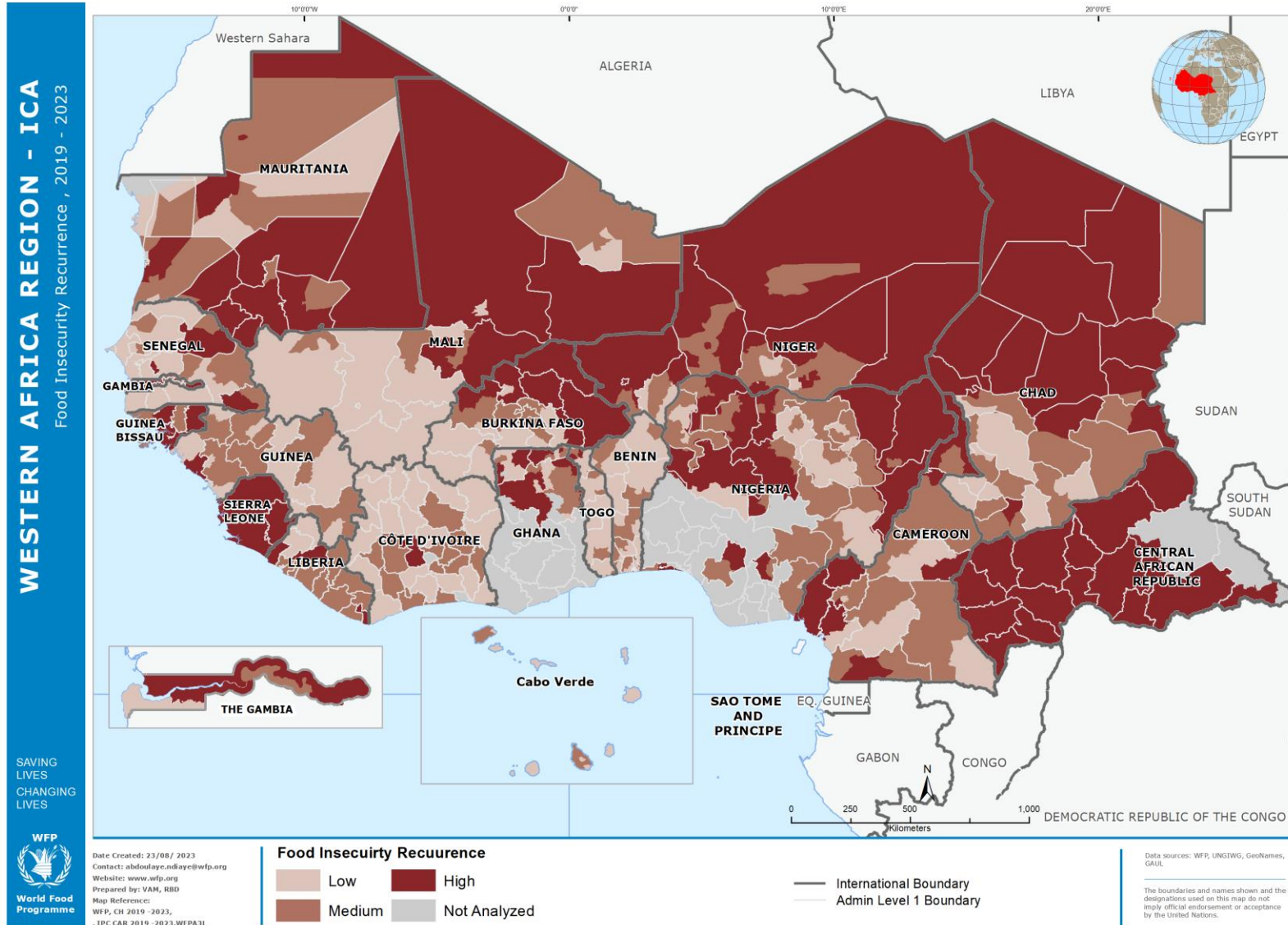
Definition of thresholds/triggers:

To take into account the **regional dimension of the analysis**, the definition of thresholds for all components of the ICA (recurrence of natural shocks & recurrence of food insecurity) was adjusted. Specifically, two thresholds were tested:

- First, a **national threshold** that is aligned with the 'national' ICA approach. For instance, for the recurrence of food insecurity, this threshold uses the national average of the median recurrence of food insecurity for each unit of analysis (Adm2 or Adm1), with a specific value for each country.
- In addition, a **regional threshold** was also calculated using the same approach but without taking into account the national level (i.e. considering each area/unit of analysis within the region). This regional threshold allows for comparisons across countries.
- The same logic was applied to each of the layers included in the analysis (hazard risk: droughts, floods, landslides; recurrence of food insecurity). It is important to note that when analysing the final ICA results, there are **no major differences when using the national or regional approach**, which suggests a high level of coherence of the results.
- The type of threshold used is specified for each map included in this report.

SECTION 2:
**INTEGRATED CONTEXT
ANALYSIS (ICA) FINDINGS**

Integrated Context Analysis (ICA): Recurrence of Food Insecurity (2019-2023)

