

August 12, 2024

## News and notes

Before going on to discuss the geology and geopolitics of [Ethiopia](#), here are some news items I thought were interesting.

## Geopolitics



**Van on fire during the 2024 Southport Riots**

**Credit: [StreetMic LiveStream](#), [Creative Commons Attribution 3.0 Unported](#) license**

- [Is Britain heading for civil war? It would be foolish to write it off.](#)
- [Colour revolution](#) timed to expedite lithium mine approval: [Serbian president says he received coup warning from Russia.](#)
- Video: [Burkina Faso: The World's Most-Neglected War.](#)
- More civil disorder: [No jobs, no trust: young Africans' economic struggles fuel protests.](#)
- Ukraine War:
  - [Battles persist in western Russia after bold cross-border attack by Ukraine;](#)
  - Not a scene from an American civil war, it's a town in the [Donetsk Oblast: 53rd Brigade Launches Successful Counteroffensive in New York.](#)

## Research and News

- [Variability in interseismic strain accumulation rate and style along the Altyn Tagh Fault.](#)
- [The constant oxidation state of Earth's mantle since the Hadean.](#)
- [Biogeographic climate sensitivity controls Earth system response to large igneous province carbon degassing;](#) Phys.org summary [here](#).

- Crystallography: [Positron emission tomography quantifies crystal surface reactivity during sorption reactions.](#)
- Geological history: [Geological evidence reveals a staircase pattern in Earth's rotational deceleration evolution.](#)
- Wind blown sand research: [Rheological sand bed generates non-rebounding particles.](#)
- [The assembly of Pangaea: geodynamic conundrums revisited.](#)
- [A long section of serpentinized depleted mantle peridotite](#); behind a paywall, Science Alert summary [here](#).
- [Coevolution of craton margins and interiors during continental break-up](#); Phys.org summary [here](#).
- [Generation of Archaean oxidizing and wet magmas from mafic crustal overthickening](#); Sci News summary [here](#).
- Geophysics: [Effect of Al-Incorporation on the Sound Velocities of Superhydrous Phase B at High Pressure and High Temperature](#); Phys.org summary [here](#).
- [Peri-Gondwanan sediment in the Arkoma Basin derived from the north: The detrital zircon record of a uniquely concentrated non-Laurentian source signal in the late Paleozoic.](#)
- [On the Move: 2023 Observations on Real Time Graben Formation, Grindavík, Iceland](#); Phys.org summary [here](#).

## Paleontology

- [Novel phylogenomic inference and 'Out of Asia' biogeography of cobras, coral snakes and their allies](#); Live Science summary [here](#).
- [Siberian gold miners accidentally find ancient woolly rhino mummy with horn and soft tissues still intact.](#)
- [Plant, insect, and fungi fossils under the center of Greenland's ice sheet are evidence of ice-free times](#); Phys.org summary [here](#).
- [Survival of mammoths \(\*Mammuthus\* sp.\) into the Late Pleistocene in Southwestern British Columbia \(Vancouver Island\), Canada](#); Phys.org summary [here](#).

## Mining and Energy

- [Calibre secures approval for third open pit at Valentine gold mine in Newfoundland.](#)
- [Petra defers another diamond tender amid weak demand.](#)
- [Australian spodumene producers staying the course amid low prices.](#)
- [Glencore abandons plan to exit coal after investors say no.](#)
- [Global Coal Production Hits Record Highs.](#)



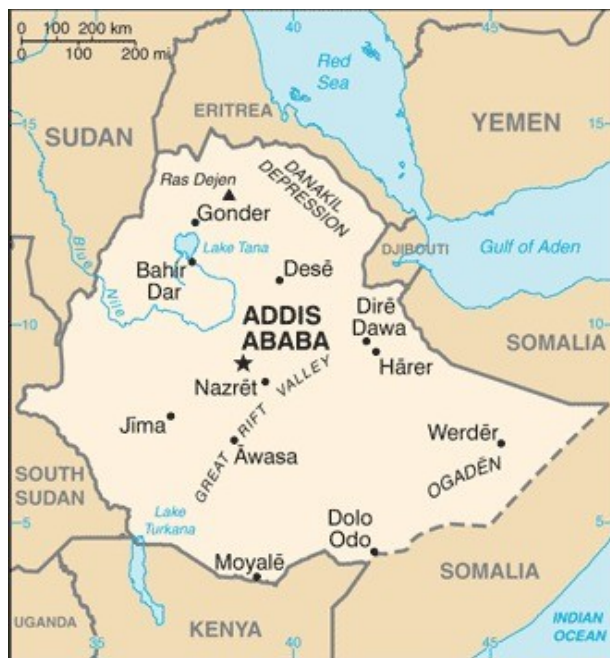
- United States Geological Survey (USGS) Volcano Watch: [Kīlauea's 2019–2020 lake: recalling the watery intermission between eruptions.](#)
- USGS Yellowstone Volcano Observatory: [The probability of hydrothermal explosions in Yellowstone.](#)
- [Smithsonian / USGS Weekly Volcanic Activity Report.](#)
- [Earth from space: 'Smoking terror' volcano that destroyed city 400 years ago burps toxic cloud.](#)
- [Euro-Mediterranean Seismological Centre](#)
- [Earthquakes Monitoring Live Worldwide.](#)
- Man-made earthquakes: [Induced seismicity and surface deformation associated with long-term and abrupt geothermal operations in Blue Mountain, Nevada.](#)
- [M7.1 earthquake strikes southern Japan; megaquake advisory issued](#); USGS summary [here](#); [Japan Meteorological Agency](#) map [here](#).
- [M5.2 earthquake shakes south and central California](#); USGS summary [here](#).
- Earthquake research: [Revisiting interseismic deformation in Nankai: focusing on slip-deficit accumulation in the ETS zone and comparison with Cascadia.](#)
- Landslides:
  - Landslides and tsunamis: [The 16 September 2023 Greenland Megatsunami: Analysis and Modeling of the Source and a Week-Long, Monochromatic Seismic Signal](#); Phys.org summary [here](#);
  - [Landslide research: Influence of sediment permeability in seismic-induced submarine landslide mechanism: CFD-MPM validation with centrifuge tests and analysis](#);
  - More landslide research: [Slope reliability assessment using an innovative critical failure path approach](#);
  - [B.C. landslide: Videos show water flowing over top of Chilcotin River site](#); another video [here](#).

