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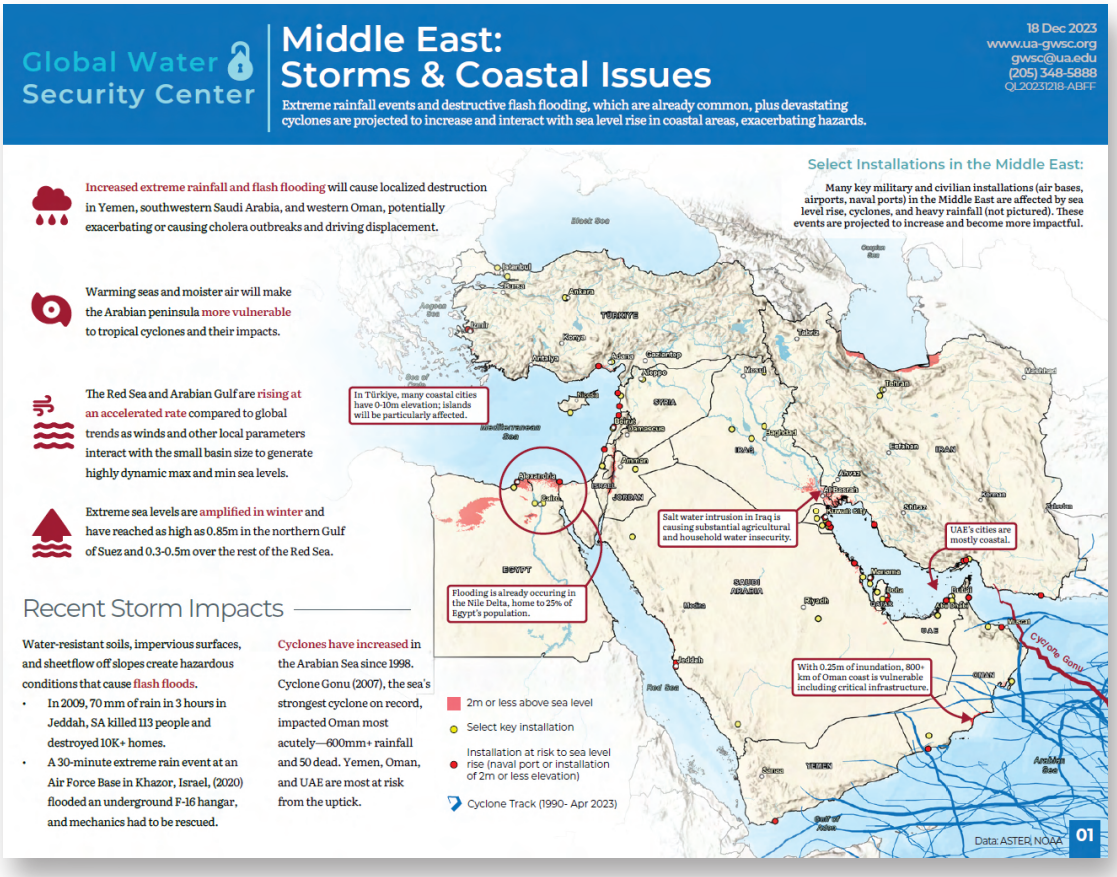
This is a collection of maps I have created while at the Global Water Security Center. All GIS work, cartography, layout, and graphic design in these reports were created by me. Links to the full reports are embedded where available.

Middle East Overview

This is the first page in an in-depth report on the effects of climate change in the Middle East on key military and civilian installations. This map shows an overview of their locations and highlights specific issues such as sea level rise and cyclones.

