

Ethiopia: Brief History, Energy demand and its implication on Environment

By: Girma G Gonfa (PhD)

Geographic location

- **Ethiopia:** area of 1.12 million square Kilometers (slightly less than twice the size of Texas), is located at 4 and 14 degree north, 33 and 48 degrees east. Situated in the Horn of Africa, **Ethiopia** is bordered by Eritrea to the north, Sudan to the west, Kenya to the south, Somalia to the east and Djibouti to the northeast.



time difference: UTC+3 (8 hours ahead of Washington, DC during Standard Time)



Population = 79 Million, (second populous)

Major languages are: Amharic, Afaan Oromoo, Sidama, Tigrigna, Somali,

Religion

Orthodox 43.5%, Muslim 33.9%, Protestant 18.6%, traditional 2.6%, Catholic 0.7%, other 0.7%

Pre-History

- The oldest nation
- homes the ancestor of humanity

Lucy – Australopithecus Afarensis

- 3.2 million yrs old, discovered in 1974 by an American Professor

Donald Johanson

- Ethiopia

→ you are all Ethiopians



Lucy, the most complete skeleton

diverse

- historical
- natural and cultural tourist attraction sites.
monuments, churches, monasteries and
mosques,

-contrasting nature

**Semien Mountains
(4620m or 15,175ft)**

to

**Danakil Depression,
(125m below SL)**



Eight sites are registered by the **United Nations Education Science and Culture Organization (UNESCO)** as **world heritage sites**.

Ancient civilization

- Ethiopia (Axumite) was the powerful state between the Roman Empire and Persia.

- The granite obelisk 1700 yrs old 160 ton, (24m) looted by italians and returned in April 2005
- The one that fell to the ground due to structural collapse? is 33m
- Markers for underground burial chambers



Axumite coins

Christianity was introduced to the country in the 4th Century and thus Axum is known to be center of religion and civilization.

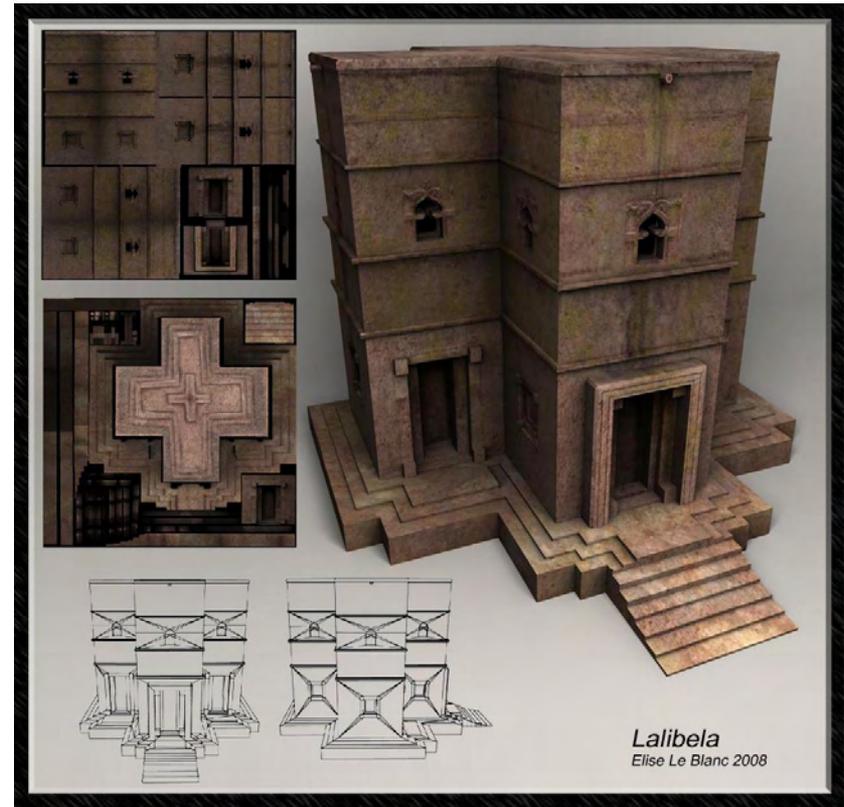
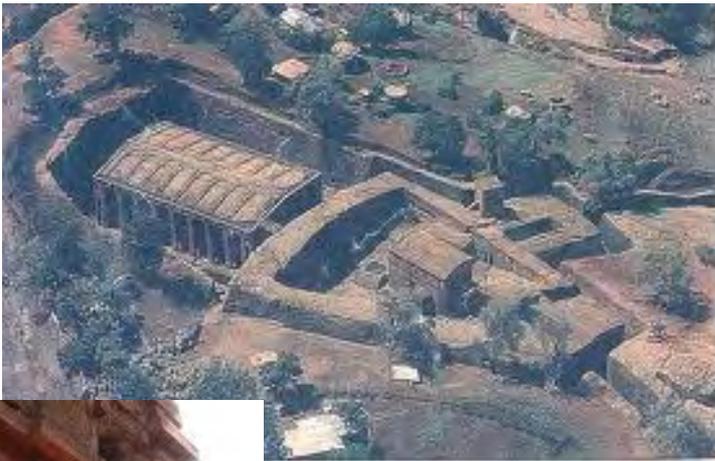


The first Ethiopian Orthodox Church (Zion mariam) is African oldest church

Axum went into decline between the 7th and 8th centuries AD.