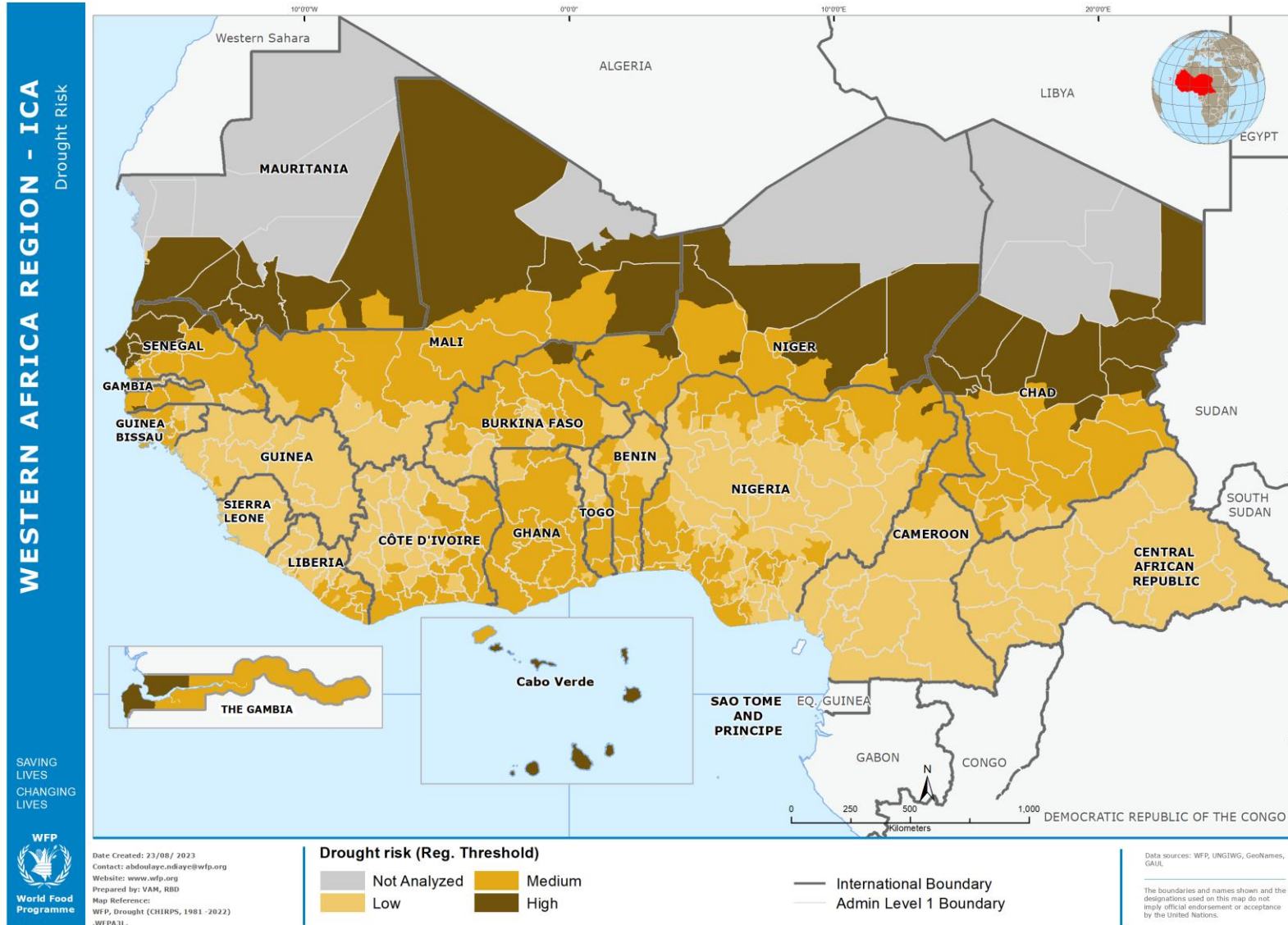


The map to the left shows the recurrence of food insecurity over the 2019-2023 period. Using CH/IPC data, the following categories were determined:

1. Areas where the threshold was surpassed less than 2 out of 5 years have a **low recurrence** of food insecurity.
2. Areas where the threshold was surpassed 2-3 times over the last 5 years have a **medium recurrence** of food insecurity.
3. Areas where the threshold was surpassed 4-5 times over the past 5 years have a **high recurrence** of food insecurity.

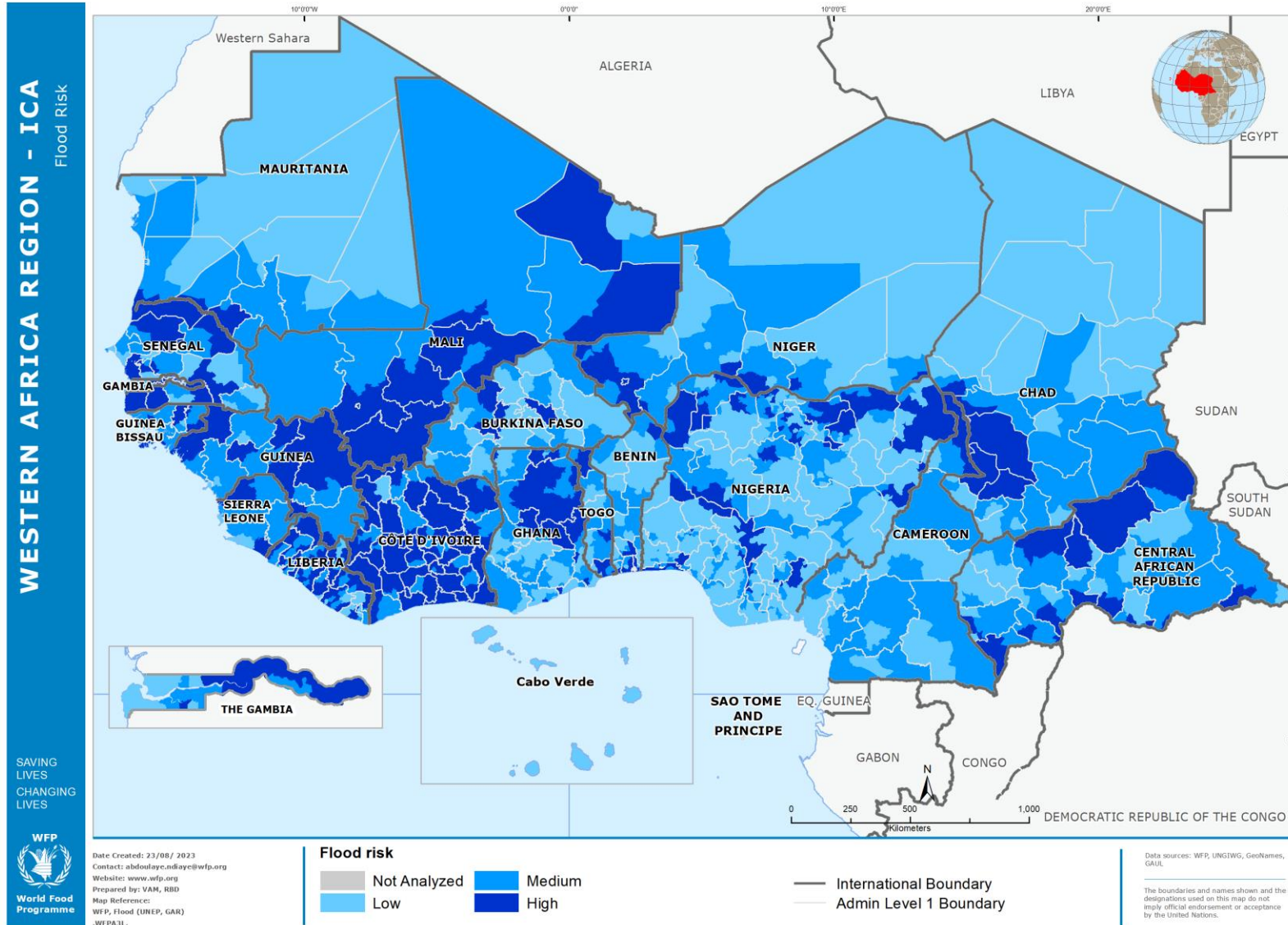
It is important to note that in order to ensure comparability across the region, a **regional threshold** based on the median level of food insecurity for all analysed admin 2 areas across West Africa was used.

Integrated Context Analysis (ICA): Recurrence of Droughts



- The map to the left shows the level of drought risk, which is based on CHIRPS RFE data from 1982 – 2021.
- A long-term average of RFE during the growing seasons was created, and each year was individually compared against the last thirty year as a benchmark to determine the number of years the growing seasons were significantly below the benchmark. The key indicator used for the purposes of the analysis is the **number of poor growing seasons then drought frequency for each admn2**, with the range of values classified by Natural Break (Jenks) to classify the drought risk in **Low, Medium** and **High** levels.