## Upcoming Events

- [Dallas Mineral Collecting Symposium, August 17, 2024.](#)
- [Goldschmidt 2024, August 18-24, Chicago IL](#), organized by the Geochemical Society and the European Association of Geochemistry.
- [Lloydminster Heavy Oil Show September 11-12](#); Pipeline Online summary [here](#).
- [Groundwater Week 2024](#), December 10-12 in Las Vegas, Nevada.
- [Copper to the World Conference, Tuesday 26 – Wednesday 27 August 2025](#), in Adelaide, Australia; report on 2024 conference [here](#).

August 12, 2024

## Geology and the Fate of Societies – Ethiopia



**Figure 1a – Ethiopia**

**Credit:** [CIA World Factbook](#), public domain

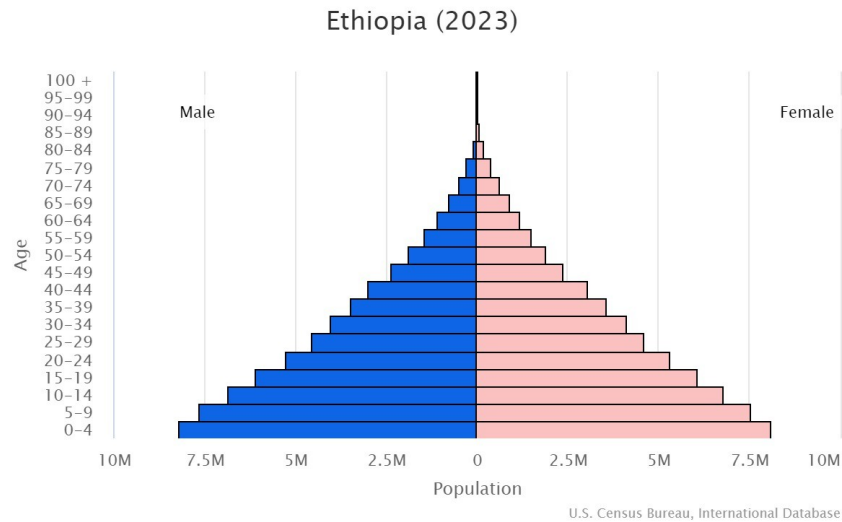
**Figure 1b – Location Map**

**Credit:** [CIA World Factbook](#), public domain

This week we will take a look at the [Federal Democratic Republic of Ethiopia](#). Located in the [Horn of Africa](#), Ethiopia is a landlocked country that has borders with: [Eritrea](#) to the north, [Djibouti](#) to the northeast, [Somalia](#) to the East, [Kenya](#) to the South, [South Sudan](#) to the West, and [Sudan](#) to the Northwest. The country is [Federal parliamentary republic](#); the President is [Sahle-Work Zewde](#); and the Prime Minister is [Abiy Ahmed](#). The [legislature](#) consists of two houses: an Upper House, the [House of Federation](#); and a Lower House, the [House of Peoples' Representatives](#). The Capital and largest city in Ethiopia is [Addis Ababa](#) (pop. 5,704,000 in the metropolitan area).