Data: ASTER DEM, HydroSHEDS river and lake data, NOAA Cyclone Tracks

Tools: ArcGIS Pro, Adobe Illustrator

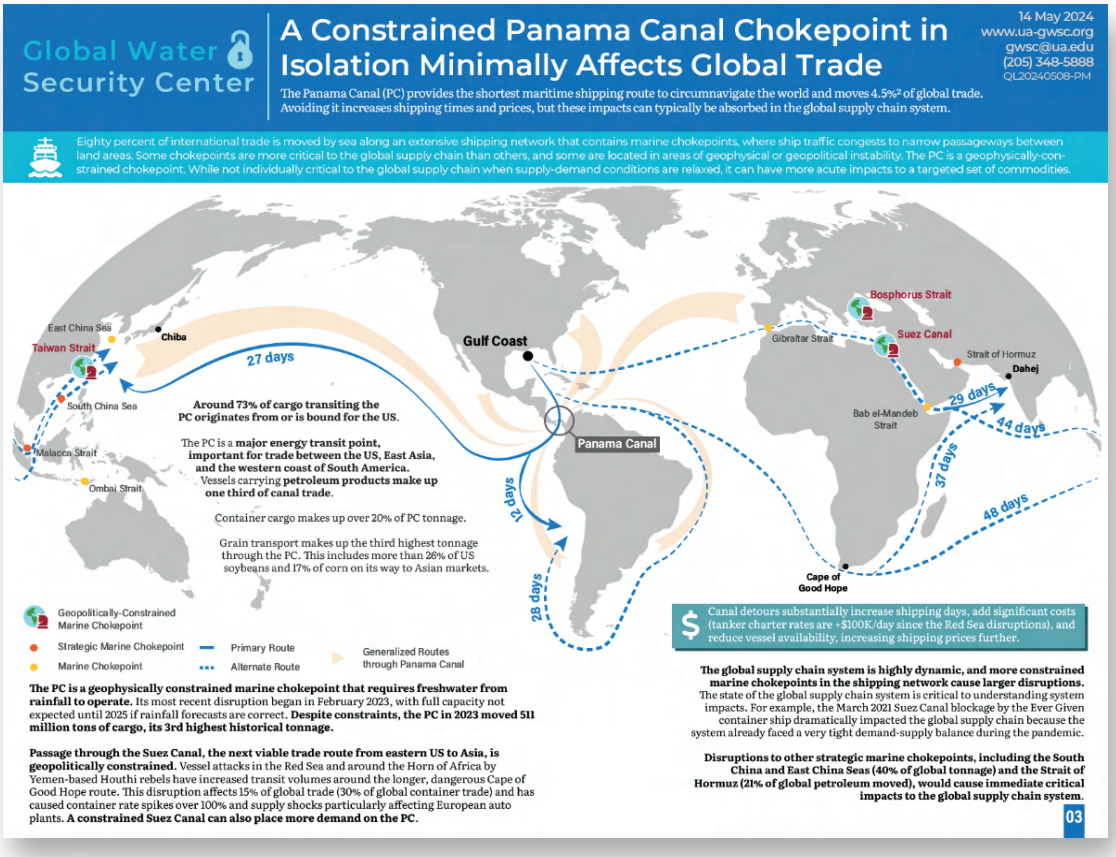


Shipping Routes

Part of a larger report on the Panama Canal, this map shows the potential effects on closing the canal and highlights strategic chokepoints.

