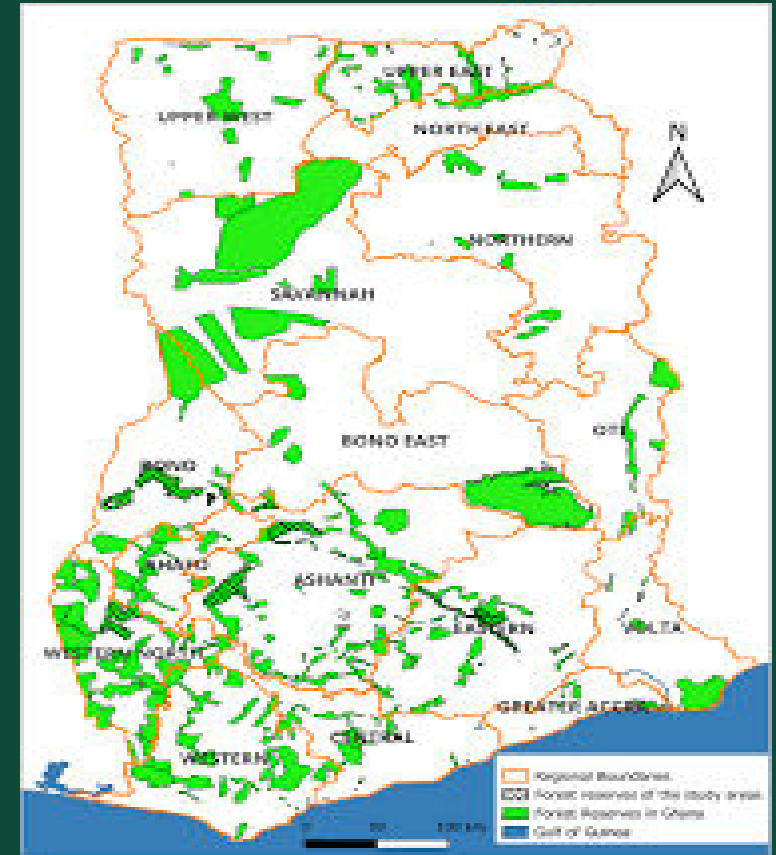


COP 17 | YEREVAN, ARMENIA

BIODIVERSITY MONITORING SYSTEM: GHANA'S EXPERIENCE

Ghana Side Event



WHY MONITORING

The challenge: clear targets, but limited systems to track them



Fragmented data

Data sits in different institutions that rarely coordinate with each other



No clear ownership

Indicators exist on paper, but nobody owns the job of tracking them



Reporting pressure

CBD national report deadlines arrive faster than monitoring capacity can keep up



Capacity and finance gaps

Inadequate baselines, limited technical skills and insufficient financing

NMSI treats this as a system problem, not a paperwork problem. Start with what capacity exists, find the real gaps, then build a monitoring plan around what Ghana can realistically sustain.

THE NMSI PROJECT



NMSI

2025 to 2030

National Monitoring Support
Initiative



Goal: a streamlined National Monitoring Plan and trained institutions to track KMGBF targets and the NBSAP.

Partners

Government (MEST, EPA, NBA and other government agencies))

Conservation Alliance International
(Ghana Project Lead)

UNEP-WCMC (Technical Partner)

International Climate Initiative, IKI
(Project Funder)

Universities and research institutions

Civil society organisations

Indigenous Peoples and local
communities

Private sector and development
partners

NMSI: APPROACH, PROGRESS AND NEXT STEPS



Approach

How we are doing it

- Assess the national monitoring system and identify gaps
- Launch with government, academia, civil society and communities
- Assess capacity needs, then define indicators aligned with the KMGBF



Progress

First-year groundwork

- Launched nationally, with media coverage
- Countrywide capacity needs assessment and stakeholder mapping completed
- Monitoring Committee and Technical Working Group established



Next steps

Towards 2030

- Finalise the National Monitoring Plan and deliver targeted training
- Finalise indicators and build the digital platform
- Secure partnerships and finance for handover

Built to hand off: the plan will belong to Ghana's monitoring institutions

IAS AND BIOSAFETY MONITORING UNDER NMSI

One system, three lines of monitoring



NMSI

KMGBF indicators and reporting

- Tracks KMGBF targets and the NBSAP
- National Monitoring Plan, 2025 to 2030
- Capacity, data and a digital platform



IAS

Invasive alien species, Target 6

- Early detection and rapid response
- People, Science and Technology model
- National database linked to GBIF