According to the [Central Intelligence Agency's \(CIA\) World Factbook on Ethiopia](#), the country has a total area of 1,104,300 square kilometres (km<sup>2</sup>), of which 1,096,570 km<sup>2</sup> is land, and 7,730 km<sup>2</sup> is water. Also according to the World Factbook, 118,550,298 people live in Ethiopia, 23.2% of whom live in urban areas. The country has no majority ethnic group. Of the approximately 119 million people in Ethiopia: 35.8% are ethnic [Oromo](#); 24.1% are [Amhara](#); 7.2% are [Somali](#); 5.7% are [Tigray](#); 4.1% are [Sidama](#); 2.6% are [Guragie](#); 2.3% are [Welaita](#); 2.2% are [Afar](#); 1.3% are [Silt'e](#); 1.2% are [Kafficho](#); and 13.5% are something other. With such a variety of ethnic groups, Ethiopia has an equally [large number of languages](#), estimates [go up to 109](#). Official languages include [Afar](#), [Amharic](#), [Oromo](#), [Somali](#), and [Tigrinya](#). As well, [Harari](#) and [Sidama](#) are recognized as regional languages. Most Ethiopians are [Christian](#); 43.8% are [Ethiopian Orthodox](#); 22.8% are Protestants, especially [P'ent'ay](#) Pentecostals; and 0.7% are [Roman Catholic](#). Of the remaining, 31.3% of Ethiopians are [Muslim](#), 0.6% follow [traditional African religious faiths](#), 0.8% are something other. In terms of education, 51.8% of the population is literate and schooling for most people lasts around 8 to 9 years. In terms of the economy, per capita [GDP](#)

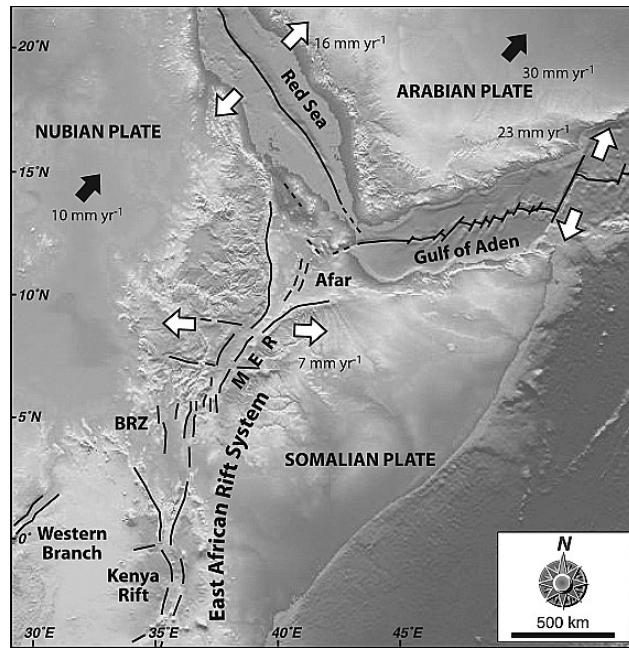
was \$2,800 USD in 2023 and the unemployment rate was 3.5% the same year. In 2015, 23.5% of the population lived below the poverty line and the overall [Gini Index](#) for that year was 35 out of 100, where 100 is the best Gini coefficient.



**Figure 2 – Demographic Profile of Ethiopia**  
 Credit: [U.S. Census Bureau, International Database, public domain](#)

The demographic profile of Ethiopia shows a young country where the median age is 20.4 years. The total fertility rate is 3.92 births per woman with an under 5 mortality rate of 47.5/1000, resulting in an overall annual growth rate of 2.4%. Life expectancy at birth for both sexes is 67.1 years.

## Geology

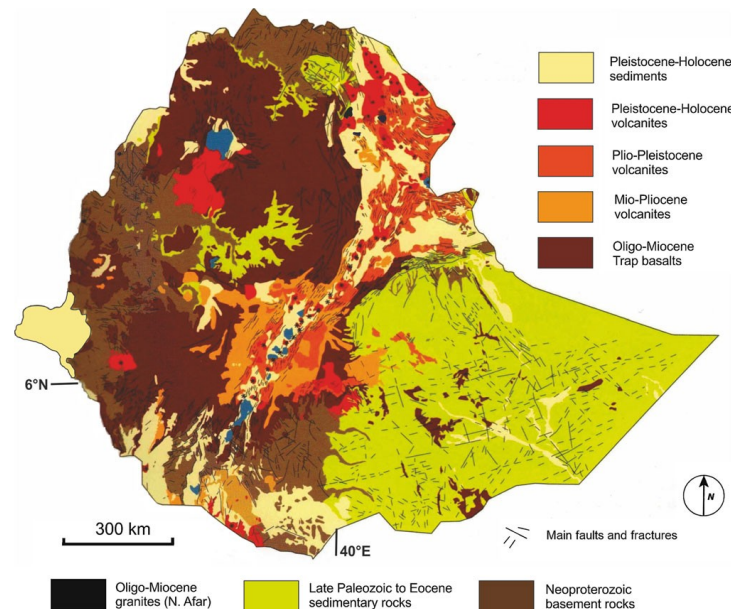


**Figure 3 – Geodynamic setting of the Main Ethiopian Rift**  
 Credit: [Figure 1 in Bonini et al, 2005](#)

Figure 3 shows the main tectonic features of the [geology of Ethiopia](#):

- To the west is the [Nubian or African Plate](#);
- To the east is the [Somali Tectonic Plate](#);
- To the north is the [Afar Depression](#), bordering on the [Arabian Plate](#); and
- Separating the three is the [Ethiopian Rift System](#) that is part of the [East African Rift Zone](#).

