01

MAPS

Map production is one of the most vital functions of OCHA's designers and information management officers. A map's visual style and physical size vary widely depending on its size, use and the information it needs to convey. However, some basic standards and guidelines are valuable.

REFERENCE MAPS

Depending on the scale, the size of the map and the information you would like to show, each map is unique. It is therefore impossible to provide one map style that fits all. Adapt the style of your map based on scale, content, shape and readability.

In all cases, an important first step is to create a base map that is suitable for layering future information. These base maps should emphasize clarity and versatility. They should also print well in colour and black and white, as they may well be printed in varying conditions. They should also look good when projected or on screen.

Limited use of colour will be an important design choice for base maps, both to ensure quality printing and to facilitate easy layering of future information as the emergency develops.

Some examples of map styles and some suggested rules to obtain a harmonized balance are provided here. But you will always need to make adjustments based on your needs and on common sense.

CHAD
A4 reference map
As of December 2017

OCHA

LIBYA

Bardaï

Zouar

TIBESTI

NIGER

Kirdimi

Faya-Largeau

BORKOU

ENNEDI OUEST

ENNEDI EST

Fada

Kalaït

Am Djarass

Bahai

Matadjana

Iriba

WADI FIRA

KANEM

C H A D

Salal

Biltine

Guéréda

Nokou

Mao

BARH-EL-GAZEL

BATHA

Moussoro

Ati

Oum Hadjer

Abéché

Adré

LAC

Liwa

Mondo

Yao

OUADDAÏ

Abdi

Baga-Sola

Bol

Ngouri

Lake Chad

Massakory

Bokoro

Bitkine

Mangalmé

Am-Dam

HADJER-LAMIS

Massaguet

Mongo

SILA

Goz Beïda

N'Djamena

Mandalia

GUÉRA

NIGERIA

CHARI-BAGUIRMI

Masenya

Aboudéïa

SALAMAT

Guelendeng

Melfi

MAYO-KEBBI EST

Bousso

Am Timan

Bongor

Haraze

Binder

Fianga

Gounou-Gaya

TANDJILÉ

MOYEN-CHARI

Léré

Kélo

Lai

Pala

Béré

Bénoye

Sarh

Kyabé

Krim-Krim

Koumra

Maro

MAYO-KEBBI OUEST

Moundou

Doba

MANDOUL

Bébédjia

Bodo

Bédjondo

Moïssala

CAMEROON

Baïbokoum

Béboto

Goré

CENTRAL AFRICAN REPUBLIC

LOGONE OCCIDENTAL

LOGONE ORIENTAL

200 km

	International boundary
	Region boundary
✪	National capital
○	Region capital
•	Town

The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations. Final boundary between the Republic of Sudan and the Republic of South Sudan has not yet been determined.
Creation date: 7 Dec 2017   **Sources:** UN GIS, Natural Earth, OCHA.   **Feedback:** ochavisual@un.org   www.unocha.org   www.reliefweb.int

Kirdimi

Faya-Largeau

BORKOU

KANEM

Salal

Nokou

BARH-EL-GAZEL

C H A D

Mao

Moussoro

BATHA

LAC

Liwa

Mondo

Ati

Oum Hadjer

Baga-Sola

Bol

Ngouri

Chedra

Yao

Massakory

Mangalmé

HADJER-LAMIS

Bokoro

Bitkine

Mongo

Massaguet

N'Djamena

Mandalia

GUÉRA

Aboudéïa

CHARI-BAGUIRMI

Masenya

Melfi

Am

NIGERIA

Guelendeng

Bousso

MAYO-KEBBI EST

Bongor

Binder

Fianga

Gounou-Gaya

TANDJILÉ

MOYEN-CHARI

Léré

Kélo

Lai

Sarh

Kyabé

Pala

Béré

Bénoye

Koumra

Maro

Krim-Krim

Doba

MANDOUL

Béïnamar

Moundou

Bébédjia

Bodo

Bédjondo

LOGONE OCCIDENTAL

Béboto

Moïssala

Baïbokoum

Goré

Left:
Example of an
A4 reference
map for print.