Integrated Context Analysis (ICA): Recurrence of Floods



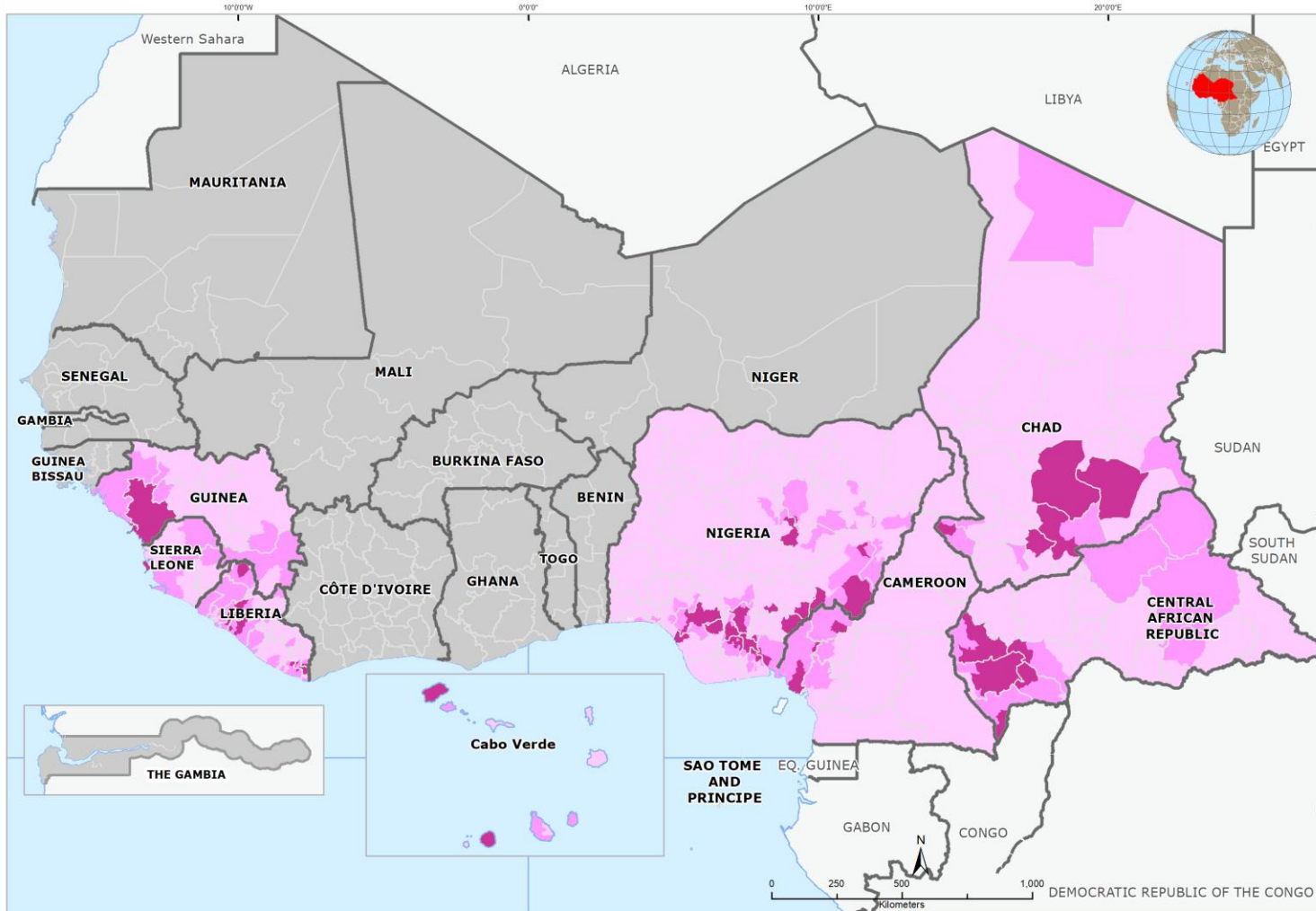
The map to the left shows the level of drought risk, which is based on Flood data from 1UNEP/UNISDR.

Flood data was obtained from the UNEP/UNISDR Global Assessment of Risk (GAR) The original dataset was aggregated at admin2 level. It should be noted that the UNISDR data are the result of an analysis performed on a global scale which combines information about historical flood events with flood modelled data. Two key indicators were used for the purpose of the analysis: the **percentage of flood affected area** and the **maximum expected frequency of flood events** with the range of values classified by Natural Break (Jenks) to classify the flood risk in **Low, Medium** and **High** levels

Integrated Context Analysis (ICA): Recurrence of Landslides

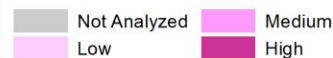
WESTERN AFRICA REGION - ICA

Landslide Risk



Date Created: 23/08/2023
Contact: abdoslaye.ndiaye@wfp.org
Website: www.wfp.org
Prepared by: VAM, RBD
Map Reference:
WFP, Flood (UNEP, GAR)
.WFP/331,

Landslide risk



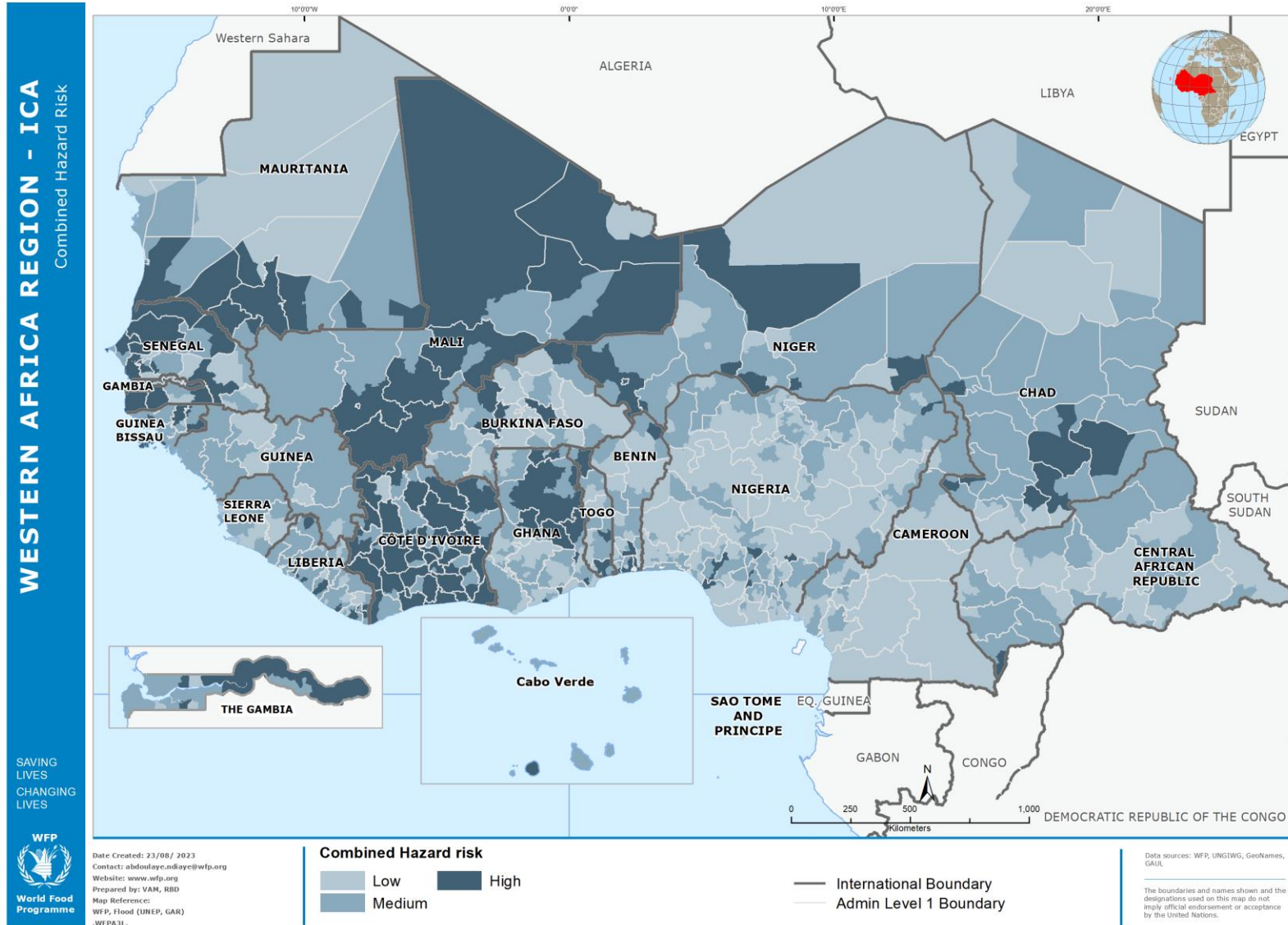
— International Boundary
— Admin Level 1 Boundary