Figure 4, below, shows a basic geological map of Ethiopia.



**Figure 4 – Basic Geological Map of Ethiopia**  
**Credit: Figure 2.4 in Abbate, Bruni, Mario Sagri, 2021**

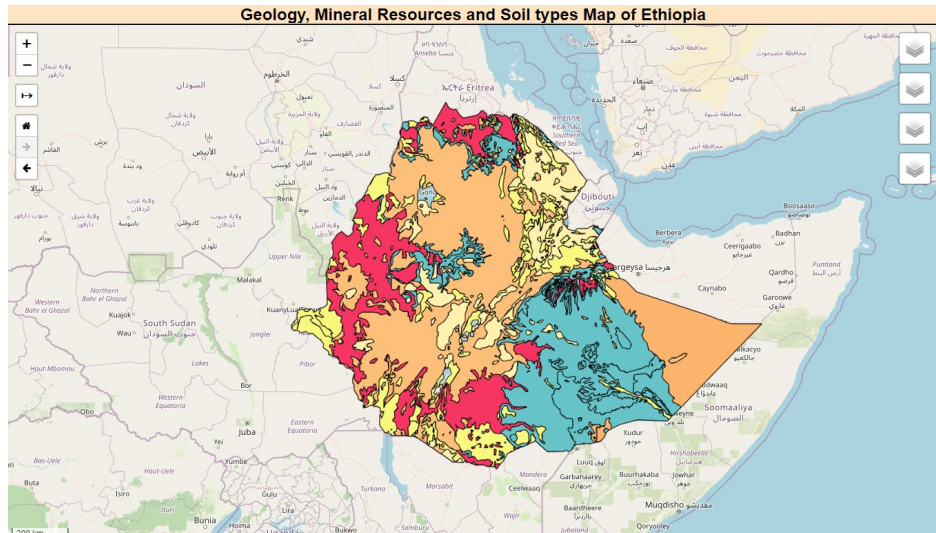
The oldest rocks in Ethiopia are [Neoproterozoic basement rocks](#) metamorphosed during the [East African Orogeny](#). These deposits include [metasediments](#), [gneiss](#), and [granite](#) overlying with older [metavolcanic](#) rocks.

Immediately overlying the basement rocks are sedimentary rocks of the [Ogaden Basin](#). The oldest of these are [Paleozoic](#) sedimentary deposits including some laid down during a period of [glaciation](#) during the Late Paleozoic. These sedimentary deposits include [Ordovician](#) to [Silurian fluvial sandstones](#) (lower [Enticho Sandstone](#)), [Late Carboniferous](#) to [Early Permian](#) glacial [fluviolacustrine](#) deposits (upper [Enticho Sandstone](#), and [Edaga Arbi Glacials](#)).

Overlying the Paleozoic deposits of the Ogaden Basin are [Jurassic](#) deposits, the oldest of which, the [Adigrat Sandstones](#), are continental deposits. Marine sedimentation resulting from the [rifting of Gondwana](#) that began in the [Late Jurassic](#) deposited the [limestones](#) and [evaporites](#) of the [Antalo Group](#). On top of the Jurassic deposits are [Cretaceous](#) sediments of the [Lower Cretaceous](#) Korah Formation, made up of interbedded evaporites, [shale](#), [dolomite](#), limestone and sandstone; and the [Upper Cretaceous Jessoma Sandstone](#).

Cenozoic sedimentary deposits in the Blue Nile Rift include the Eocene Auradu and Taleh formations made up of interbedded limestone, evaporite, and shale; the Neogene aged Alwero Formation composed of alluvial and lacustrine deposits.

The active tectonic activity in Ethiopia has deposited a long sequence of igneous rocks during the Cenozoic; these include granite, trap basalts and various other volcanic rocks. Details of the geology can be found on Figure 5, below, which leads to an interactive geologic map of Ethiopia.



**Figure 5 – Interactive Geology Map of Ethiopia**  
[Credit: map.sisaygeo.com](http://map.sisaygeo.com)

## Resources

### Agriculture



**Figure 6 – Ethiopian Farm Compound**  
[Credit: A. Davey, Creative Commons Attribution 2.0 Generic license](https://creativecommons.org/licenses/by/2.0/)

According to the CIA World Factbook on Ethiopia, agricultural land makes up 36.3% of the country's area of which 15.2% is [arable land](#), 1.1% is devoted to [permanent crops](#), and 20% is [permanent pasture](#). Most of the food production in Ethiopia is from [subsistence agriculture](#). Of the remaining, forest covers 12.2%, and 51.5% has other, or no, use. Agricultural production contributes to 34.8% of the GDP, the rest being industry, 21.6%, and services, 43.6%.

