

Confucius said: “There are 3 things to guide progress in life:

**Contemplation** – *noblest*;

**Imitation** - *easiest*;

**Experiences**—*bitterest*”



# Sustainable Development

## “The Vision for Planet Earth”

*Sustainable Development is a fundamental objective in 21<sup>st</sup> Century. It is about safeguarding the earth's capacity to support life in all its diversity. It is based on democracy, gender equality, solidarity, the rule of law and respect for fundamental rights*

***EU Guidelines on Sustainable Development -2009***



# Sustainable Development

## “Vision for Sierra Leone?”

**Summary Report: SL’s ‘Adaptation of the SDGs’,**  
*by the Sustainable Development Knowledge Platform*  
**SL made some progress with MDGs,**

- - Sadly all gains were reversed by the EVD crisis;
- -Today Poverty, vulnerability and inequality remain a concern;
- -Economy (extractives-based) remains fragile and vulnerable to shocks;
- -Natural disasters are a continuous threat;
- - Increasing evidence of the negative effects of Climate Change –
- **SL is one of the most vulnerable** and least prepared to deal with effects of Climate Change and / or adapt to its longer term impacts

# Maslow's Hierarchy of Needs

When most people can bare afford food and shelter, how do you tell an illiterate subsistence farmer whose farming calender is disrupted by erratic rains, that its due to Climate Change and they should act more responsibly?

Need  
for Self  
Realisation

Need to be appreciated

Need for social acceptance

**Need for security**

Need for food &  
shelter

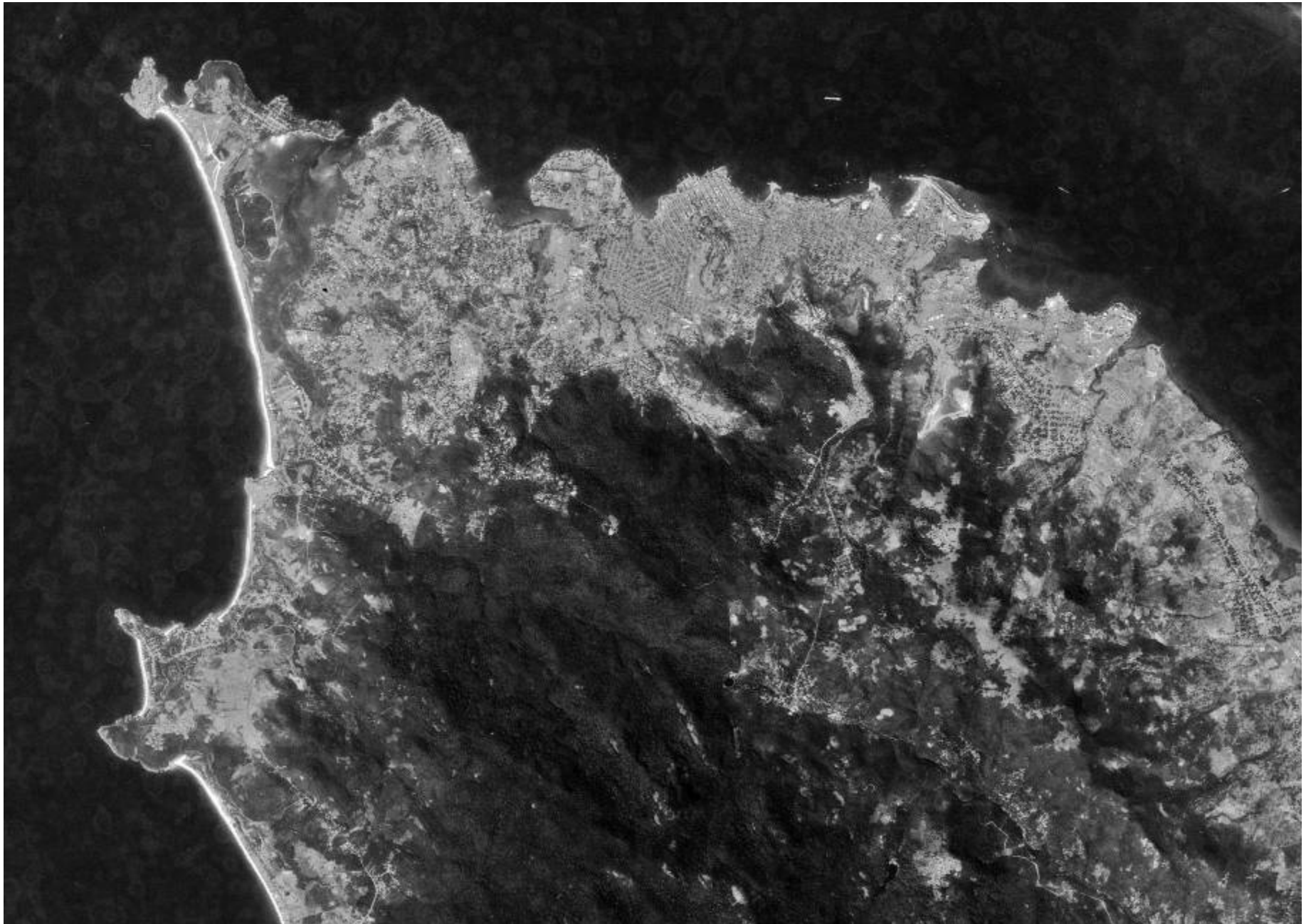
# Some obstacles to achieving progress in NR Management, esp Land Use Planning:

Historical backdrop to the slow pace of transformation to truly democratic governance, rule of law and sustained economic prosperity and social cohesion;

- ✓ Institutionalized mismanagement of NRs – Minerals, Forests and Lands;
- ✓ Pervasive corruption affecting ALL SECTORS and ALL ASPECTS of life in SL
- ✓ Social divide along political / tribal lines
- ✓ Armed Civil Conflict and Displacement of Rural Populations for >decade
- ✓ Endemic poverty, social and economic deprivation
- ✓ Comparatively low literacy levels
- ✓ Growing population with poor quality education and health care
- ✓ Extremely high and growing unemployment
- ✓ Youth Bulge
- ✓ And now there is Climate Change



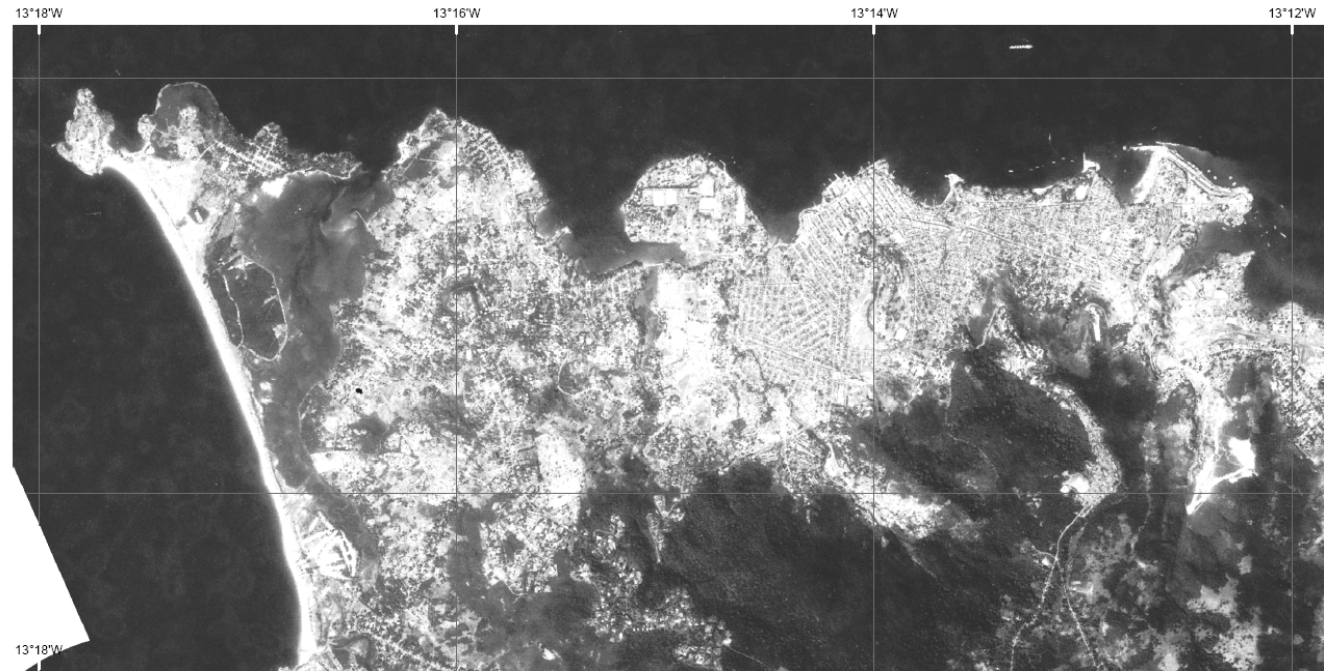
## Freetown, January 26, 1968: Corona Satellite Photo