Data: ASTER DEM, HydroSHEDS river and lake data, NOAA Cyclone Tracks

Tools: ArcGIS Pro, Adobe Illustrator



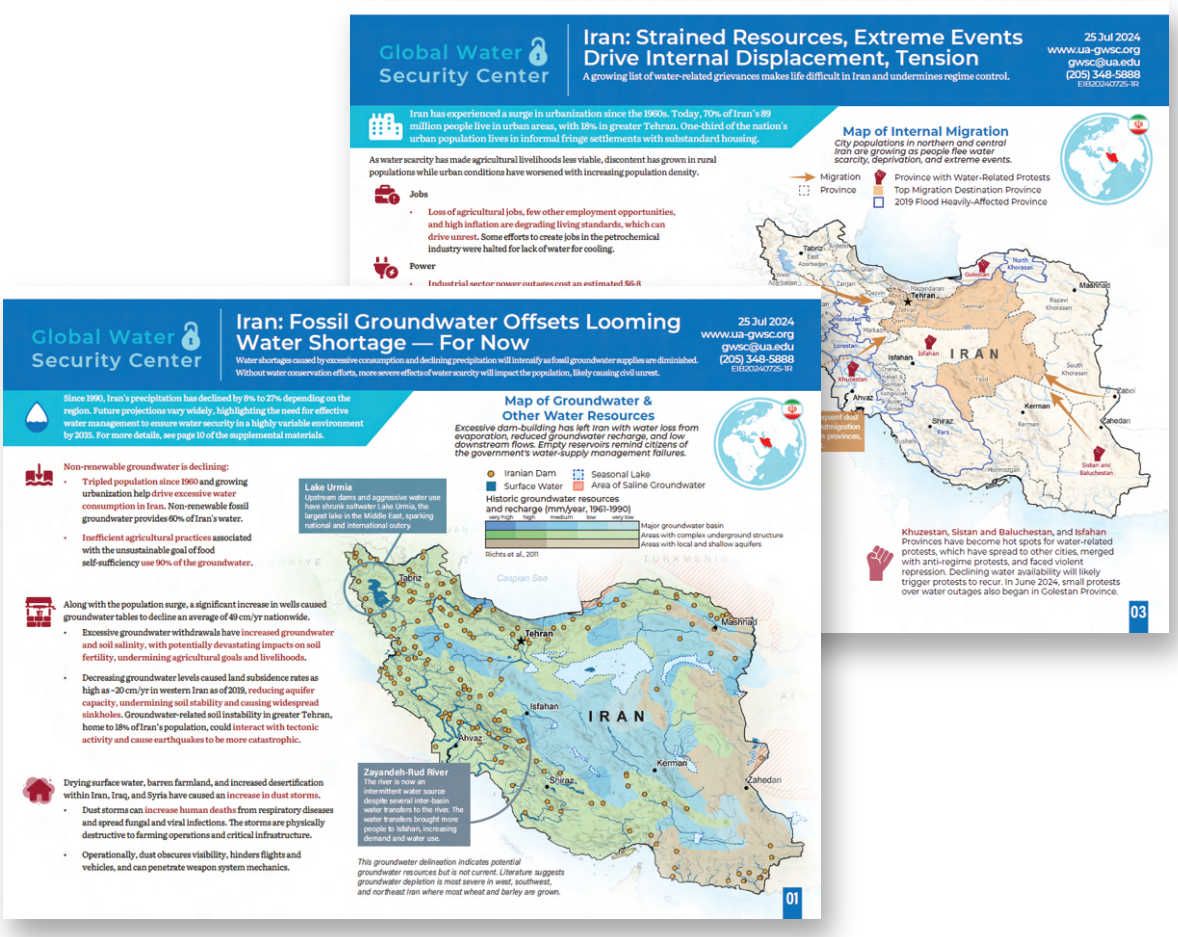
Iran Displacement & Groundwater

These two pages are in a report on water security issues and the effects of climate change in Iran in 2035. The bottom map shows the migration of Iranians to urban areas, driven by water scarcity, deprevation, and extreme events such as the 2019 flood described on the map.

The top map is a reference map showing the groundwater resources and includes surface water, including the seasonal lakes (playas).