The top ten crops of Ethiopia, based on tonnage, are [maize](#), [wheat](#), other [cereal crops](#), [sorghum](#), [dairy products](#), [barley](#), [taro](#), [potatoes](#), [millet](#), and [beans](#). Another famous crop is [coffee](#), Ethiopia being the 6th largest producer in the world and where the crop was originally domesticated. Statistics on food production in Ethiopia from the [United Nations Food and Agriculture Organization](#) (FAO) can be found [here](#).

All agriculture is weather dependent, all the more so with subsistence farming where the consequences of crop failure include starvation. As a result, food insecurity in Ethiopia has had [frequent famines over the ages](#). Currently, [59% of the population](#) suffers from moderate to severe food insecurity. In 2023 [the FAO warned](#) that the country was in a dire food security situation where approximately 20.1 million people were in need of emergency food assistance.

### **Forestry**



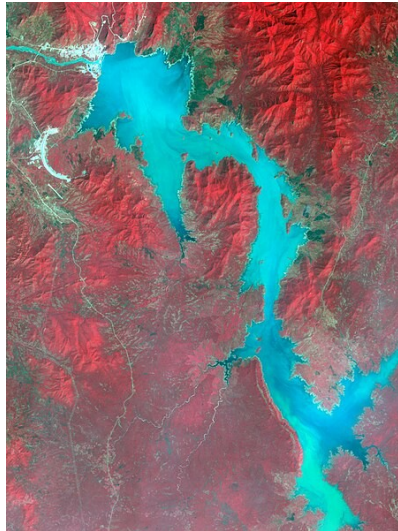
**Figure 8 – Forest Life in Ethiopia**

**Credit: [Rod Waddington, Creative Commons Attribution 2.0 Generic](#) license**

As noted above, forest covers 12.2% of the land area in Ethiopia. [Forestry in Ethiopia](#) produces lumber and other forest products, such as charcoal, for both local use and export. Two unique forest products from Ethiopia are aromatic resins used for [incense](#). One is [frankincense](#), resin from trees of the genus [Boswellia](#), and the other is [myrrh](#), resin from trees of the genus [Commiphora](#). Both have been exported

from Ethiopia since ancient times. Statistics on forest production from Ethiopia from the FAO can be found [here](#).

### Water Resources



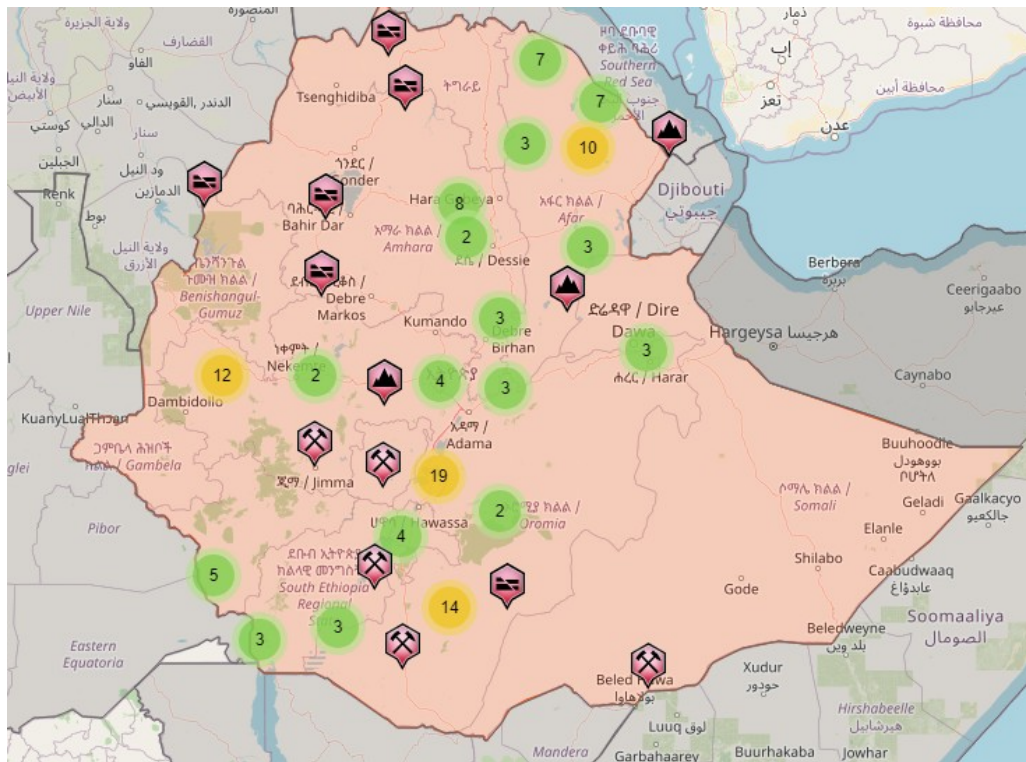
The most geopolitically significant water resource development in Ethiopia is the [Grand Ethiopian Renaissance Dam](#). Located on the [Blue Nile](#), the dam impounds 74 km<sup>3</sup> (60,000,000 acre · ft) of water and is designed to produce 5.15 [GW](#) of electricity. Filling of the dam began in 2020 and continues to this day. The dam is a great asset for a poor country like Ethiopia

The problem lies with the downstream users of the Nile River, [Sudan](#) and especially [Egypt](#). Egypt has [repeatedly objected](#) to the project, rightly fearing its effects on food production in Egypt.