Data sources: WFP, UNGIM, GeoNames, GAUL
The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

The map to the left shows the level of drought risk, which is based on Landslide data from 1UNEP/UNISDR.

Landslide data was obtained from the UNISDR Global Assessment of Risk and it was available from 2013. The original dataset was aggregated at admin2 level. It is a global analysis considering modelled landslide data. The key indicators used were the **percentage of surface areas at risk** and **maximum frequency of landslide events**, with the range of values classified by Natural Break (Jenks) to classify the Landslide risk in **Low, Medium** and **High** levels

Integrated Context Analysis (ICA): Combined Hazard Risk (Droughts, Floods, Landslides)



The map to the left shows the natural shocks risk or the combined Hazard Risk (Droughts, Floods, Landslides) .

The natural shocks analysis was carried out using data on floods, drought and Landslide. Data for each of these shocks was analysed by admin2 (see individual analyses on the following pages), then combined to produce an overall shock score

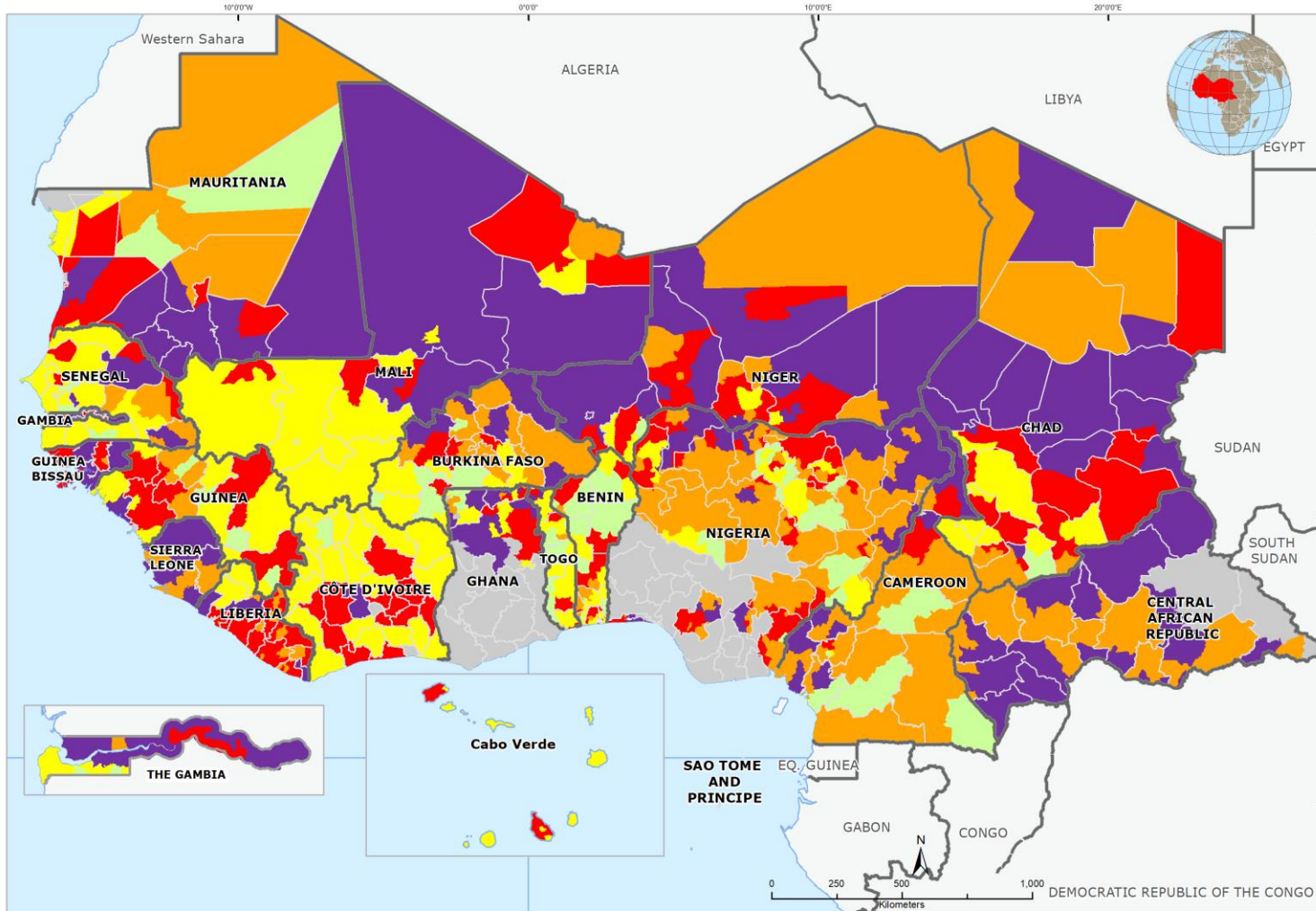
Integrated Context Analysis (ICA): ICA Categories

WESTERN AFRICA REGION - ICA ICA Categories, 2019 - 2023

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Contact: abdo@wfp.org
Website: www.wfp.org
Prepared by: VAM, RBD
Map Reference:
WFP, CH 2019 - 2023, IPC CAR 2019 - 2023
.WFP/3.1, CHIRPS(drought), UNEP GAR (flood)



ICA Categories (Reg. Trigger)