Isolated from Europe Christianity

The power moved southward to yeha-Lalibela
Lalibela is famous for its 11 rock-hewn churches
built in the 12 th century and still in use



The famous bete -giorgis church

In 15th c Portuguese re-established contact with

Intention:

Control the Indian Ocean and

to convert Ethiopia to Roman Catholicism.

A century of religious conflict followed resulting
in the expulsion of all foreign missionaries in the
1630s

Became hostile to **foreign Christianity and
Europeans** which was the cause for isolation to
mid 19th century

In the 17th and 18th Century, power moved to GONDAR. It is known for its castles built by Emperor Fasiladas and his successors from 1632-1730 at the royal enclosure

Era of the Princes was characterized by the turmoil caused by local rulers competing against each other (dark age)



The New Ethiopia (current shape)

Aggressive expansion by Menilik II, the southern territories around 1880's

The Oromo states and others became part of Ethiopia.

The Oromos have an egalitarian social system called GADA. GADA was a form of constitutional government and social system.

→ **DEMOCRATIC**

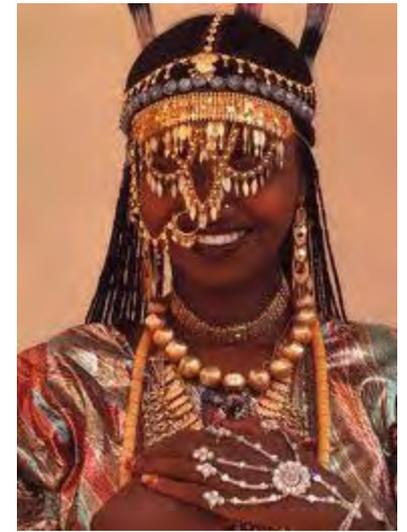
Leaders are democratically elected every eight years. Social classification is according to age with defined responsibility.

To run for the presidency (ABA GADA), one must pass through all the stages.

The system is in place to remove corrupts.
Gada is still practiced to limited scale.



The council in session



The only African country never colonized

Agriculture is the major revenue generator



coffee, grain sorghum, and
castor bean-originated
from Ethiopia

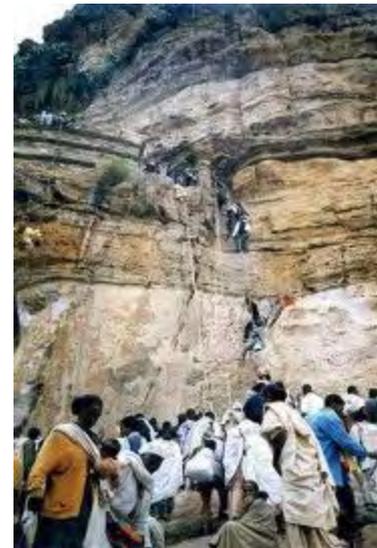
Education: Traditional and Modern
Traditional; Church and
Monasteries.
has history of 1500 Yrs.



In the 5th century, monasteries were also introduced by the monks from Syria. These monks initiated the translation of the bible into **Ge'ez**- one of the ancient languages in Ethiopia. These monasteries also began the first form of schools. Has curriculum with different stages

Its organization limited access to many.
Contributed to literature, art, arithmetic,
astronomy,

Equivalently Madrasa run by mosques.



Natural Resources: Rivers, forest, wildlife, etc,



At the turn of 19th Century, forest coverage was 35-40%

Pressure from rapid population growth (energy and farmland)

deforestation → coverage 9%



resulting soil erosion; desertification; water shortages and generally environmental degradation

Energy demand and sources and consumption

- only 16% have a potential to access to the grid.
- But only 6% accessed as it is not affordable to many

Only 10% is supplied by electric power, the balance is from wood fuel and dung.



Aggressive construction of Hydropower plants—targeting export
-scattered settlement, in some case migrating nomads

The need for alternative energy source is ==**SOLAR POWER**

= it is clean and promotes environmental issues

More practical for a country like Ethiopia

Remote areas can be accessed



Improves the life style of rural community

smoke free **light**=→ healthy and productive society

Can be used to pump water for irrigation

For cattle: In pastoralist community



Current status

- Solar Energy Foundation, German's NGO, has installed PV to one remote district
- It is also assisted by Clinton's Foundation
 - Ethio Telcom is powering its cellular towers (T&R) with solar panel.
 - Few individuals and schools are using to power small electronic devices

And yet can be said non-existent

AFRICA NEEDS THIS TECHNOLOGY!!

Thank you