Less contentiously, you can find a summary of groundwater resources in Ethiopia [here](#).

**Figure 8 – Grand Ethiopian Renaissance Dam**  
**Credit: NASA – ASTER Project, public domain**

### Mineral Resources



**Figure 9 – Interactive Mineral Deposit Map of Ethiopia**  
**Credit: ©Mindat.org**

Ethiopia has deposits of [gold](#), [coal](#), [opal](#), [gemstones](#), [kaolin](#), [iron ore](#), [soda ash](#), and [tantalum](#). However, only gold is mined in significant quantities. Much of the mining in Ethiopia is small scale [artisanal](#), especially for gold and [gemstones](#). One large commercial gold mine, the [Lega Dembi Mine](#) operated by the [MIDROC Investment Group](#) in [Oromia Regional State](#) has had repeated problems with [pollution](#) and local protests against that pollution.

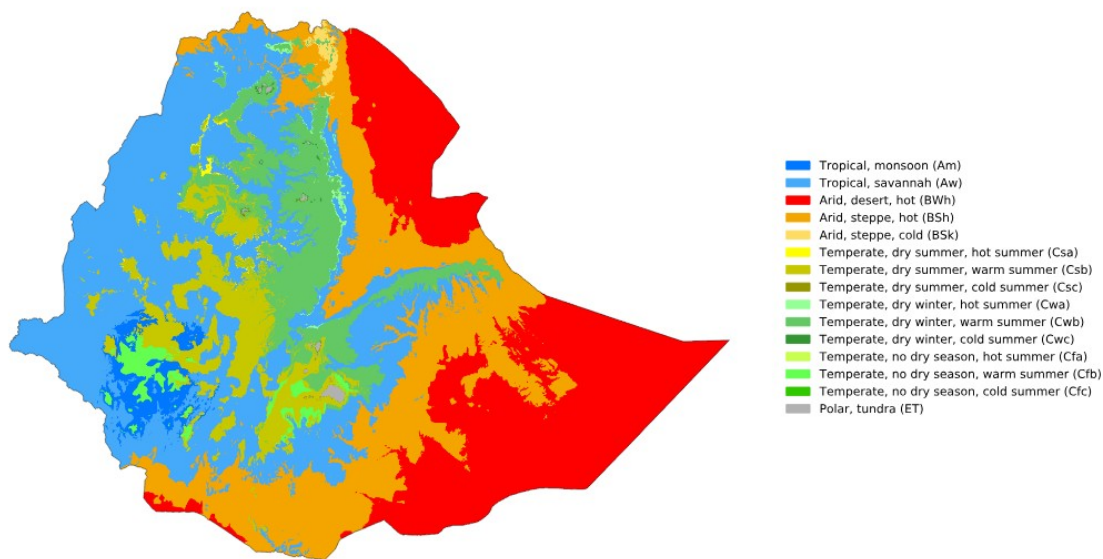
Tantalum and [lithium](#) are produced at the [Kenticha Mine](#) in the south of Ethiopia. [Platinum](#) is produced by artisanal methods in [deposits at Yubdo](#).

Salt is extracted from salt beds in the [Afar Depression](#), as well as from salt springs in [Dire](#) and [Afdere](#) districts in the south, is only of internal importance and only a negligible amount is exported. Lignite coal is produced at the [Delbi Coal Mine](#). The production of building materials are also an important part of the mineral industry in Ethiopia.

The USGS summary on the Mineral Industry in Ethiopia is found [here](#).

## Climate

Köppen–Geiger climate classification map for Ethiopia (1980–2016)



Source: Beck et al.: Present and future Köppen-Geiger climate classification maps at 1-km resolution, Scientific Data 5:180214, doi:10.1038/sdata.2018.214 (2018)

**Figure 10 – Köppen-Geiger Climate Classification Map for Ethiopia**  
**Credit: Beck et al, 2018, Creative Commons Attribution 4.0 International license**

The [climate of Ethiopia](#) is varies significantly and includes areas of tropical ([Am](#), [Aw](#)), arid ([BWh](#), [BSH](#), [BSk](#)) and temperate ([Csa](#), [Csb](#), [Csc](#), [Cwa](#), [Cwb](#), [Cfa](#), [Cfb](#), [Cfc](#)) climates. The very highest peaks have a tundra climate ([ET](#)).

Ethiopia appears to be an interesting place to visit. If you would like to go, first check out the travel advisories for the country [here](#) and [here](#). If the advisories don't scare you off your travel plans, check out [Climates to Travel](#) and [Lonely Planet](#).