Category 1	Category 4
Category 2	Category 5
Category 3	Not Analyzed

— International Boundary
— Admin Level 1 Boundary

Data sources: WFP, UNCTAD, GeoNames, GAUL

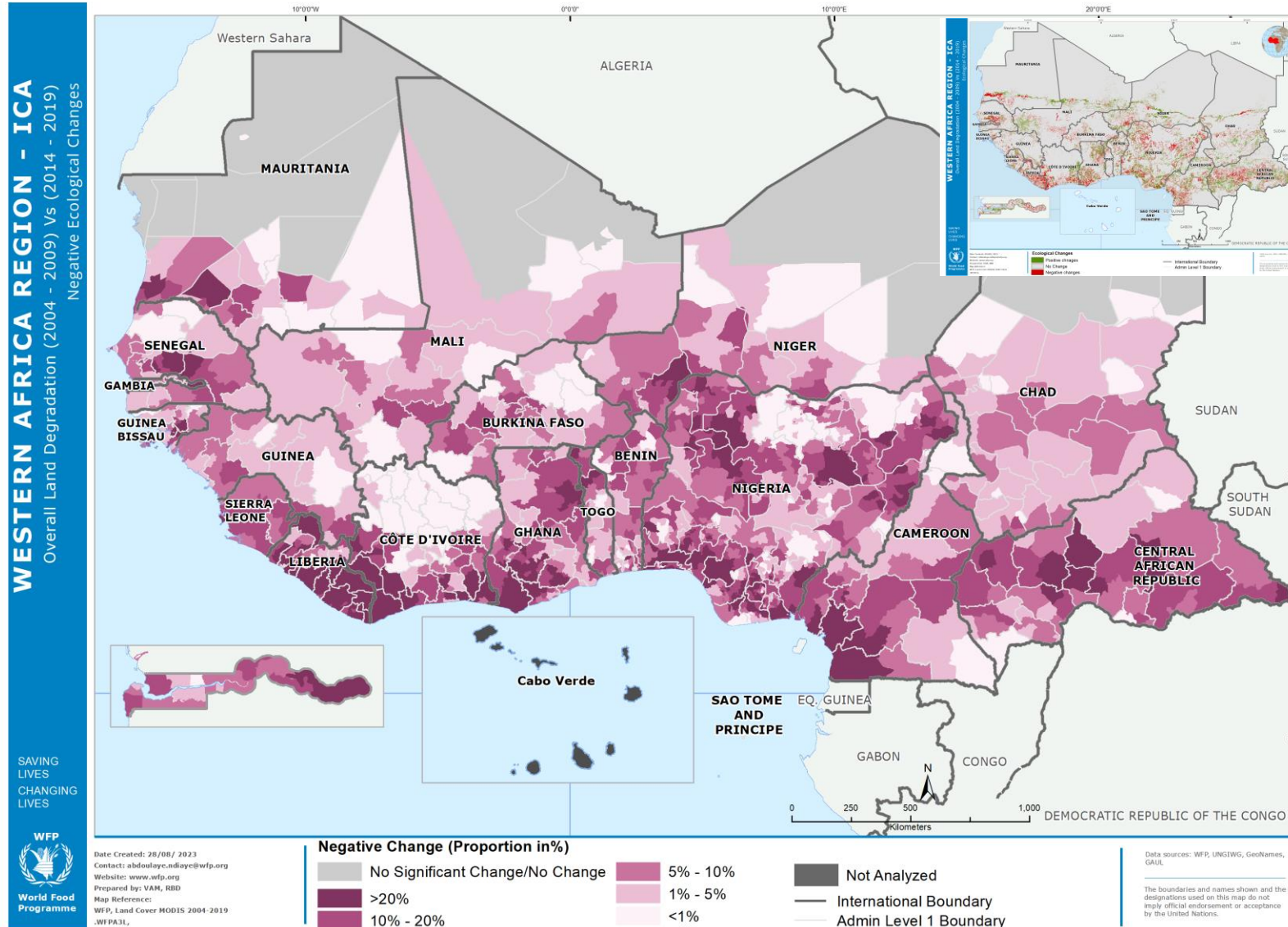
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The map to the left shows the ICA categories resulting from the combination of natural hazard risk and recurrence of food insecurity:

- **Category 1:** areas affected by a high recurrence of food insecurity and a medium to high exposure to natural shocks.
- **Category 2:** areas affected by a medium recurrence of food insecurity and a medium to high exposure to natural shocks.
- **Category 3:** areas affected by a medium to high recurrence of food insecurity and a low exposure to natural shocks.
- **Category 4** includes areas affected by a low recurrence of food insecurity and a medium to high risk of exposure to natural shocks, while both the recurrence of food insecurity and the exposure to natural shocks are low for areas in **Category 5**.

Note: the map presents a regional ICA analysis, which is conducted using a regional lens. For countries where national ICAs exist, these should be used to inform in-country programming

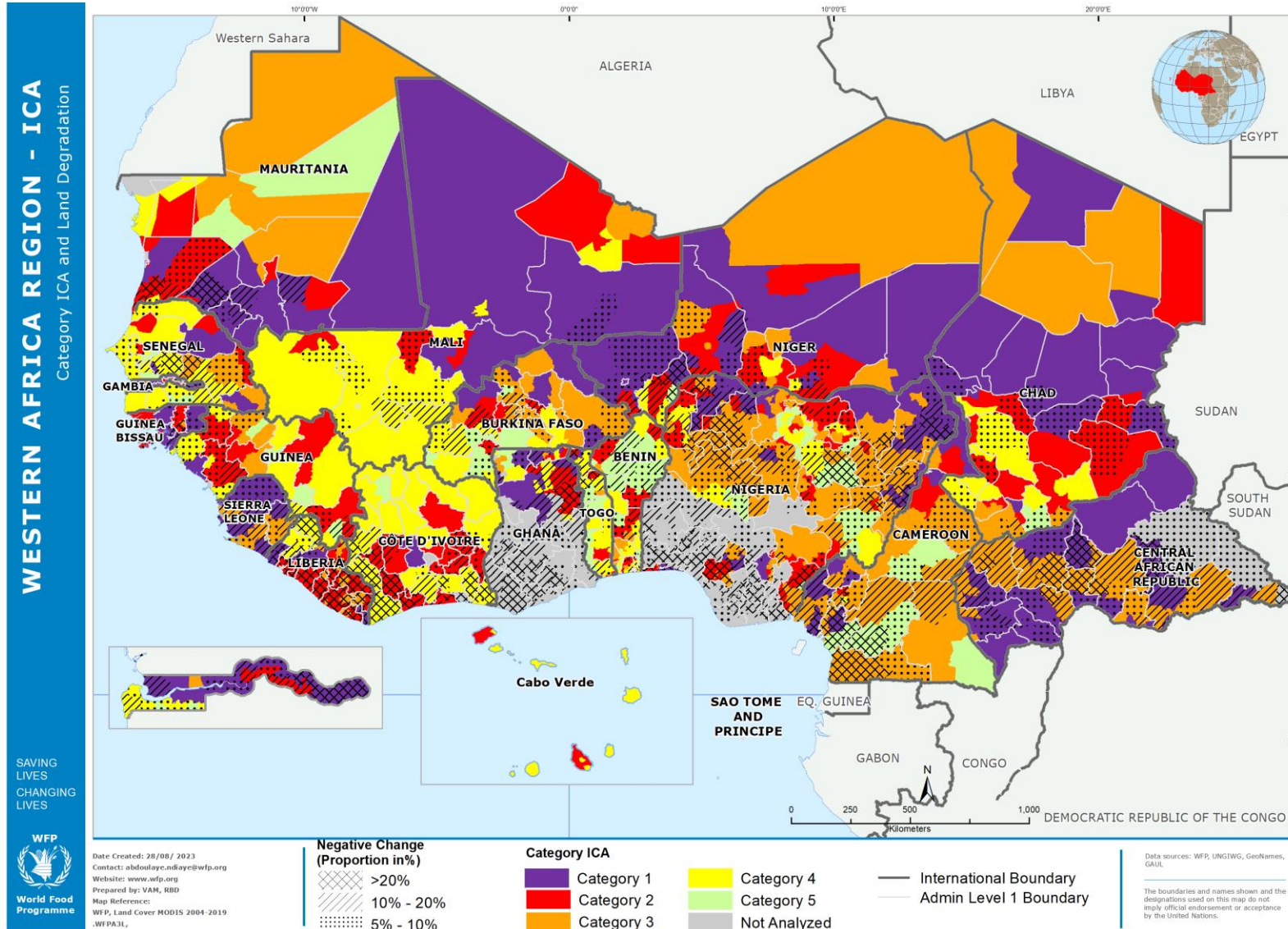
Integrated Context Analysis (ICA): Land Degradation 2004-2009 vs 2014-2019