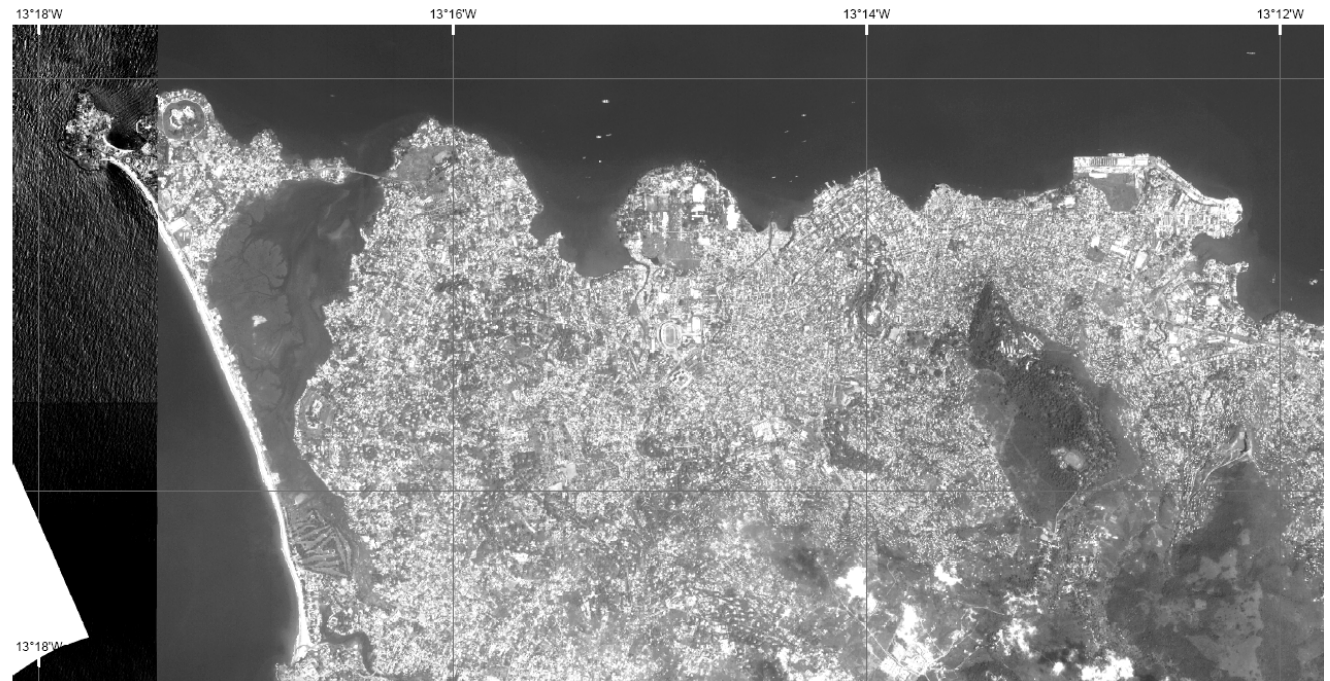


## Freetown: 40 Years Of Change

1968



2008





# Primary and Secondary Dense Forest in Sierra Leone in 1976

Scale: 1 : 500 000  
0 12.5 25 50 Kilometers

## Legend

Country Boundary

Protected Area

Primary and mature secondary forest, closed canopy (3,750 sq km)

Secondary and immature forest, closed canopy (2,539 sq km)

Produced in Support of: Mano River Union; Sustainable and Thriving Environments for West African Regional Development (STEWART) Program; Promoting Agriculture, Governance, and the Environment (PAGE) Program; various Transboundary Area activities;

Produced by: U.S. Geological Survey, EROS Center, Sioux Falls, SD, USA

Funding: U.S. Agency for International Development

**Map Purpose:** This map provides a historical baseline from 1976 of all significant remaining areas of dense forest cover (primary and secondary forest) in the Sierra Leone part of the Upper Guinea Ecosystem. The remaining forest fragments and blocks are islands of biodiversity, and many provide critical habitats for a great diversity of animals. Protected area boundaries are shown for reference and planning. This map is to be used in comparison with the map entitled "Remaining Dense Forest Cover in Sierra Leone, 2005-2009". Map classes are fairly comparable between this map and the map of recent forest cover.

**Map Compilation and Data Sources:** The map was compiled from the "Vegetation and Land Use of Sierra Leone" map, prepared by the U.N. Food and Agriculture Organization Land Resources Survey Project, published in 1980, at 1:500,000 scale. This map reproduces the Closed High Forest and Secondary Forest vegetation types depicted on that map. Both types consist of primary and mature secondary evergreen forest, and immature forest, with closed canopies. The original map was compiled from reconnaissance field surveys and the interpretation of 1975-1976 1:70,000 scale infrared color aerial photographs. The background image on this map is NASA's Visible Earth Blue Marble mosaic ([visibleearth.nasa.gov](http://visibleearth.nasa.gov)) enhanced with a shaded relief derived from the SRTM Digital Elevation Model.

**Note:** Map will be expanded geographically to include the rest of the Mano River Union countries.





## Remaining Dense Forest Cover in Sierra Leone, 2005-2009

Scale: 1 : 600 000  
0 12.5 25 50 75 Kilometers

### Legend

- Country Boundary
- Protected Area
- Village Forest
- Dense Forest Stand (2,200 sq km)
- Gallery Forest

Produced in Support of: Mano River Union; Sustainable and Thriving Environments for West African Regional Development (STEWARD) Program; Promoting Agriculture, Governance, and the Environment (PAGE) Program; various Transboundary Area activities;

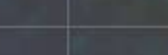
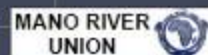
Produced by: U.S. Geological Survey, EROS Center,  
Sioux Falls, SD, USA

Funding: U.S. Agency for International Development

**Map Purpose:** This map provides an updated inventory of all significant remaining areas of dense forest cover (primary and secondary forest) in the Sierra Leone part of the Upper Guinea Ecosystem. The remaining forest fragments and blocks are islands of biodiversity, and many provide critical habitats for a great diversity of animals. Protected area boundaries are shown for reference and planning. This mapping effort will be expanded to cover the Mano River Union countries.

**Map Compilation and Data Source:** The map was compiled from the identification and delineation of dense forest areas using ASTER satellite imagery which provides multispectral image data at a resolution of 15 meters. We used a working scale of 1:50,000 when compiling this map. We used best available ASTER imagery acquired during the dry season. Most images were acquired between 2005 and 2009. Numerous forested areas depicted on this map were verified using high resolution Quickbird and WorldView imagery, and limited field work carried out in April 2009. The background image is NASA's Visible Earth Blue Marble mosaic ([visibleearth.nasa.gov](http://visibleearth.nasa.gov)) enhanced with a shaded relief derived from the SRTM Digital Elevation Model.