Right:
View at 100% scale

LAYER	STYLE	LABEL
Countries/land	CMYK 0, 0, 0, 10	L A B E L Roboto Regular | 12.5pt | all caps | tracking 0-300 | CMYK 0, 0, 0, 40
Featured country	CMYK 0, 0, 0, 0	L A B E L Roboto Bold | 14pt | all caps | tracking 500 | CMYK 0, 0, 0, 85
International boundary	—— 1.3pt | 50% opacity CMYK 0, 0, 0, 55	
1st administrative level boundary	- - - 0.8pt | dash 2.5pt CMYK 0, 0, 0, 25	LABEL Roboto Regular | 9.5pt | all caps | CMYK 0, 0, 0, 40
Capital city	✪ 8.5pt | CMYK 0, 0, 0, 100	**Label** Roboto Condensed Bold | 11pt | CMYK 0, 0, 0, 100
Adm 1 capital	○ 5.2pt | stroke 1pt CMYK 0, 0, 0, 85	Label Roboto Condensed Regular | 9.5pt | CMYK 0, 0, 0, 85
Town	● 4pt | CMYK 0, 0, 0, 70	Label Roboto Condensed Regular | 8pt | CMYK 0, 0, 0, 70
Watershed	CMYK 10, 5, 0, 0 | stroke 0.5pt CMYK 38, 19, 0, 0	*Label* Crimson Text Italic | 8pt | tracking 0-100 | CMYK 38, 19, 0, 0
River	—— 0.5pt | CMYK 38, 19, 0, 0	*Label* Crimson Text Italic | 8pt | tracking 0-100 | CMYK 38, 19, 0, 0

HOW WAS THE A4 MAP EXAMPLE CALCULATED?

The rule of thumb is to create a visual hierarchy:

- The most important elements must be the most prominent, and the least important elements must be the least prominent.
- Use size or styling (bold, darker, etc.) to create visual hierarchy.

GOLDEN RATIO

As with the typographic scale, you can use the golden ratio (1.618) to calculate a harmonized style for your symbol styles. Start with the smallest element and multiply by 1.618 to obtain the style for the higher level.

Boundary line stroke:

Admin 1 boundary	0.8pt
International boundary	0.8pt x 1.618 = 1.3pt

Populated places symbol size (as it is a surface, the calculation is slightly different: area = radius^2 x 1.618):

Town	4pt diametre or 2pt radius Area = $2pt^2$ x 1.618 = $6.5pt^2$
Admin 1 capital	Radius = $6.5pt^2$ ^ 0.5 = 2.6pt (or 5.2pt diametre) Area = 2.6pt2 x 1.618 = $11pt^2$
Country capital	Radius = $11pt^2$ ^ 0.5 = 3.3pt (or 6.6pt diametre) This was not prominent enough, so a larger size was calculated: Area = $11pt^2$ x 1.618 = $18pt^2$ Radius = $18pt^2$ ^ 0.5 = 4.25pt (or 8.5pt diametre)

INCREASE THE SIZE INCREMENTALLY

For the label size, using the golden ratio was not appropriate. Therefore, a regular increment of 1.5pt size was used. Start with the smallest font size and work up towards the largest font size. In this case, we will start with the town and finish with the feature country label. Do not use a font size less than 7pt on the map. For the most part, a font size of 8pt for the smallest label will suffice; 8pt-10pt is an ideal range.