The map to the left shows the Land degradation (ecological change) resulting analysis of MODIS Land use and Land Cover (LULC) from 2004-2019 :

- Land cover change analysis identifies and qualitatively classifies deterioration in vegetation, looking specifically at deforestation
- Changes over time are expressed as the difference between the initial (2004-2009) and final (2014-2019) land cover class values which can produce values in the range [-36; +36]. Negative values indicate a deterioration in the ecological value of the land, i.e. a loss of vegetation and associated ecosystem services and this impacts the communities livelihoods.
- The overall negative change is calculated for each Admin2 (divided by total admin2 area) to express the percentage of change for each admin2.

Integrated Context Analysis (ICA): ICA Categories & Land Degradation



The map to the left shows the ICA categories and Land degradation resulting from the combination of natural hazard risk and recurrence of food insecurity and the proportions of land degradation greater than 5% at the admin2 level.

This shows the coincidence of land degradation and where there are specific problems in terms of persistence of food insecurity and occurrence of natural hazard shocks.

Integrated Context Analysis (ICA): ICA Categories & Conflict

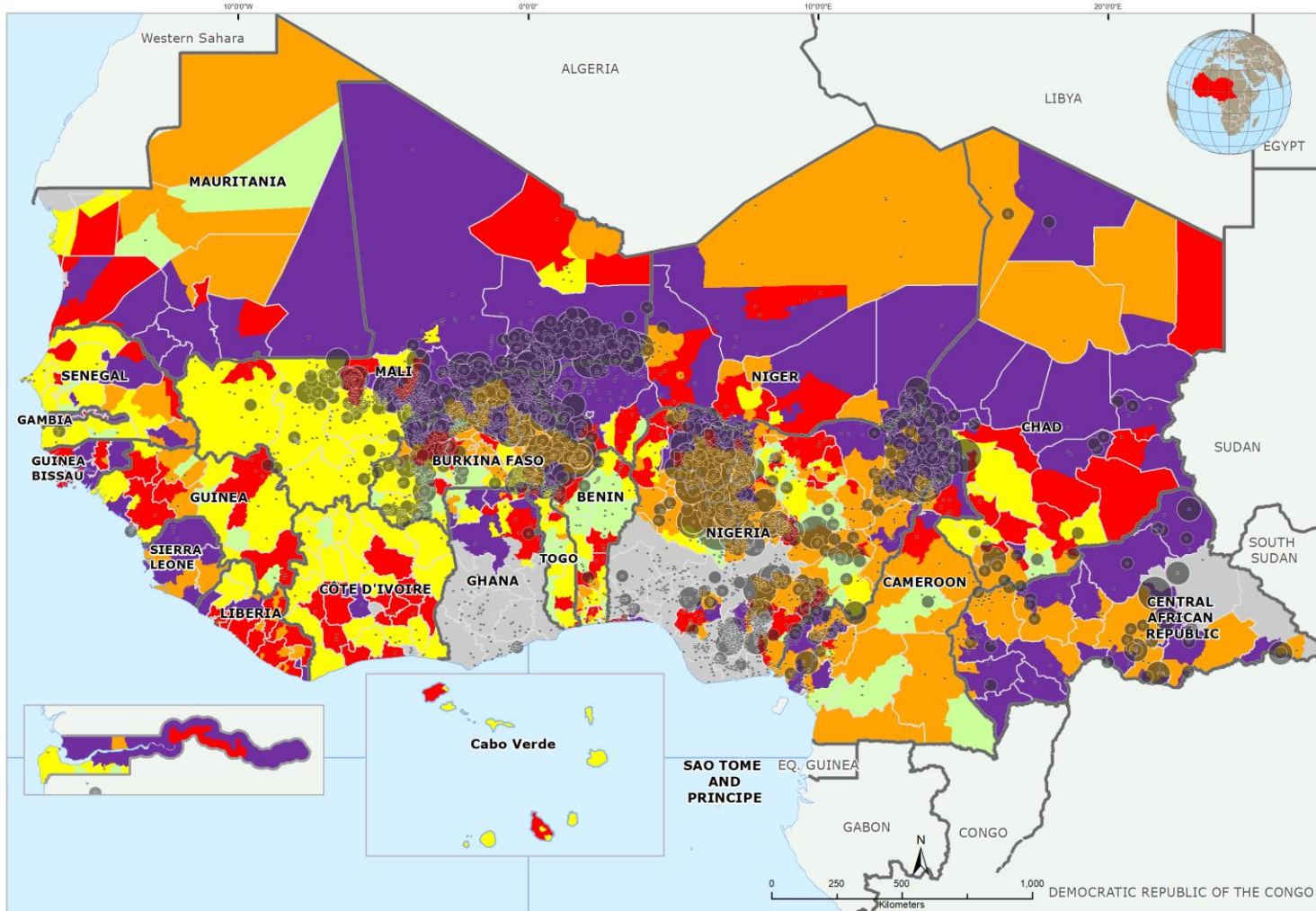
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Category ICA and Conflict (ACLED 1 Jan. 2022 - Aug. 2023)

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Prepared by: VAM, RBD
Map Reference:
WFP, Land Cover MODIS 2004-2019
RCLC Sentinel2-WFP/PA31,



The map to the left shows the ICA categories and Conflicts (events and associated fatalities 1 Jan 2022 – Aug. 2023).

