



Environmental  
Protection Authority

# Ghana's Experience Compiling the A.2 Indicator: Extent of Natural Ecosystems

Based on Land and Ecosystem Extent Account  
(2015-2021)

**Kwame Boakye Fredua, PhD (C)**  
Principal Programme Officer, EAA/EPA

Expert Group Meeting on SEEA-related Indicators for the  
Global Biodiversity Framework



Cambridge, UK | 10-12 February 2026

GBF Target 1

# Institutional Arrangements for A.2 Compilation

## Multi-stakeholder collaboration enabled Ghana's first ecosystem extent account

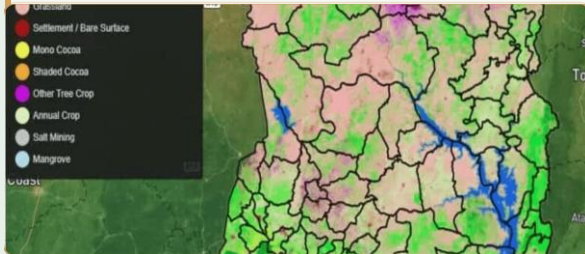
### Coordination

MEST/EPA serves as CBD National Focal Point, ensuring direct linkage between ecosystem accounting and the **NBSAP** revision process.

NDPC and GSS serve as co-coordinators.

### Technical Support

World Bank (GPS), UN Statistics Division provided methodology and capacity support.



### LEEA Sub-Working Group (Data Providers)



**Forestry Commission  
(FC-RMSC)**



**MEST & Environmental  
Protection Authority  
(EPA)**



**Ghana Statistical Service  
(GSS)**



**National  
Development  
Planning Commission  
(NDPC)**



**Land Use & Spatial  
Planning Authority  
(LUSPA)**



**Lands Commission  
& MLNR**



# Status of A.2 Indicator Compilation

Ghana has completed its first A.2 calculation with a 30-year time series

## First Account

Land and Ecosystem Extent Account (LEEA) compiled for 2015-2021 using 10m resolution maps.

## Historical Baseline

Calculated for 1990, 2015, and 2021 to show long-term trends.

## Sub-national Scope

Accounts compiled for all 16 regions and 2 key forest reserves (Atewa & Tano Offin).

## Methodology Applied

1

Use existing 10m land cover maps (2015 & 2021)

2

Align 2015 classification with 2021 scheme

3

Apply Red List of Ecosystems baseline map

4

Crosswalk 12 national classes to IUCN GET

5

Calculate natural vs. anthropogenic extent

### Natural Ecosystems (IUCN GET)

Tropical Rainforest (Wet & Moist)  
Moist Semi-Deciduous Forest  
Sudan Savanna Woodland

Guinea Savanna Woodland  
Coastal Scrub & Grasslands  
Mangroves & Wetlands

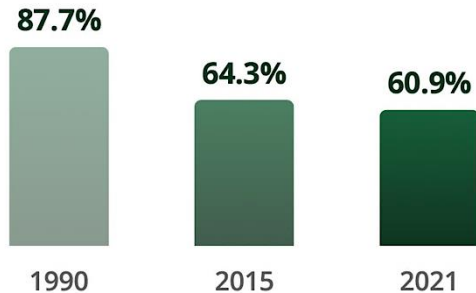
### Anthropogenic Ecosystems

Cropland (inc. Mono Cocoa)  
Settlement  
Bare Surface (Mining)

# Key Results - Ghana's A.2 Indicator

Natural ecosystem extent declined from 87.7% (1990) to 60.9% (2021)

## Extent of Natural Ecosystems (A.2)



↓ 26.8% Total Decline

## Status by Ecosystem Type (Remaining Extent)

Coastal Scrub & Grassland	29% (Critical)	Tropical Rainforest	~40% (Severe)
Moist Semi-Deciduous	44%	Mangroves	58%

## Primary Drivers of Change (1990-2021)

+303%

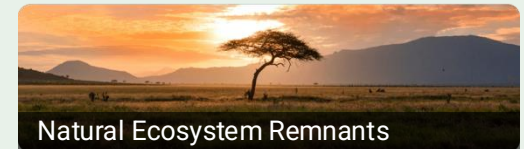
Cropland Expansion

+673%

Settlement Growth

-23.4%

Closed Forest Loss



# Challenges & Lessons Learned

## Technical and institutional insights for other countries

### ! Top 3 Challenges

---



#### Classification Crosswalk

Aligning 12 national land cover classes with IUCN GET ecosystem functional groups required expert judgment.



#### Historical Baseline Data

1990 baseline relied on modeled data vs. direct observation, complicating trend analysis.



#### Natural vs. Semi-Natural

Defining boundaries for agroforestry systems (e.g., shaded cocoa) on the natural continuum.



### 3 Lessons Learned

---



#### Coordination & collaboration is Essential

The Sub-Working Group model with 8 MDAs ensured data access and policy relevance.



#### Leverage Existing Data

Built successfully on existing land cover maps and Red List assessments; no new primary data needed.



#### Actionable Policy Insights

Regional disaggregation identifies priority areas for NBSAP and spatial planning interventions, among others.





Environmental  
Protection Authority

# For Further Information

---

**Kwame Boakye Fredua, PhD (C)**

[kwame.fredua@epa.gov.gh](mailto:kwame.fredua@epa.gov.gh)

---

**Environmental Protection Authority (EPA)**

Ghana's Experience Compiling the A.2 Indicator: Extent of Natural Ecosystems