Data: HydroSHEDS river and lake data, Natural Earth, Richts, et al., UN OCHA

Tools: ArcGIS Pro, Adobe Illustrator

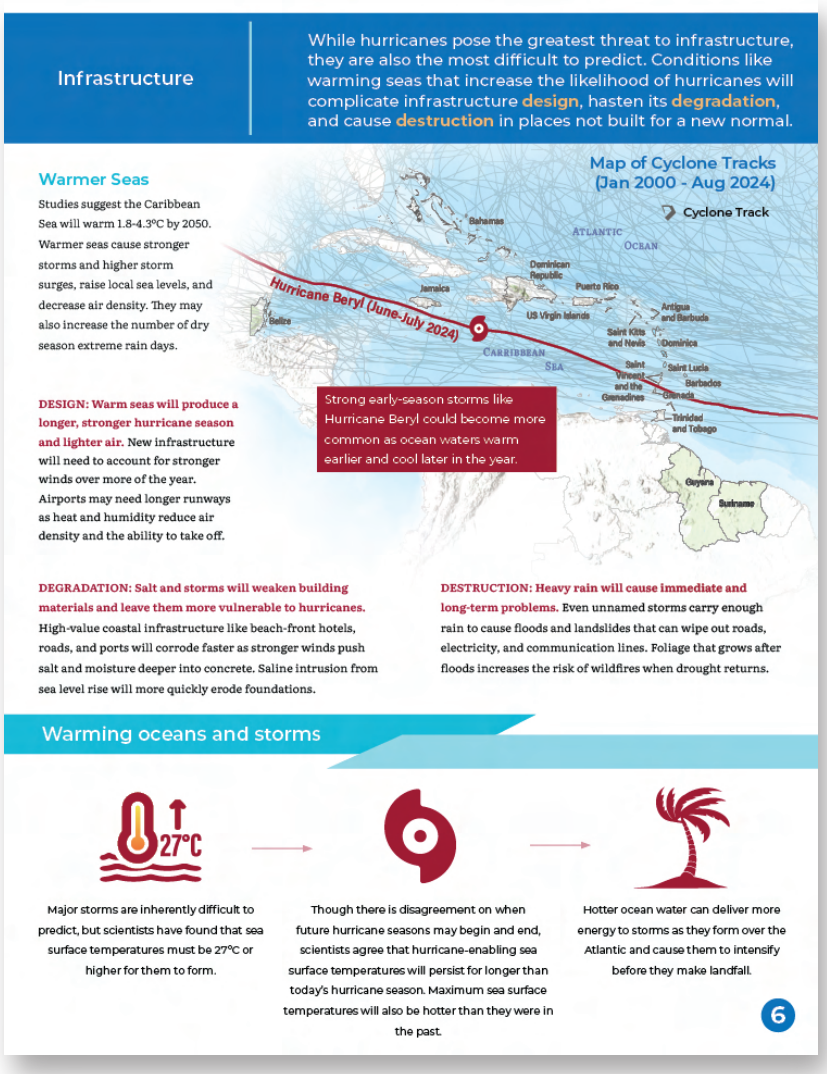


Caribbean Cyclones

This report was on the effects of climate change in the Caribbean region focusing on select countries. This is one of several maps in the report and this map shows the region and historic cyclone tracks, highlighting a recent storm. Icons were also created to convey help convey warming oceans developing into storms.. This is an example of a report created in InDesign with maps created with ArcGIS Pro and Illustrator.