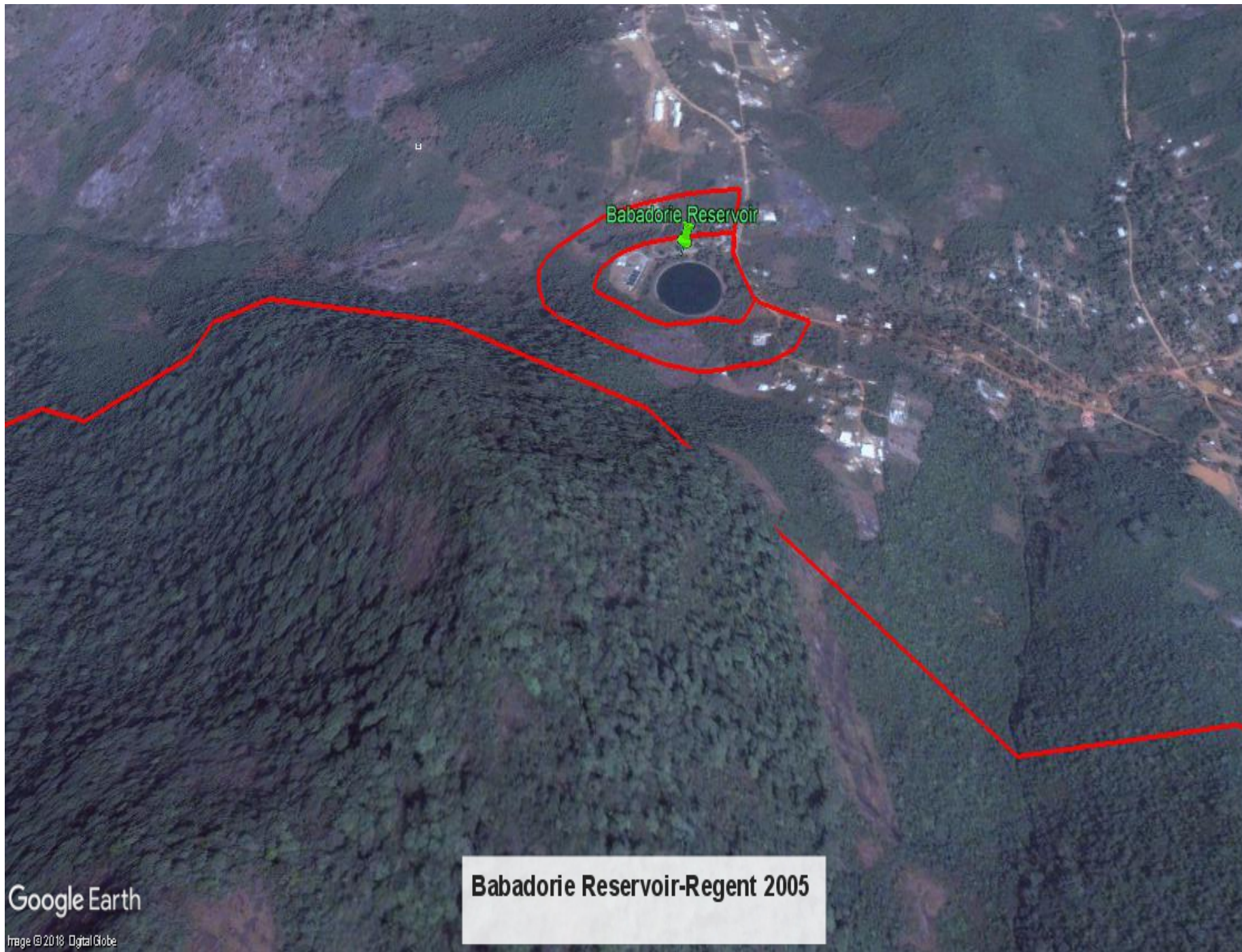
**Note:** Map will be expanded geographically to include the rest of the Mano River Union countries.



# Consequences of Poor Management of Natural Resources

- Persistently struggling national economy –
- Woefully inadequate water and electricity supply
- Unplanned urban settlements (chaotic existence for most);
- Very high cost of doing business in SL;
- Looming conflicts over increasingly dwindling land & water resources;
- Increasing vulnerability of land and people to regular Environmental Crises and / or “Natural Disasters”;
- General Sense of Hopelessness in business and everyday life