## History and Geopolitics

### History – A Troubled Ancient Land



**Figure 11 – The Visit of the Queen of Sheba to King Solomon**  
**Credit: [Edward Poynter \(1836–1919\)](#), public domain**

The [history of Ethiopia](#) stretches back to the [Paleolithic](#), fossils of some of the [earliest hominids](#) come from the country. In historic times, Ethiopia was known to the ancient civilizations of [Egypt](#) and the [Levant](#). One of the most famous stories from antiquity concerning Ethiopia was the visit of the [Queen of Sheba, Bilqis](#) to [King Solomon](#) of Israel. [A notorious womanizer](#), Solomon got Bilqis pregnant and their child was the supposed first ruler of the [Solomonic dynasty](#) of [Aksum](#). The Solomonic dynasty later ruled in Ethiopian kingdom and continued to do so until 1974, when its last emperor, [Haile Selassie](#), was overthrown by a [coup d'état](#).

Ethiopia, under the Kingdom of Aksum, [adopted Christianity](#) in the 4<sup>th</sup> Century AD. The presence of a Christian kingdom was vaguely known to the medieval Christians of Western Europe, who told stories about the mythical [Kingdom of Prester John](#), a story that encouraged Western European exploration in the early modern period.

During medieval and early modern times a series of monarchies ruled what is now Ethiopia from 980 B.C. to 1855, when the Amhara kingdoms of northern Ethiopia united in an empire under [Tewodros II](#). In 1896, Italian adventurers attempted to conquer Ethiopia, only to be thoroughly trounced at the [Battle of Adwa](#). Ethiopia is unique in African history for not being colonized by Europeans in the [Scramble for Africa](#).

The Italians didn't forget their defeat at Adwa and, under [Benito Mussolini](#), invaded Ethiopia in 1935. The Ethiopian Emperor at the time, [Haile Selassie](#), [appealed for help](#) to the [League of Nations](#). However, the [Italians occupied Ethiopia](#) in spite of international condemnation, and [conducted numerous atrocities](#). The British expelled the Italians from Ethiopia in the [East African Campaign of World War II](#), 1940-41 and Emperor Haile Selassie returned to his throne.

Haile Selassie was quite an interesting character. His reign after World War II was not entirely peaceful but had some notable successes. In 1960, dissatisfied army officers unsuccessfully attempted to [overthrow his regime in a coup d'état](#). In 1962, Ethiopian forces invaded and [annexed Eritrea](#). In 1963, Selassie helped establish the [Organization of African Unity](#) in 1963. As well, and interestingly enough, the [Rastafarians of Jamaica](#) revered (and continue to revere) Selassie as a [Sacred King](#).

Sacred or not, a [Marxist-Leninist](#) cabal in the Ethiopian Army, [The Derg](#), successfully overthrew Emperor Haile Selassie in a [1974 coup d'état](#). Readers familiar with Marxist-Leninists can quickly guess what came next, the attempt to establish a Marxist-Leninist utopia led to a [political repression campaign](#) that led to the death of up to 980,00 people, [famine](#), and massive displacements of people. As if that wasn't enough, they got into a dust-up with Somalia, the [Ogaden War in 1977-78](#).

The mismanagement of Ethiopia by the Derg sparked a [civil war](#) that lasted until 1991, when the Derg were overthrown by the [Ethiopian People's Revolutionary Democratic Front](#) (EPRDF). The EPRDF political coalition ruled Ethiopia from 1991 until its dissolution in 2019. Ethiopia adopted its [current constitution](#) in 1995 and held its first multiparty elections that year. Also as a result of the civil war that ended in 1991, [Eritrea gained its independence](#).

Also during the 1990's, [Ethiopia and Eritrea fought a border war](#) that ended with a peace treaty in 2000. Ethiopia subsequently rejected the [2007 Eritrea-Ethiopia Boundary Commission demarcation](#). This resulted in more than a decade of a tense “no peace, no war” stalemate between the two countries. This [was finally resolved in 2018](#).

Things since 2018 have not been so rosy for Ethiopia, which continues to have [civil conflict between various ethnic groups](#). Maybe getting rid of Emperor Haile Selassie wasn't such a good idea after all?