Data: NOAA Cyclone Tracks

Tools: ArcGIS Pro, Adobe Illustrator, Adobe InDesign

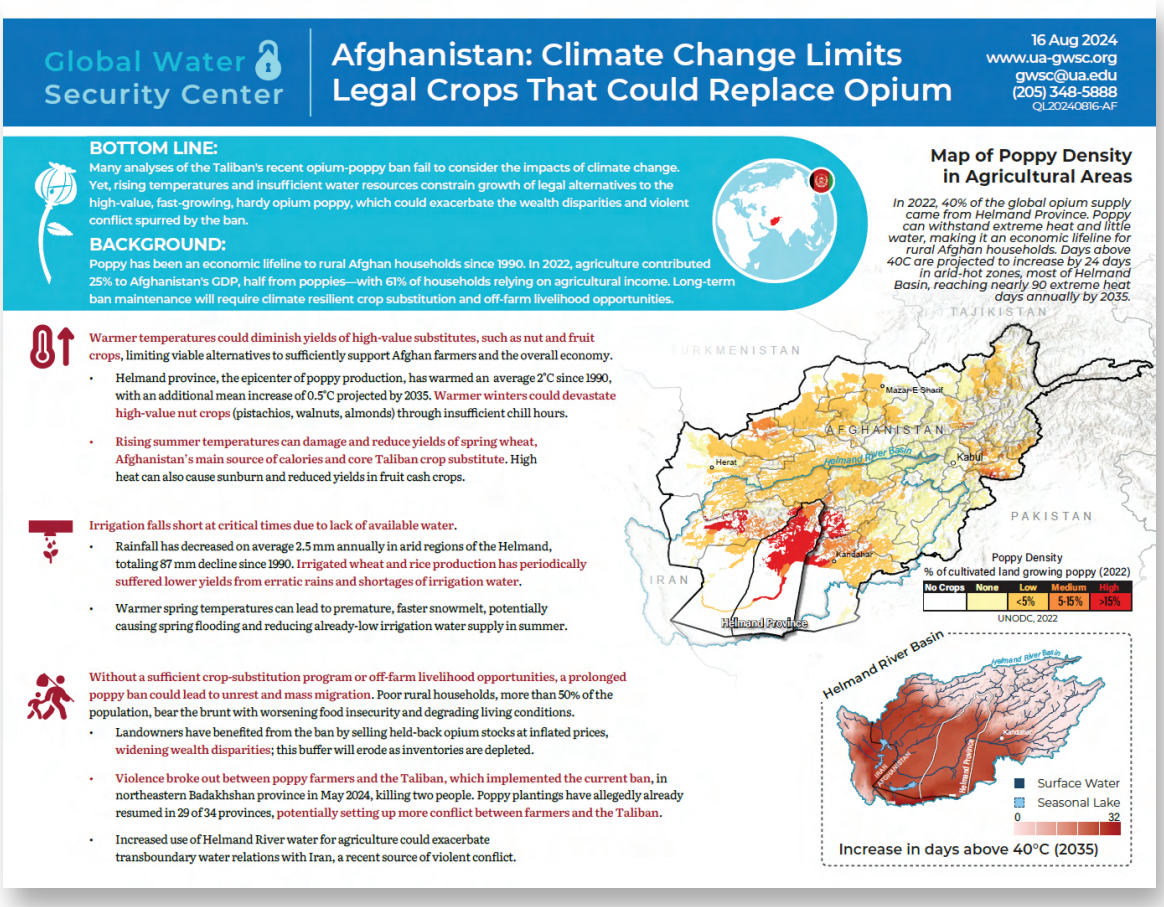


Afghanistan Poppies

This was a one-page report focusing on the potential for climate change limit farmers in Afghanistan after switching from growing opium to legal crops. These maps show the poppy density within agricultral areas and where they were in relation to projected increases in temperature.

Data: HydroSHEDS river and lake data, Natural Earth, Thrasher, B et al.