Label size:
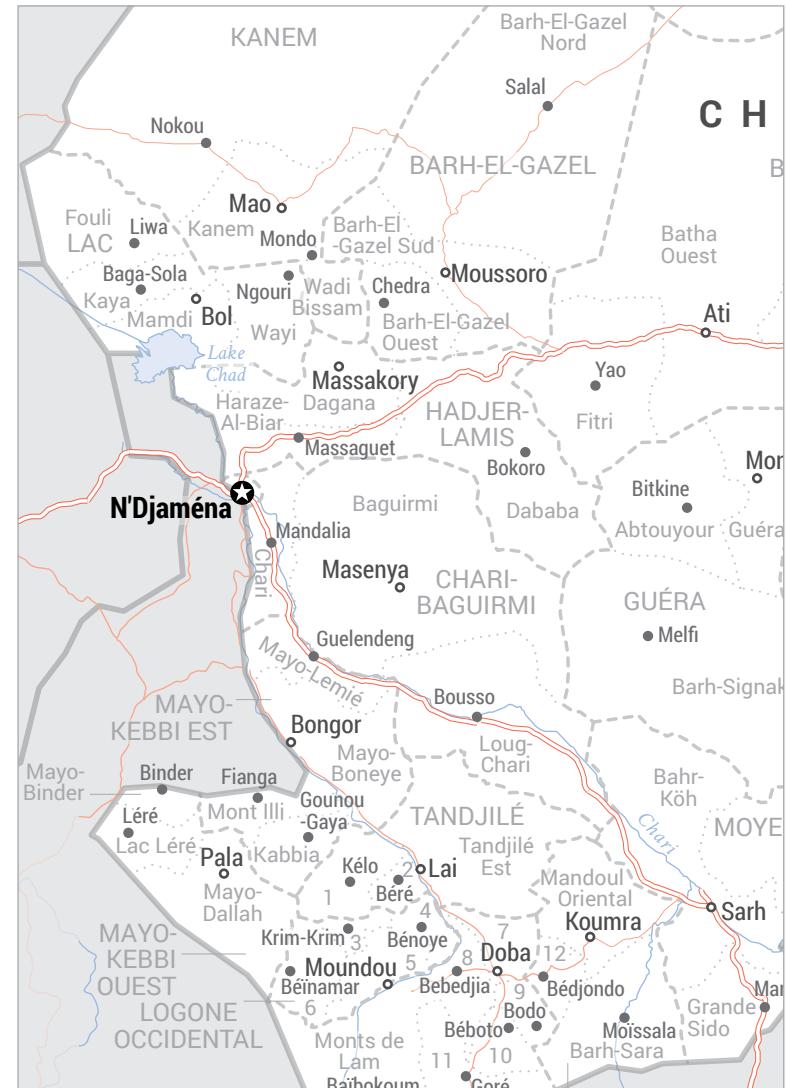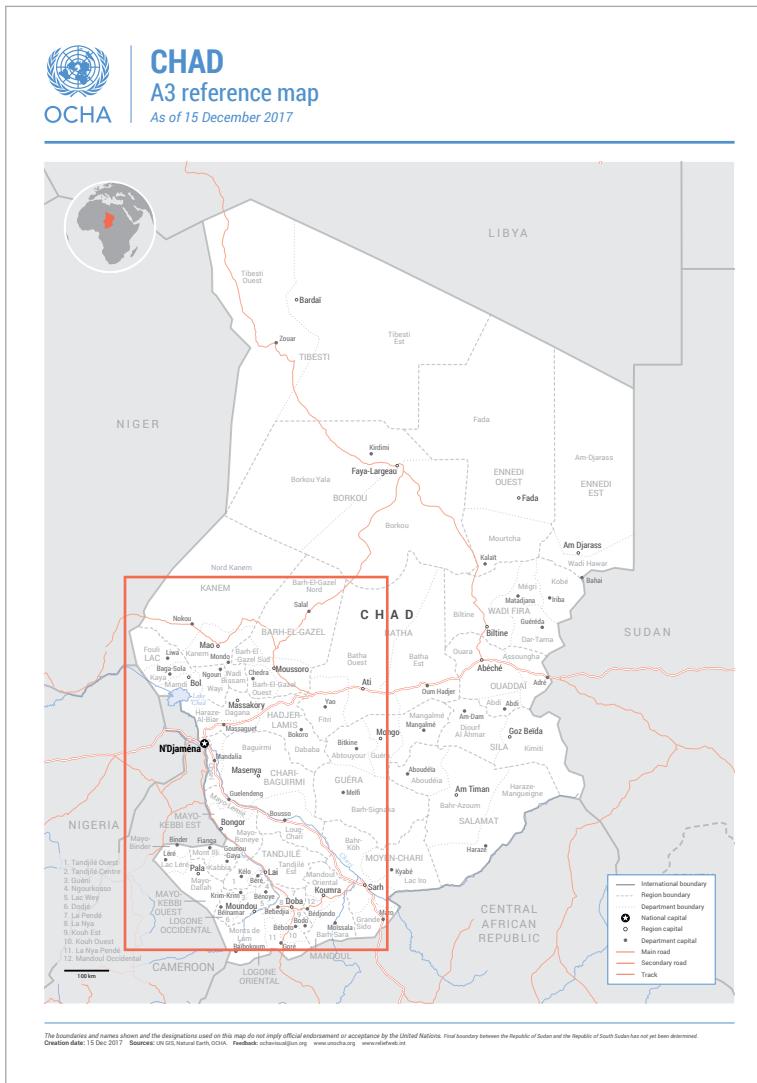
Town	8pt
Adm 1 capital/adm1 name	8pt + 1.5pt = 9.5pt
Capital	9.5pt + 1.5pt = 11pt
Country name	11pt + 1.5pt = 12.5pt
Feature country	12.5pt + 1.5pt = 14pt

Left:
Example of an
A3 reference
map for print.