### *Geopolitics – A Dangerous Corner of the World*

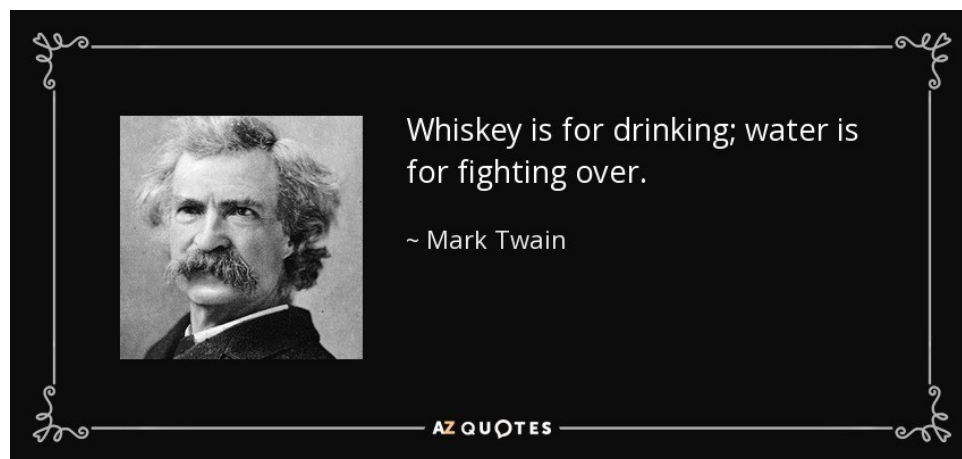


**Figure 12 – Destroyed Tank in the Afar Region, July 2022**  
**Credit: [Voice of America / Henry Wilkins](#), public domain**

The many internal problems of Ethiopia defy easy solutions. Even a Sacred King, and wily politician, like Haile Selassie would be hard pressed to come up with a solution to Ethiopia's current predicament. The ancient medieval Kingdoms in Ethiopia were held together by personal loyalties, such ideologies do not survive well in the modern world. Ethnic tensions fed by historical resentments become ammunition for ambitious politicians and wannabe freedom fighters. The good news is that there are also men of good will attempting to make the federation work for its constituent members. Continuing conflict is a guarantee for more death from violence and famine. In the absence of peace, many of the most ambitious Ethiopians will simply leave the country.

Things might be bad in Ethiopia, but they are worse in neighbouring countries. [Eritrea](#) is ruled by authoritarian cabal that [represses its own people](#) and [supports rebels](#) in the Tigray province of Ethiopia. Sudan is in turmoil from [civil war](#), with Sudan suffering from what the [Al Jazeera](#) news agency calls [one of the worst humanitarian crises in recent history](#). South Sudan is not much better, suffering from poverty and a [barely functioning state](#). Only [Djibouti](#) seems to moderately stable.

One of the results of this regional disorder is that people are fleeing for their lives, many ending up in Ethiopia. According to the [UN Refugee Agency](#), approximately [930,000 asylum seekers](#) from South Sudan, Somalia and Eritrea (as of July 2023) have fled to Ethiopia.



**Figure 13 – Water is for Fighting**  
**Credit: [AZ Quotes](#)**

Another African country that has a stake in Ethiopian affairs is [Egypt](#). As I noted above, the Great Renaissance Dam ~~sears the shit out of~~ deeply troubles the people of Egypt, and with good reason. While the [White Nile](#), originating in the [Great Lakes Region of Africa](#), provides the base flow for the [Nile River](#), the Blue Nile is the source of the [yearly floods](#) that have benefited Egypt for millennia. Any curtailment of water flow to Egypt could reduce food production – a serious situation for a country of about [117 million](#) hungry people. Cutting off, or curtailing, water flow on the Blue Nile could provide a [casus belli](#). Egypt and Ethiopia are in [talks to avert conflict](#), but keep an eye on this one.

The Great Powers, [China](#), [Russia](#), and the [United States](#), also have an interest in Ethiopia, regardless of whether or not the Ethiopians can resolve their internal problems. [Russia's interest in Ethiopia](#) goes back to [Cold War](#), when the [Soviet Union](#) armed and [supported](#) the Derg. Recent Russian interest in Ethiopia has led some to accuse the Russians of trying to [colonize the country](#). One thing to consider is that the

continuing troubles in Ethiopia may provide a market for [Russian products](#) such as [Russian](#) arms. Note that Ethiopia is a country accustomed to using Russian weapons.

China has been extending their [Belt and Road Initiative](#) to [Africa](#) and to [Ethiopia](#) in particular. The Chinese have a [commercial interest in Ethiopia](#) with China being Ethiopia's [top trade and investment partner](#). With regards to the mineral industry, Chinese investments include the [Ethiopia Hansom International Glass PLC](#). China has a long term view of their investment in Africa and their involvement with Ethiopia is worth keeping an eye on.

The United States also have an [interest in helping Ethiopia resolve its troubles](#). A destabilized Ethiopia is a potential source of international terrorism, much of which could be aimed at Americans. Thus, [both countries have a common interest](#). Another interest that the Americans have in Ethiopia is as [venue for their their ongoing rivalry with China](#). This is another one worth watching.

That kind of winds up this short look at Ethiopia. Follow up on the links if any of this interests you.

### **Standard Caveat**

The purpose of my weblog postings is to spark people's curiosity in geology. Don't entirely believe me until you've done your own research and checked the evidence. If I have sparked your curiosity in the subject of this posting, follow up with some of the links provided here. If you want to, go out into the field and examine some rocks on your own with the help of a good field guide. Follow the evidence and make up your own mind.

In science, the only authority is the evidence.