Biosafety

KMGBF Target 17

- Biosafety Act, 2011 (Act 831)
- National Biosafety Authority oversees GMOs
- Risk assessment, inspection and a register

One goal: evidence to track progress on the Global Biodiversity Framework

MONITORING INVASIVE ALIEN SPECIES

1 of 5

major drivers of biodiversity loss globally is invasive alien species

3,500

introduced species worldwide are invasive (IPBES)

70

different IAS have established and invaded Ghana



Impacts in Ghana

Ecosystems, fisheries and agriculture are affected, with economic losses costing millions annually. Maize yield loss in Ghana to Fall Armyworm outbreak in 2018 is USD 177M



New pathways opening

Land degradation is creating new pathways, while climate change is expanding species ranges.

KMGBF Target 6 Reduce the rates of introduction and establishment of invasive alien species by at least 50% by 2030

INVASIVE SPECIES ALREADY AFFECTING GHANA



Water hyacinth

Eichhornia crassipes



Siam weed

Chromolaena odorata



Paper mulberry

Broussonetia papyrifera



Sargassum

Marine macroalgae



Fall armyworm

Spodoptera frugiperda



Together they degrade biodiversity and reduce the ecosystem services people depend on.

A NATIONAL IAS FRAMEWORK IS IN PLACE



NISSAP

2020 to 2030

National Invasive Species Strategy
and Action Plan



The Environmental Protection Authority coordinates activities of all institutions responsible for invasive alien species.

Institutions involved

Ministry of Environment, Science and
Technology

Forestry Commission

Volta River Authority

Water Resources Commission

Conservation Alliance

Council for Scientific and Industrial
Research

University of Ghana (Academia)

Ghana News Agency

THE GAP: MONITORING IS NOT YET SYSTEMATIC

THE CHALLENGE

Without reliable data, introductions cannot be measured, let alone reduced.

1

No systematic early-warning system

There is no national real-time database for invasive alien species.

2

Ad hoc, field-based monitoring

Current monitoring results in delayed response.

3

Gaps in reliable, standardised data

Data on distribution, spread and impact are incomplete.

GHANA'S THREE-PILLAR MODEL FOR IAS



People

Community-based monitoring (citizen science)

- Communities are the best early detectors
- Awareness raising and training ongoing in six protected landscapes
- Communities report new sightings with simple mobile tools



Science

Evidence for early action

- eDNA analysis, especially for aquatic invasions
- Horizon scanning for priority invasive pests and pathogens



Technology

Digital tools for tracking and reporting

- Satellite imagery and remote sensing track species such as Siam weed and water hyacinth
- Kobo Collect and iNaturalist for reporting new sightings
- National database now linked to GBIF

Low cost and replicable for all African countries

EARLY DETECTION AND RAPID RESPONSE



STEP 1

Anticipate

Horizon scanning for priority invasive pests and pathogens, such as banana bunchy top and cassava brown streak virus.



STEP 2

Prevent

Improved biosecurity at entry points in Ghana.



STEP 3

Respond

Early warning and rapid response developed for crop pests.

Prevention is cheaper than cure. Ghana's EDRR model saves money.

CLOSING GAP VIA IAS DATA MOBILIZATION

~12,100

occurrence and sample records being mobilised for priority invasive alien species on GBIF

Supported by the EU

Mobilising high-quality, standardised IAS datasets and reporting them through the GBIF Integrated Publishing Tool.

Records span Ghana's



Forests



Coastlines



Agricultural landscapes



Ghana's IAS database is now linked to GBIF

MESSAGES FOR TARGET 6

1

Target 6 cannot be achieved without monitoring

If we cannot measure introductions, we cannot reduce them by 50 percent.

2

Prevention is cheaper than cure

Ghana's EDRR model saves money.

3

Local communities must be at the centre of monitoring

They see invasions first.

4

Ghana's three-pillar model is low cost and replicable

People, Science and Technology, for all African countries.

BIOSAFETY MONITORING

Biosafety: a legal framework is in place



Biosafety Act

Regulates genetically modified organisms; supports KMGBF Target 17



The Biosafety Act 2011 (Act 831) establishes the National Biosafety Authority to decide applications and oversee GMO activities.

What the framework provides

Applications for contained or confined use

Applications for release into the environment

Import, export and placing on the market

Risk assessment by the Board and a Technical Committee

Register of relevant documents

Inspections and agency oversight

Appeals Tribunal

Protection of public health and the environment



**Ghana invites partners to
strengthen biodiversity
monitoring**

Thank you