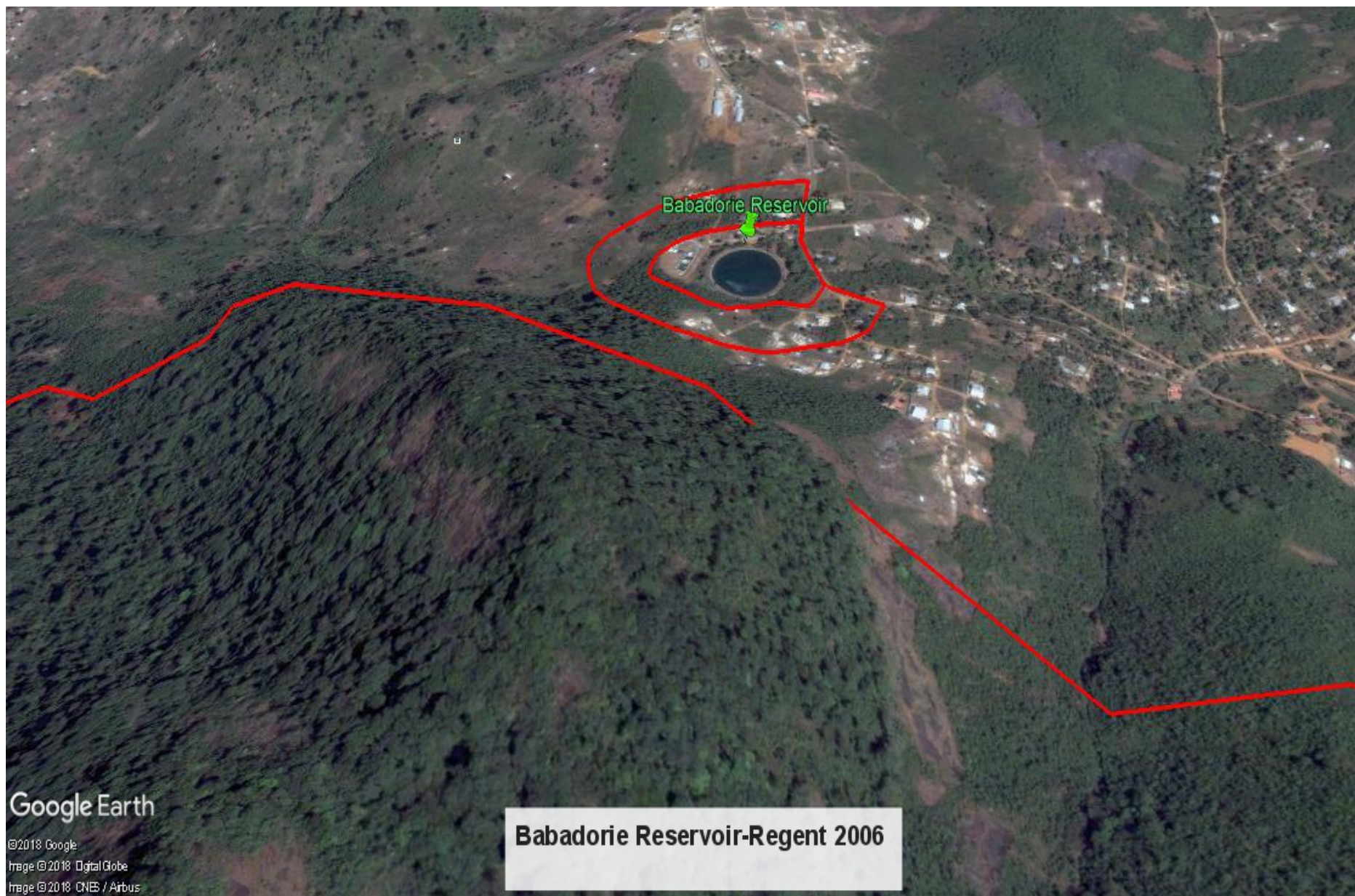


Google Earth

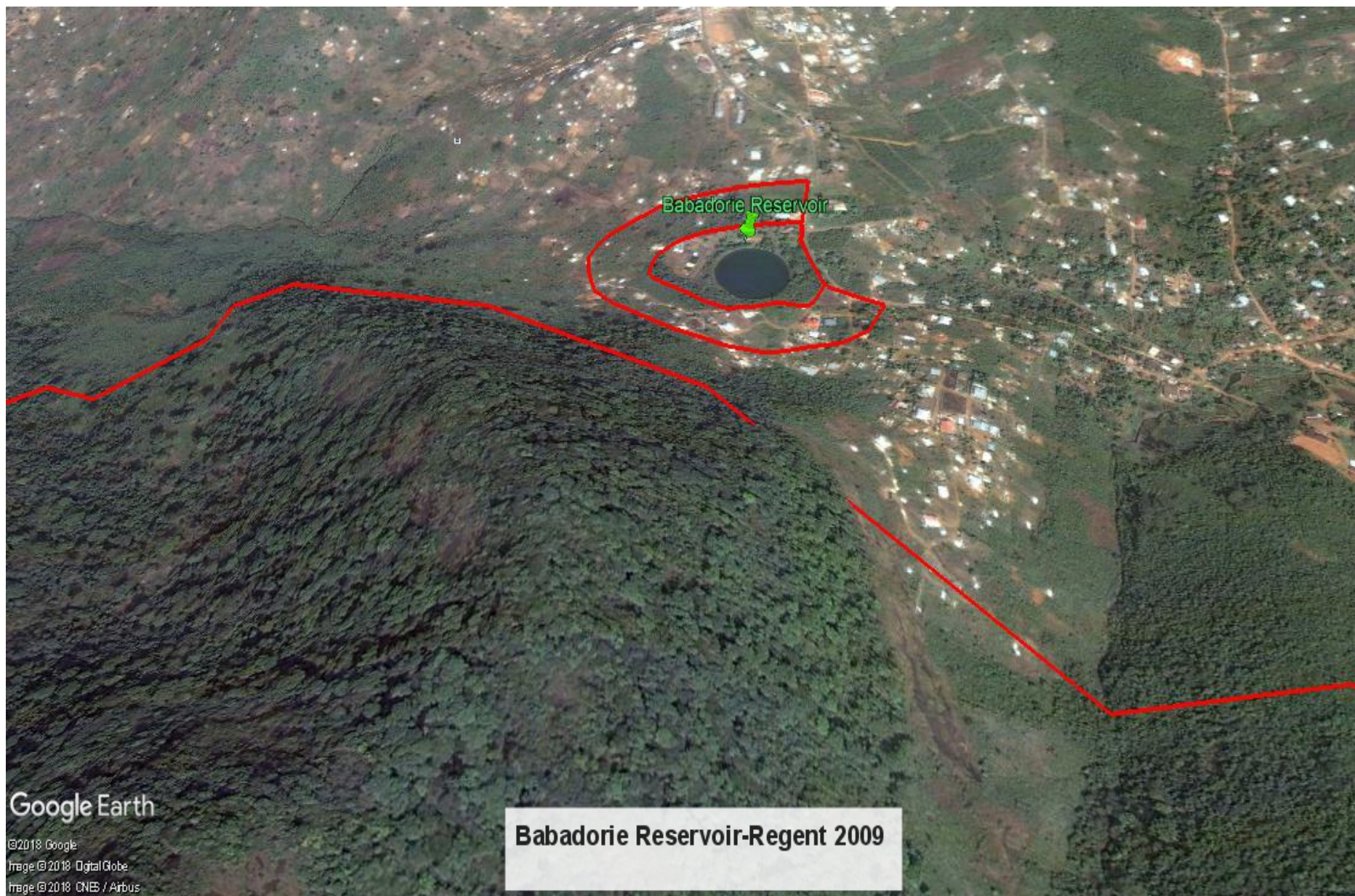
Image © 2018 Digital Globe

Babadorie Reservoir-Regent 2005







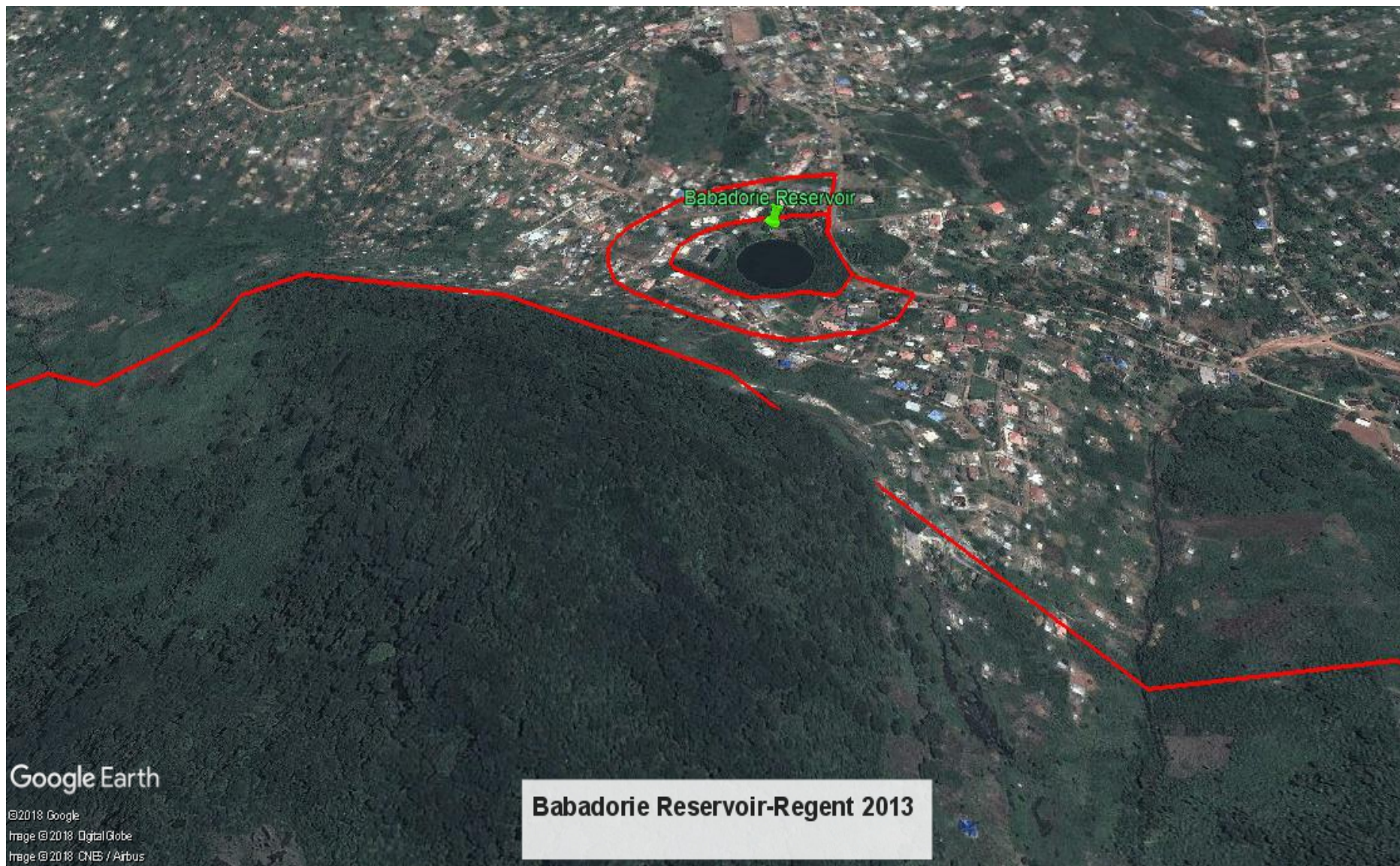


Google Earth

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Babadorie Reservoir-Regent 2009