Tools: ArcGIS Pro, Adobe Illustrator

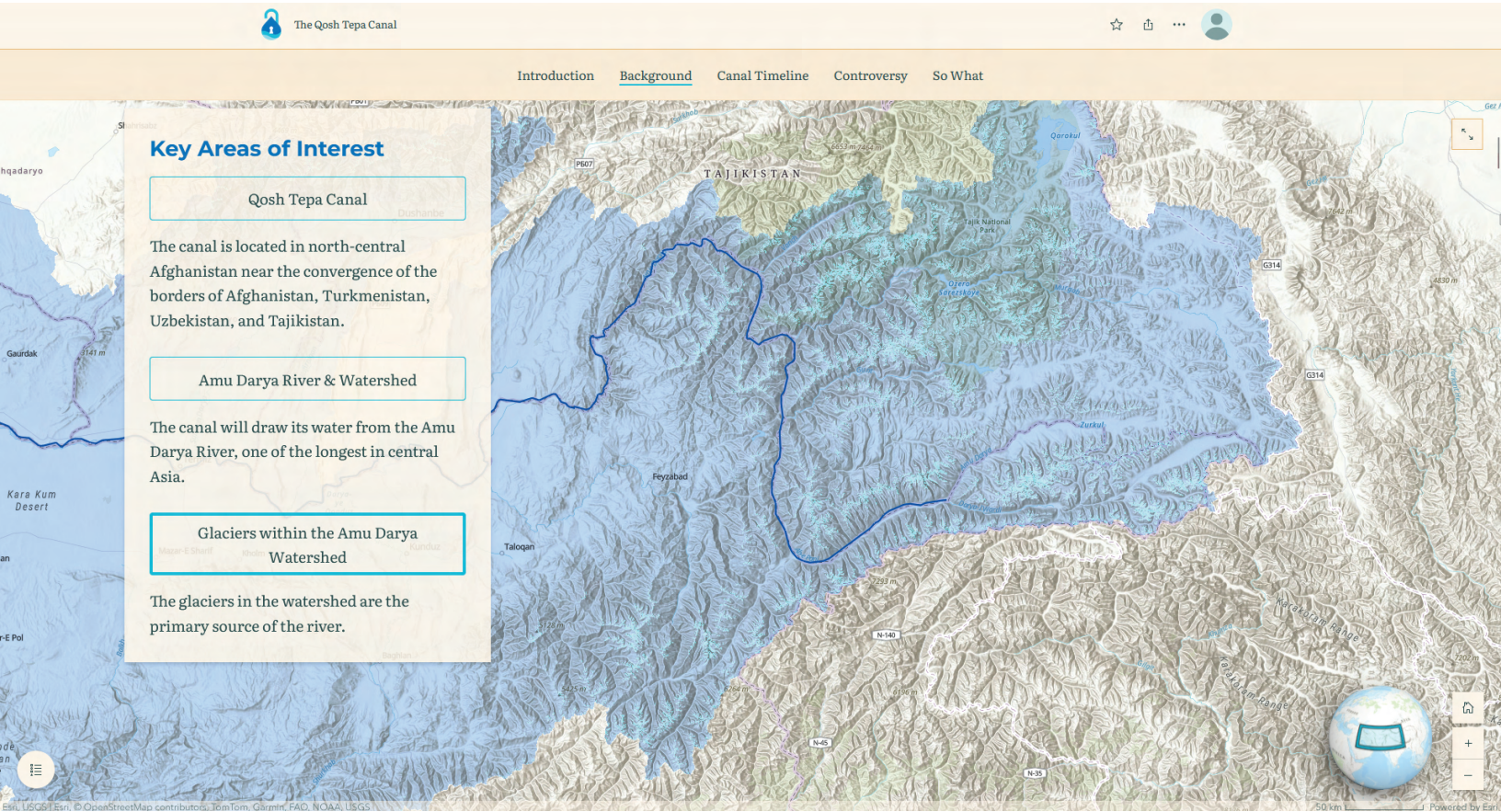


Qosh Tepa Canal Storymap (embedded link)

Created for a blog post highlighting the construction of the Qosh Tepa Canal in Afghanistan. The storymap includes a number of maps that show various content to include glaciers, watersheds, and the canal's progress. The maps were a mix of static and web maps. I developed and wrote the story and created all maps and visuals.