Right:
View at 100% scale

LAYER	STYLE	LABEL
Countries/land	CMYK 0, 0, 0, 10	L A B E L Roboto Regular | 12.5pt | all caps | tracking 0-300 | CMYK 0, 0, 0, 40
Featured country	CMYK 0, 0, 0, 0	**L A B E L** Roboto Bold | 14pt | all caps | tracking 500 | CMYK 0, 0, 0, 85
International boundary	▬ 2.1pt | 50% opacity CMYK 0, 0, 0, 55	
1st administrative level boundary	– – 1.3pt | dash 3pt CMYK 0, 0, 0, 25	LABEL Roboto Regular | 9.5pt | all caps | CMYK 0, 0, 0, 40
2nd administrative level boundary	⋯⋯ 0.8pt | dash 0pt gap 3pt CMYK 0, 0, 0, 25	Label Roboto Regular | 8pt | CMYK 0, 0, 0, 40
Capital city	✪ 8.5pt | CMYK 0, 0, 0, 100	**Label** Roboto Condensed Bold | 11pt | CMYK 0, 0, 0, 100
Adm 1 capital	⊙ 5.2pt | stroke 1pt CMYK 0, 0, 0, 85	Label Roboto Condensed Regular | 9.5pt | CMYK 0, 0, 0, 85
Adm 2 capital	● 4pt | CMYK 0, 0, 0, 70	Label Roboto Condensed Regular | 8pt | CMYK 0, 0, 0, 70
Watershed	CMYK 10, 5, 0, 0 | stroke 0.5pt CMYK 38, 19, 0, 0	*Label* Crimson Text Italic | 8pt | tracking 0-100 | CMYK 38, 19, 0, 0
River	── 0.5pt | CMYK 38, 19, 0, 0	*Label* Crimson Text Italic | 8pt | tracking 0-100 | CMYK 38, 19, 0, 0

LAYER	STYLE	LABEL
Main road	══ 2.1pt CMYK 0, 72, 70, 0 | 1.3pt CMYK 0, 0, 0, 0	
Secondary road	── 0.5pt | CMYK 0, 72, 70, 0	
Track	── 0.3pt | CMYK 0, 72, 70, 0	

HOW WAS THE A3 MAP EXAMPLE CALCULATED?

GOLDEN RATIO

As with the typographic scale, you can use the golden ratio (1.618) to calculate a harmonized style for your symbol styles. Start with the smallest element and multiply by 1.618 to obtain the style for the higher level.

Boundary line stroke:

Admin 2 boundary	0.8pt
Admin 1 boundary	0.8pt x 1.618 = 1.3pt
International boundary	1.3pt x 1.618 = 2.1pt

Populated places symbol size (as it is a surface, the calculation is slightly different: area = radius^2 x 1.618):

Town	4pt diametre or 2pt radius
	Area = $2pt^2$ x 1.618 = $6.5pt^2$
Admin 1 capital	Radius = $6.5pt^2$ ^ 0.5 = 2.6pt
	(or 5.2pt diametre)
	Area = 2.6pt2 x 1.618 = $11pt^2$
Country capital	Radius = $11pt^2$ ^ 0.5 = 3.3pt
	(or 6.6pt diametre)
	This was not prominent enough, so a larger size was calculated:
	Area = $11pt^2$ x 1.618 = $18pt^2$
	Radius = $18pt^2$ ^ 0.5 = 4.25pt
	(or 8.5pt diametre)

Road line stroke:

Track	0.3pt
Secondary road	0.25pt x 1.618 = 0.5pt
Main road	0.5pt x 1.618 = 0.8pt
	This was not prominent enough, so a larger size was calculated:
	0.8pt x 1.618 = 1.3pt
	(white inner line)
	1.3pt x 1.618 = 2.1pt
	(salmon outer line)

INCREASE THE SIZE INCREMENTALLY

For the label size, using the golden ratio was not appropriate. Therefore, a regular increment of 1.5pt size was used. Start with the smallest font size and work up towards the largest font size. In this case, we will start with the town and finish with the feature country label. Do not use a font size less than 7pt on the map. For the most part, a font size of 8pt for the smallest label will suffice; 8pt-10pt is an ideal range.

Label size:

Adm 2 capital/adm2w name	8pt
Adm 1 capital/adm1 name	8pt + 1.5pt = 9.5pt
Capital	9.5pt + 1.5pt = 11pt
Country name	11pt + 1.5pt = 12.5pt
Feature country	12.5pt + 1.5pt = 14pt