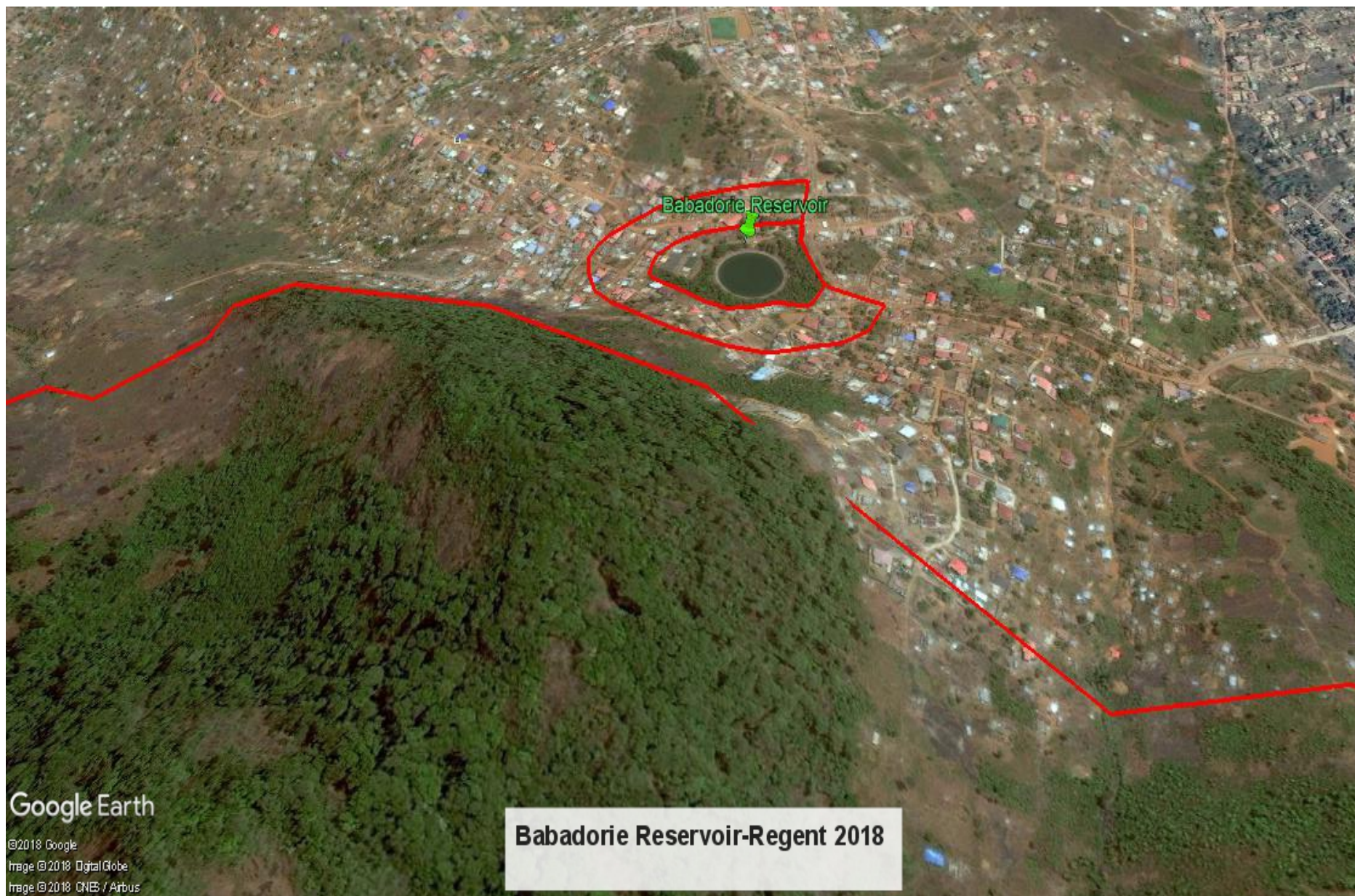


Google Earth

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Babadorie Reservoir-Regent 2013





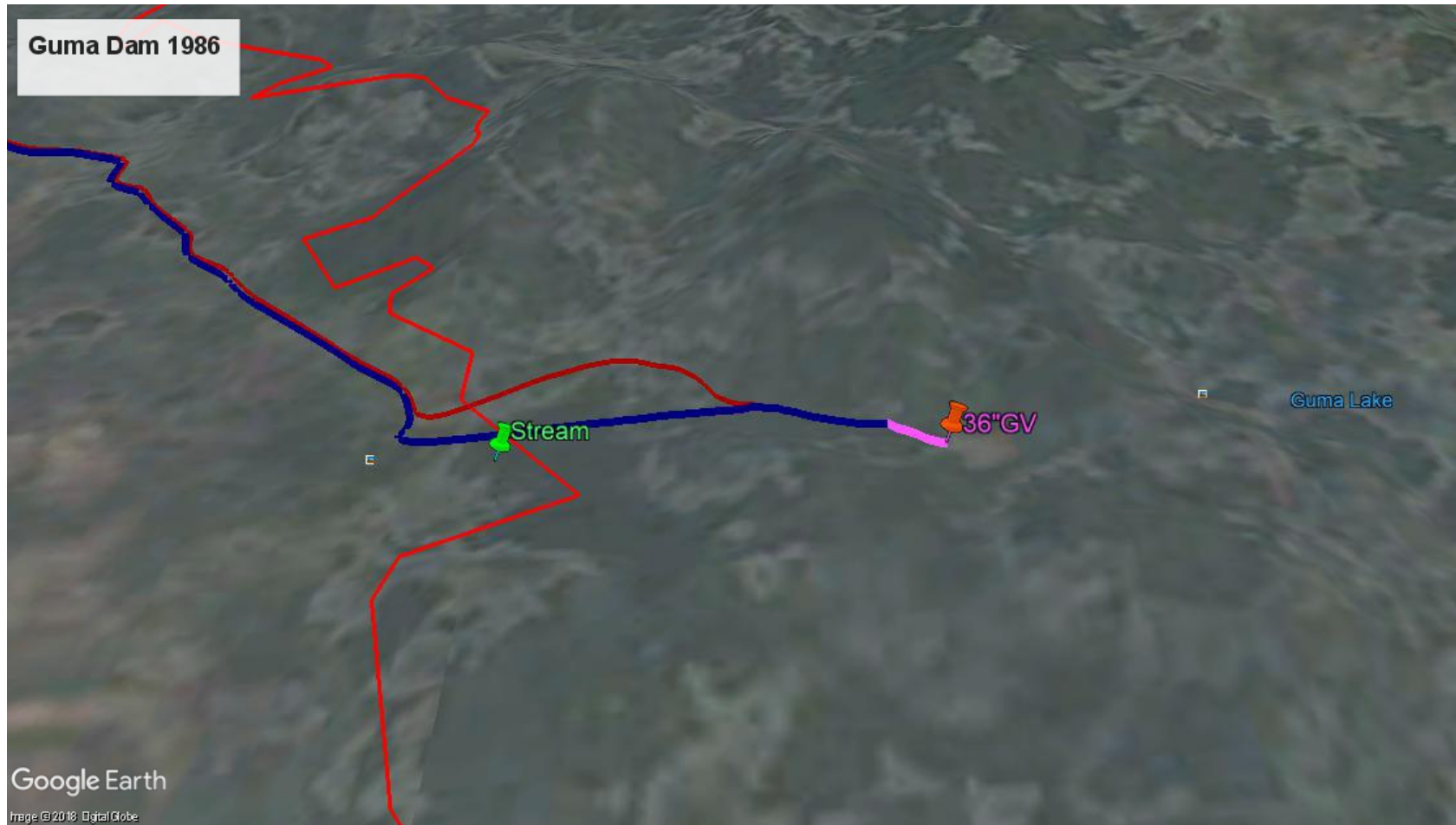
Google Earth

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Babadorie Reservoir-Regent 2018