Data: HydroSHEDS river and lake data

Tools: ArcGIS Pro, ArcGIS StoryMaps, Adobe Illustrator

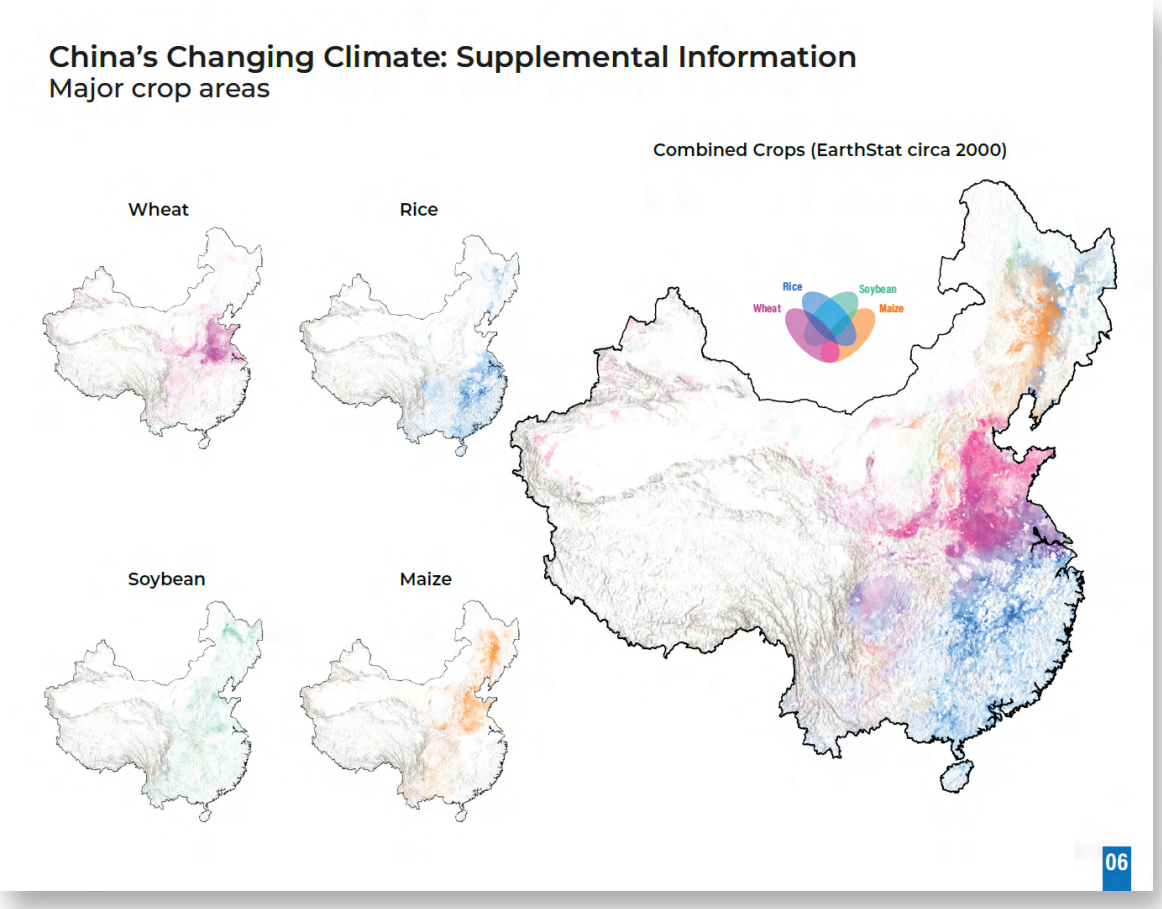


Major Crops in China

These maps were in a supplemental section of a longer report on the effects of climate change in China. These maps show the location of major crops, supplementing a map of all combined crops in the main section of the report that drives the story of the need to migrate crops to a more suitable region in the future.

Data: EarthStat

Tools: ArcGIS Pro, Adobe Illustrator, Adobe Photoshop



Tigris-Euphrates River Basin

This map highlights the complexity of the TIgris-Euphrates River Basin, focusing on the rise in salinity from sea level rise and drying lakes and its affect on the population and marshes.

Data: HydroSHEDS river and lake data, Kurdistan Region Statistics Office.

Tools: ArcGIS Pro, Adobe Illustrator, Adobe InDesign