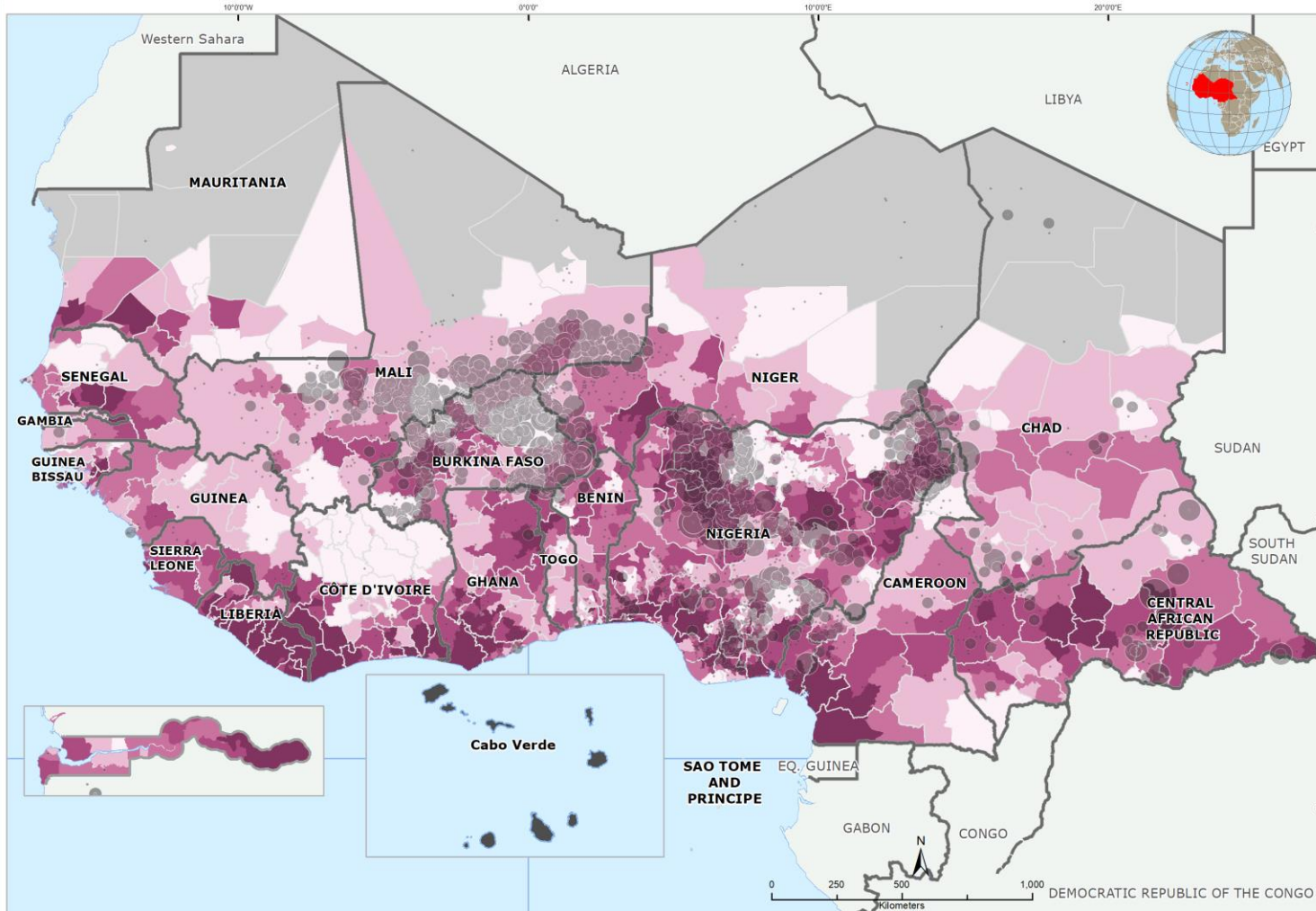
This shows where the conflicts persistence overlap with the food insecurity recurrence and exposure to natural hazards

Integrated Context Analysis (ICA): Land Degradation & Conflict

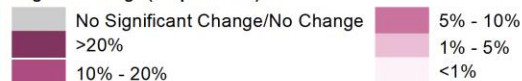
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Land Degradation and Conflict (ACLED 1 Jan. 2022 - Aug. 2023)

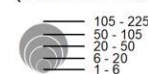
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Negative Change (Proportion %)



Fatalities (ACLED (1 Jan. 2022 - Aug. 2023))



— International Boundary
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Data sources: WFP, UNGIWW, GeoNames, GAUL

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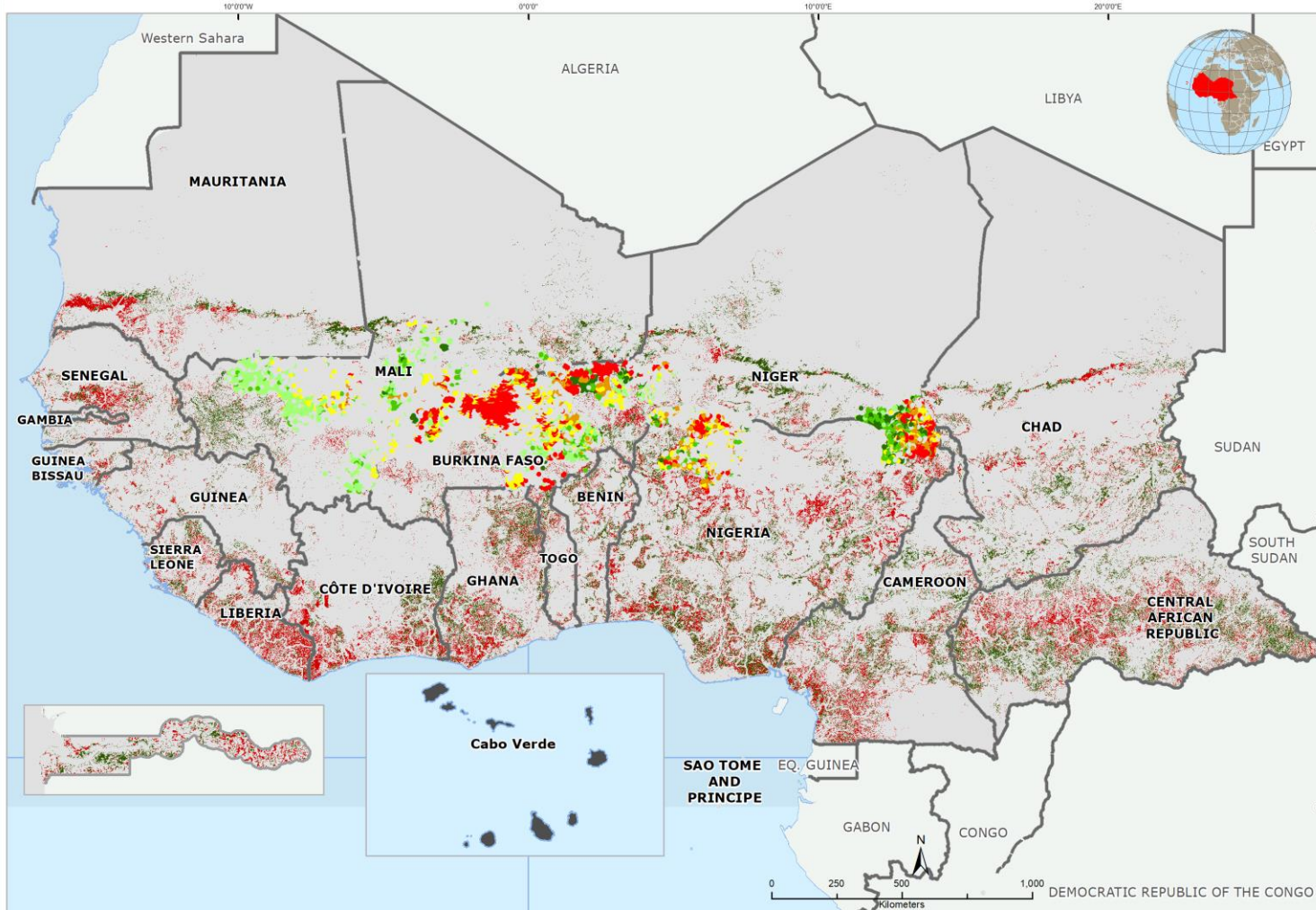
The map to the left shows the Land degradation (the proportions of land degradation greater than 5% at the admin2 level) and Conflicts (events and associated fatalities 1 Jan 2022 – Aug. 2023).