# GUMA DAM 1986

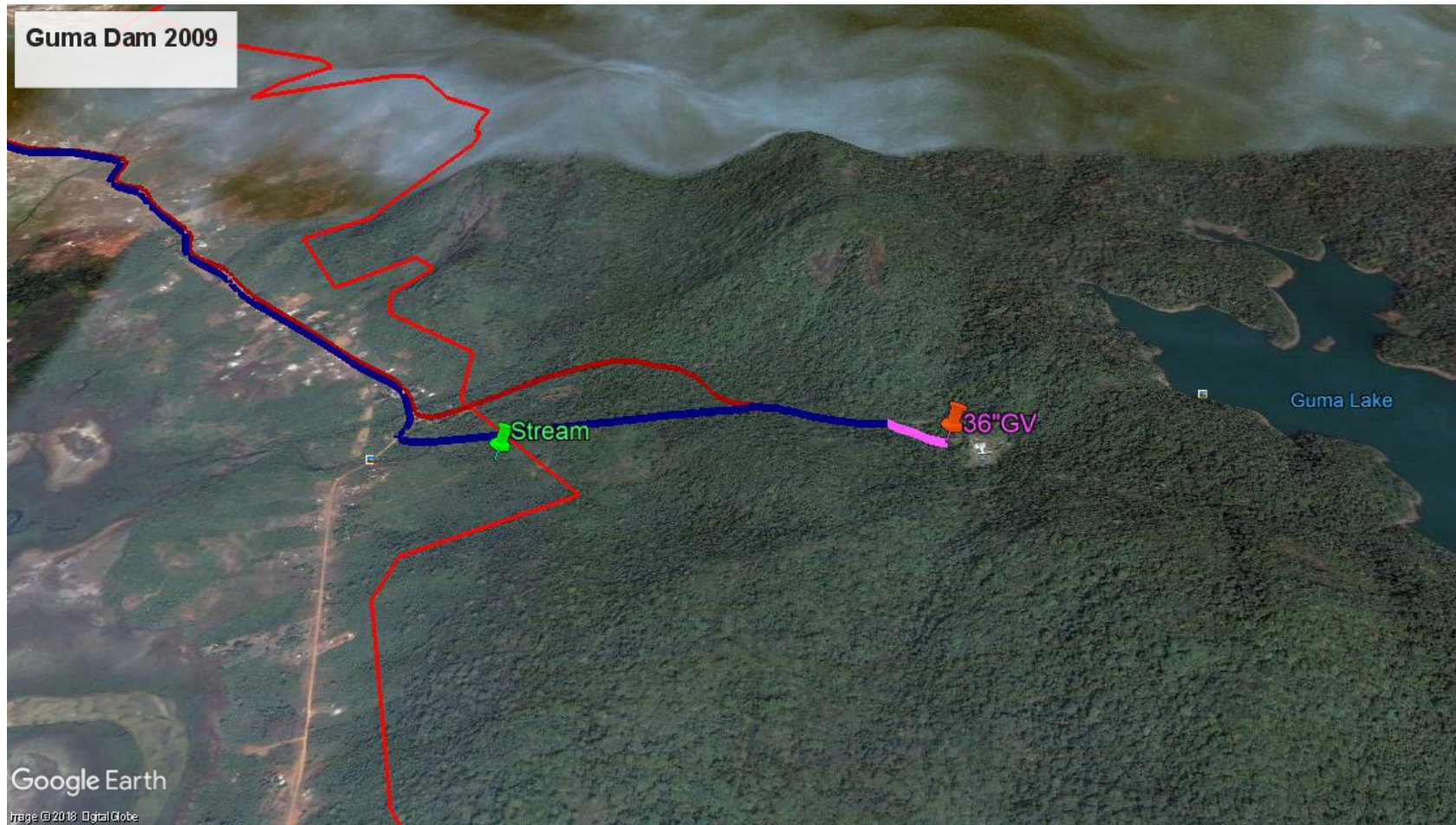




# GUMA DAM 1998



# GUMA DAM 2009



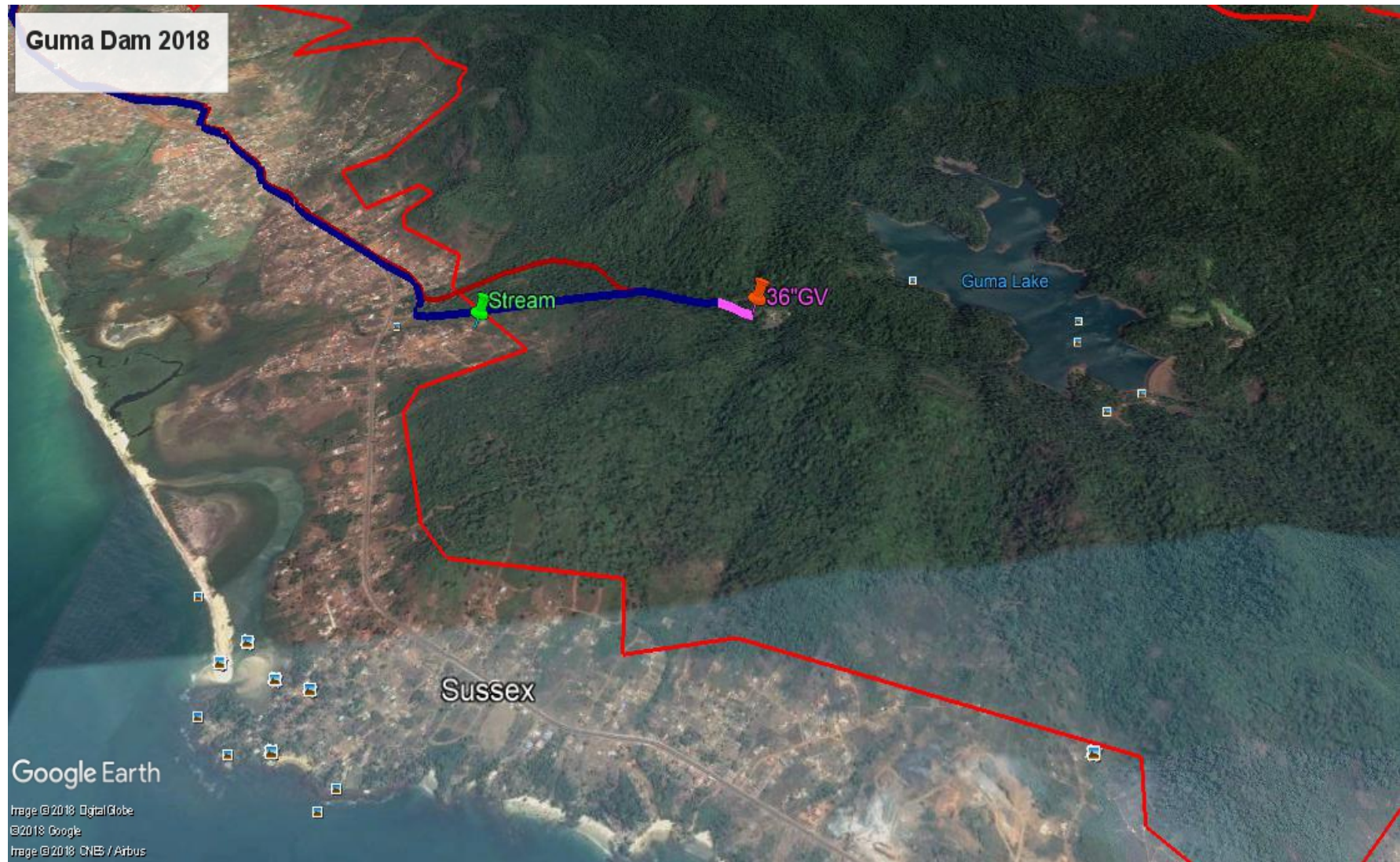


# GUMA DAM 2013

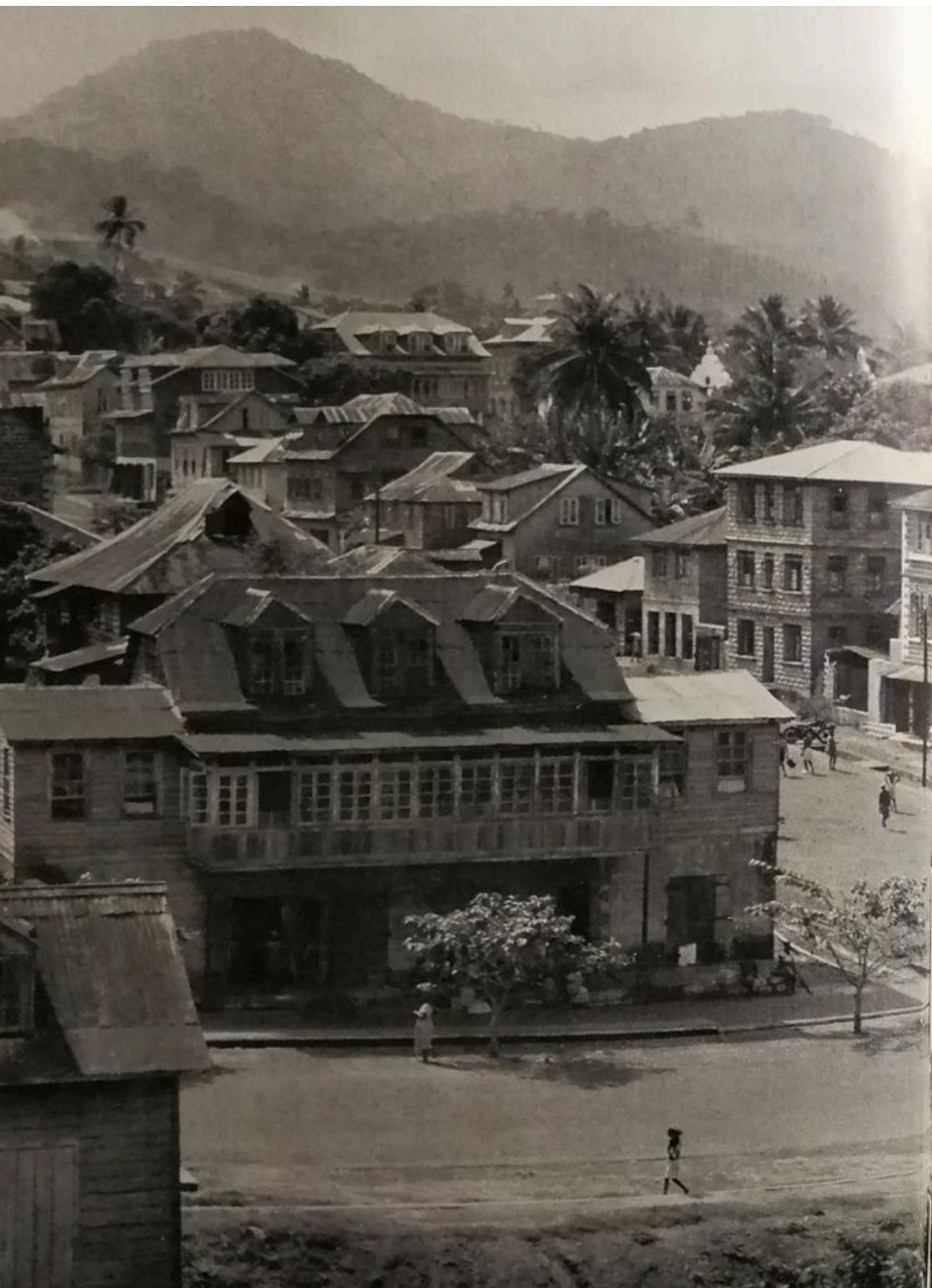




# GUMA DAM 2018









































## RAINY SEASON WAHALA









# Impact of Sand mining

- The beaches of the Freetown Peninsular are potentially a significant economic resource (tourism)
- Extraction of building sand from beaches may promote erosion and spoil the potential value from tourists.

- *(high salt content in beach sand can cause concrete “cancer”).*



Erosion ~ 10 meters per year





**Receding coastlines leading to shrinking local resources, worsening social and economic livelihoods**





# Sparing a thought for “Up Country”





# Hunting of wildlife for food and market









# Bauxite Mining in Sierra Leone





# Rutile Mining

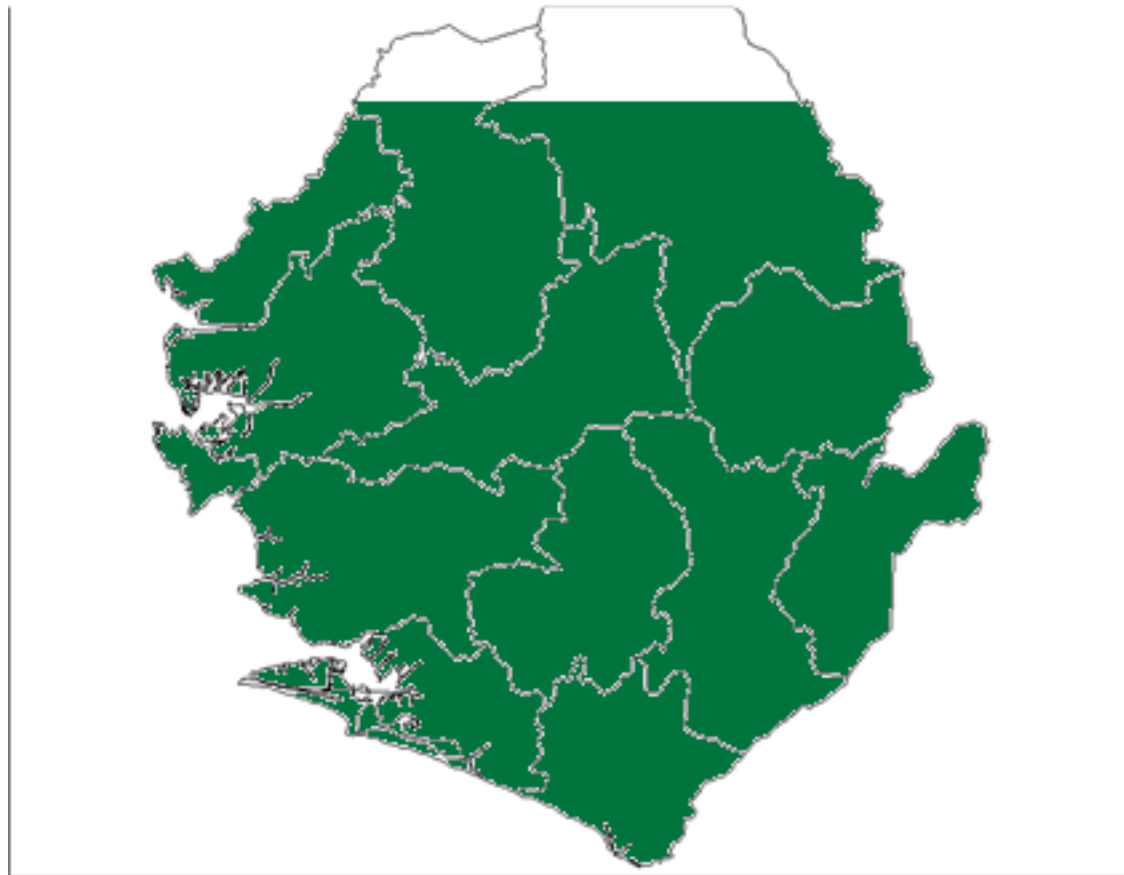
## Titanium ore extraction in Sierra Leone