This shows where the conflicts persistence overlap with the land degradation

Integrated Context Analysis (ICA): Land Degradation & Cropland Change

WESTERN AFRICA REGION - ICA

Overall Land Degradation (2004 - 2009) Vs (2014 - 2019)
Ecological Changes & Cropland Change (2022 Vs Reference)



The maps to the left shows the Land degradation (ecological change) resulting analysis of MODIS Land use and Land Cover (LULC) and cropland change 2022 vs 2012 (reference) from Sentinel 2:

- Land cover change analysis identifies and qualitatively classifies deterioration in vegetation, looking specifically at deforestation i.e. a loss of vegetation and associated ecosystem services and this impacts the communities livelihoods.
- Cropland change analysis identify the changes in agriculture land BTW 2022 Vs 2012 (reference year). The changes (decrease or increase) are expressed in slight (<25%), medium (25% - 50%) or high level (>50%).
- This analysis shows that the decrease or the increase of cropland is not linked to the land changes

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Prepared by: VAM, RBD
Map Reference:
WFP, Land Cover MODIS 2004-2019
RCLC Sentinel 2-WFP/PA31,

Cropland Change (2022 Vs Reference)

- Significant increase
- Medium increase
- Slight increase
- No change
- Slight decrease
- Medium decrease
- Significant decrease

Ecological Changes

- Positive changes
- No Change
- Negative changes

- Not Analyzed
- International Boundary
- Admin Level 1 Boundary

Data sources: WFP, UNCTW, GeoNames, GAUL

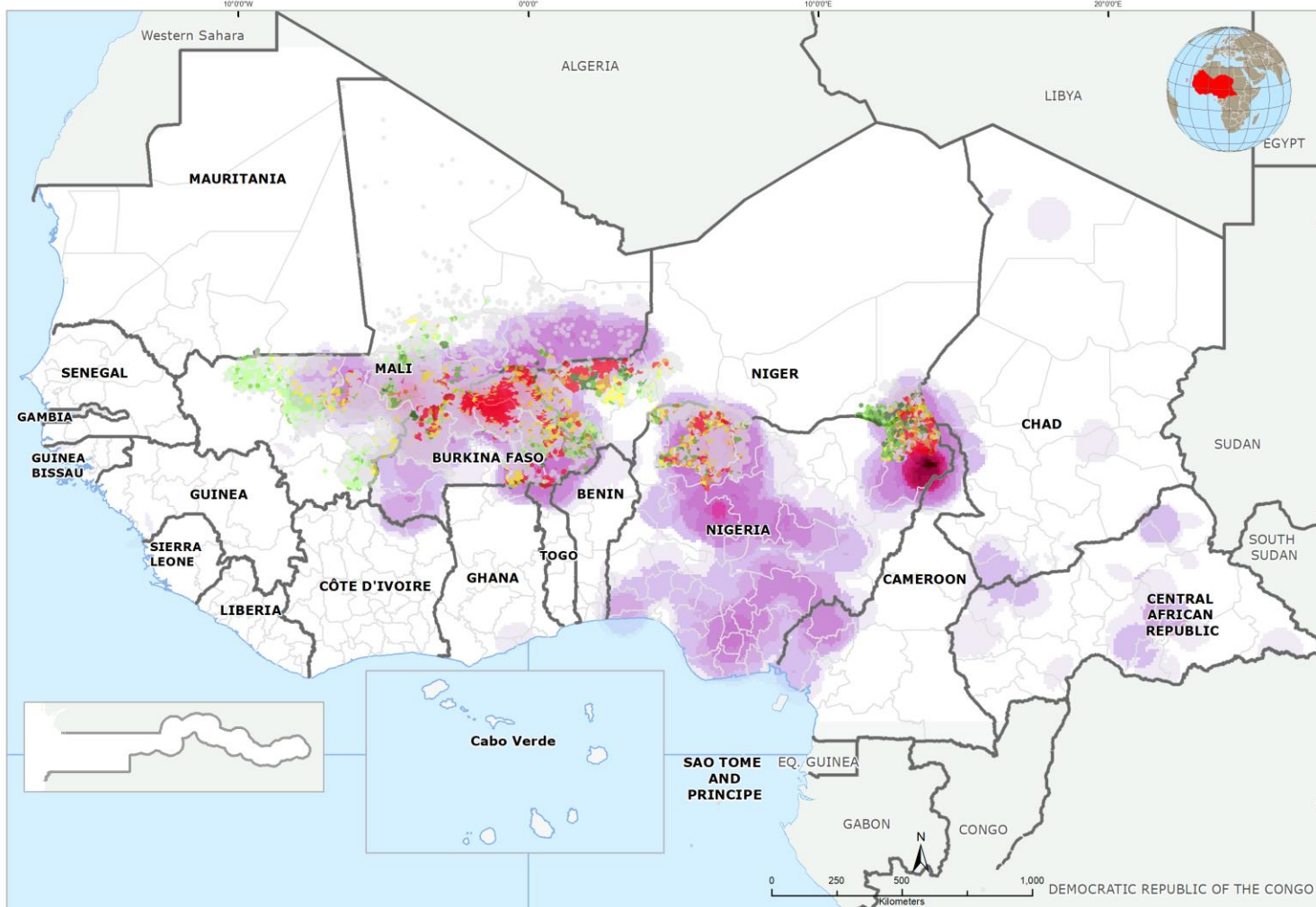
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Integrated Context Analysis (ICA): Cropland Change & Conflicts

WESTERN AFRICA REGION - ICA

Cropland Change (2022 Vs Reference)
& Conflicts (ACLED, 1 Jan. 2022 - Aug. 2023)

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Contact: abdo@wfp.org
Website: www.wfp.org
Prepared by: VAM, RBD
Map Reference:
WFP, Land Cover MODIS 2004-2019
ACLED Sentinel 2 WFP A31

Cropland Change (2022 Vs Reference)

- Significant increase
- Medium increase
- Slight increase
- No change
- Slight decrease
- Medium decrease
- Significant decrease

Conflict Density (1 Jan 2022 - Aug. 2023)



- International Boundary
- Admin Level 1 Boundary

Data sources: WFP, UNCTAD, GeoNames, GAUL

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The map to the left shows Conflicts Density (from ACLED, 1 January 2022 – August 2023) and cropland change 2022 vs 2012 (reference):

- The conflicts Density take into account the spatial conflicts distribution and the associated fatalities.
- This analysis shows that the decrease of cropland is linked to conflicts hotspot (Liptako Gourma, LCB, Maradi border neighbouring northern Sokoto)

For further information:
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