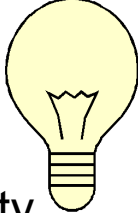
# Journey to Prosperity

Early 1900's



Full tank

Half tank

Empty 



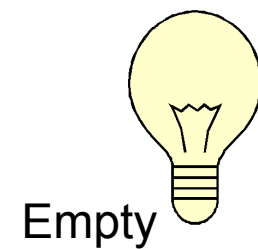
# Journey to Prosperity

Independence



Full tank

Half tank



Empty



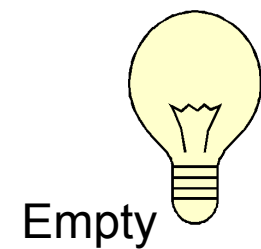
# Journey to Prosperity

Conflict



Full tank

Half tank



Empty



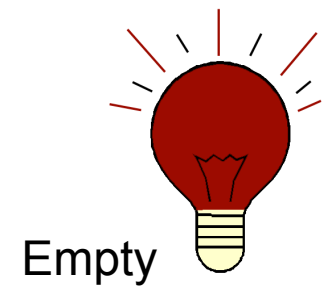
# Journey to Prosperity

Post-conflict



Full tank

Half tank



Empty



# Journey to Prosperity

2030





# **Sustainable Development**

## **“The Vision for Planet Earth”**

SDG 11: Make cities and human settlements inclusive, safe, resilient and sustainable

SDG 15: Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification and halt and reverse land degradation, and halt biodiversity loss



# **LandThatWeLove-**

## **A Pathway for Public Participation in Finding Durable Solutions**

**#LandThatWeLove'** is a movement initiated in 2017, by individuals and institutions working in Sierra Leone, as part of a global movement **#NatureForAll** which was created by the **IUCN Commission on Education and Communication in 2016:**

- To raise **AWARENESS** and motivate people from all walks of life to embrace nature and its values.
- To facilitate opportunities for all to **EXPERIENCE** and **CONNECT** with nature.
- To create transformational moments that become pathways to lifelong personal connections and commitments to **CONSERVATION** action.

**#LandThatWeLove** was instigated by the visible impacts of the catastrophic mudslide in August 2017, and recognition of the socio-political, economic, cultural and environmental factors that led to the mudslide.



# A Common Vision for all who Love and / or Care for Sierra Leone

1. The GoSL reinforces strict observance of the forest boundary / demarcations and Enforcement of the laws banning the sale of land and building construction in restricted areas of the WAPNAP.
2. The GoSL reviews and enforces regulations governing the extraction of sand from beaches, protection of coastal areas, wetlands, creeks and other critical ecosystems in the Western Area,
3. A national campaign – ‘Every Child Plants a Tree, is launched whereby every child, (especially school-going children) in the country, plants one tree, as part of a national awareness initiative to emphasize the importance of trees and the value of forests.

*A test case for implementing **SDG 17:***

**Strengthen the means of implementation and revitalise the global partnership for sustainable development**



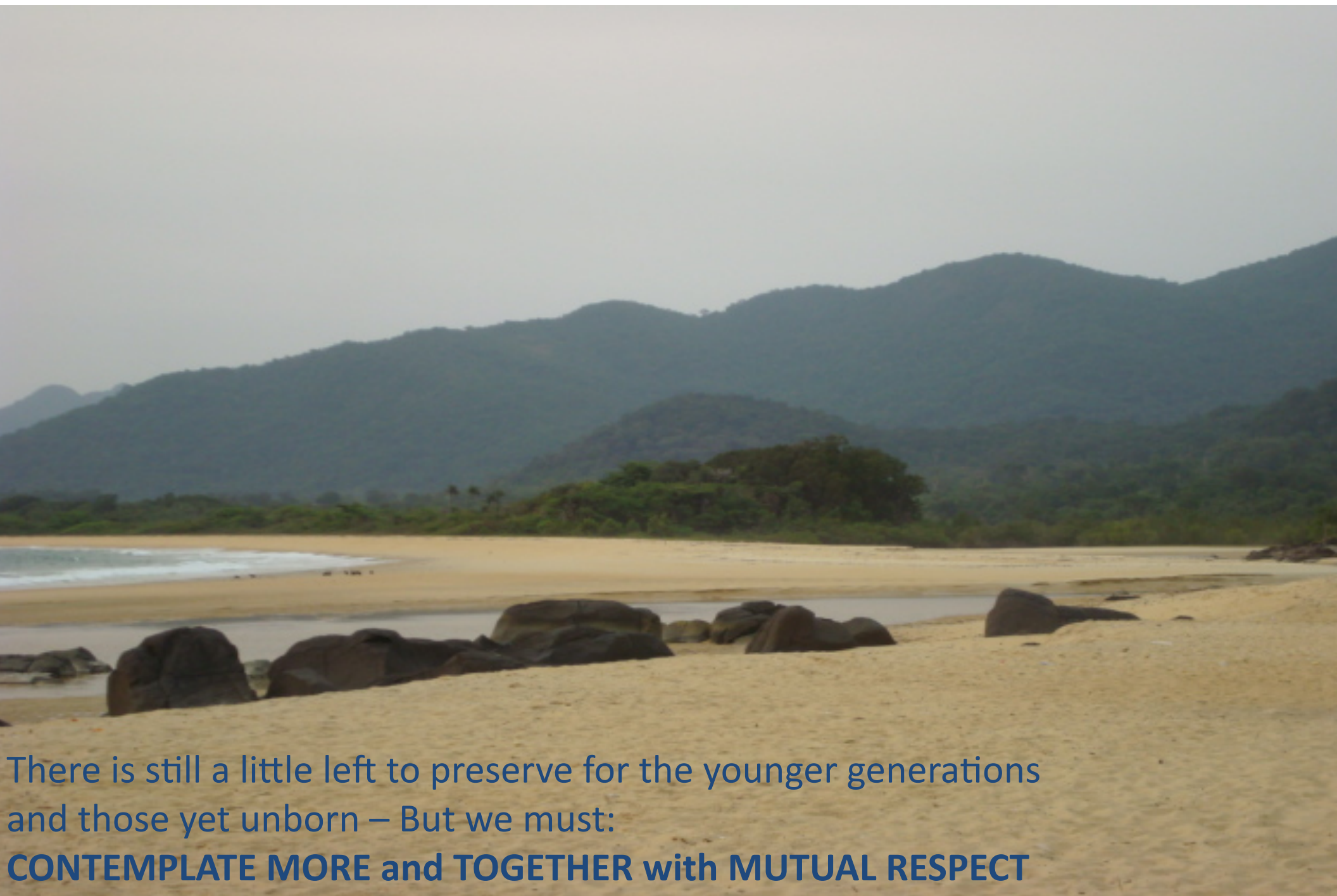
# A Growing Movement...

-Many Sierra Leoneans and Friends of Sierra Leone – here & abroad

## Institutions / Organisations

- American International School of Freetown
- British Council
- Conservation Society of Sierra Leone
- Environmental Foundation for Africa
- Environmental Protection Agency (SL)
- INTEGEMS
- Milton Margai College of Science & Technology
- National Protected Areas Authority
- UNDP – GEF Small Grants Programme





There is still a little left to preserve for the younger generations  
and those yet unborn – But we must:  
**CONTEMPLATE MORE and TOGETHER with MUTUAL RESPECT**



# A view of Tiwai Island in the Moa River









Plenti Tenki