

# Rehabilitation and Greening of Mine-Degraded Areas of Saaman-Juaso Communities Eastern Region, Ghana



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# Outline

The background image shows a landscape with a river in the foreground, surrounded by lush green trees and vegetation. In the distance, there is a large area of reddish-brown earth, likely a mining site, with some machinery visible. The overall scene suggests a natural environment affected by human activity.

**Alluvial Mining Threats**

**Restoration/Rehabilitation**

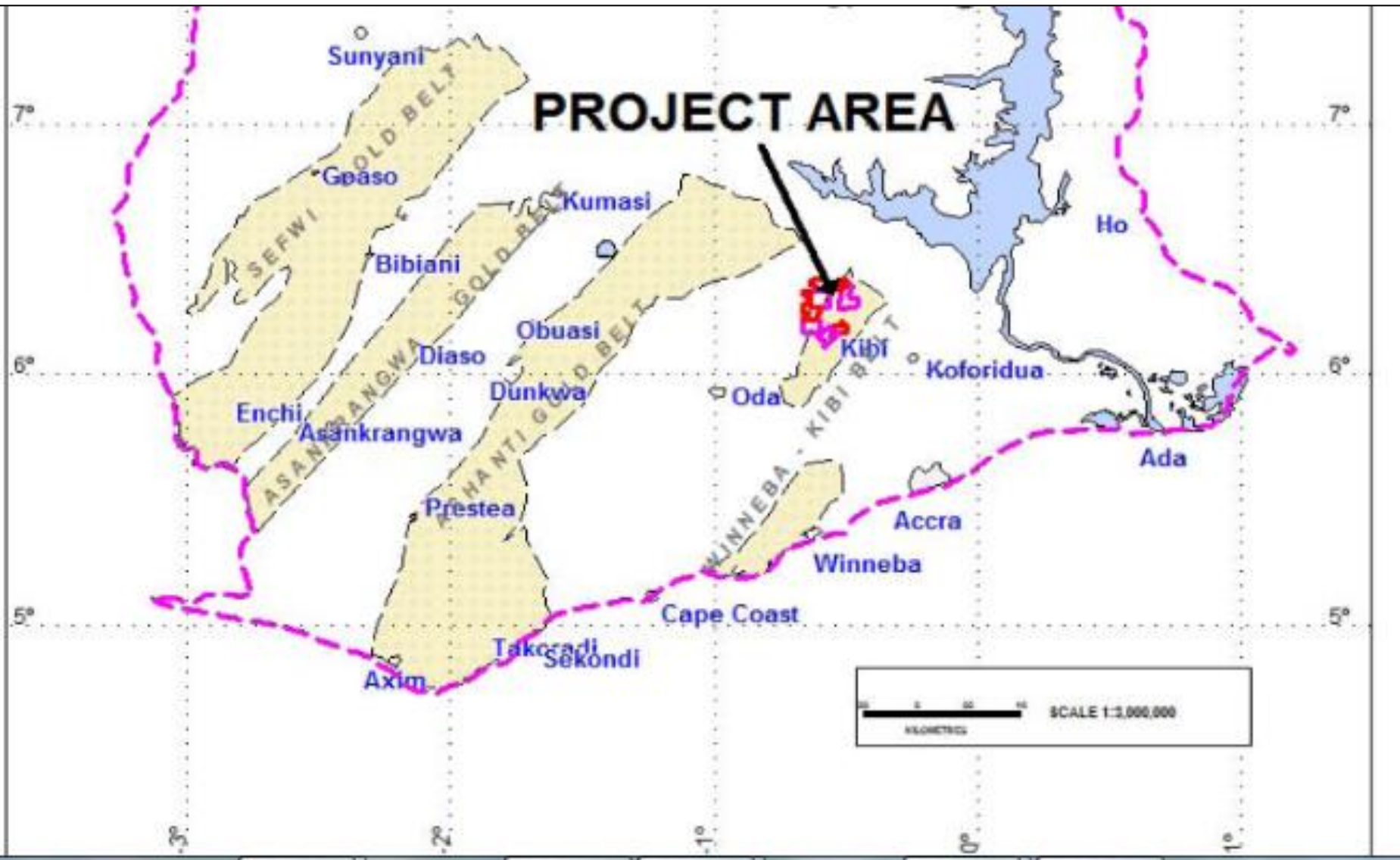
**Summary Activities**

# Threats from Alluvial Gold Mining

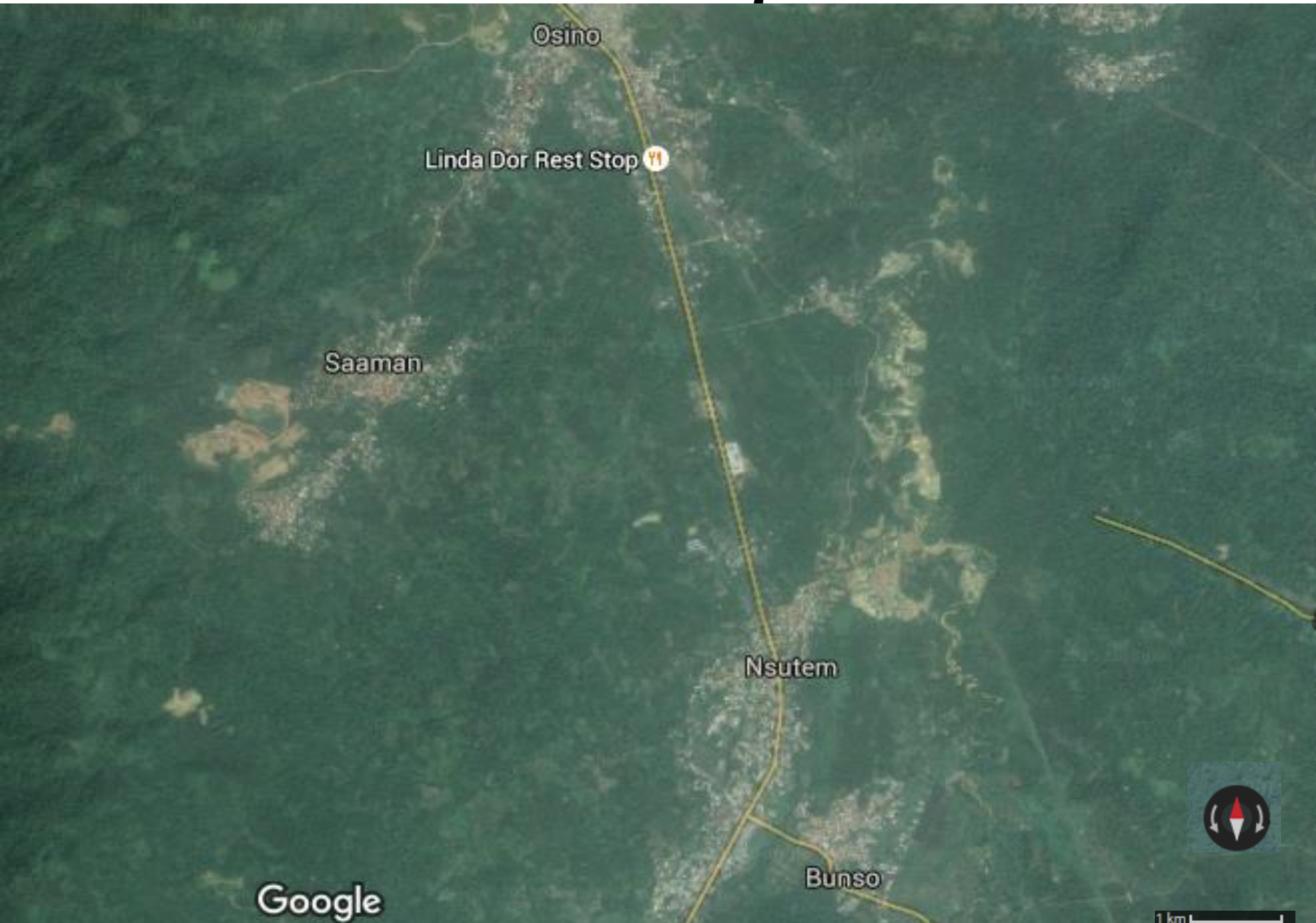
- Recent upsurge in artisanal gold mining (*galamsey*) has overtaken typical land use (e. g farming) in both rural and urban Ghana
- *Galamsey* severely compromises the livelihood potentials of many rural communities through :
  - **Massive destruction of vegetation and water bodies** (rivers, wetlands, natural vegetation)
  - **Crop loss** (invariably uncompensated): as cocoa and oil palm plantation as well as food crop farms
  - **Disruption of socio-economic activities**
  - **Destabilization of local economy**: massive inflation over short periods (irreversible)
  - **Cultural tension** from influx of miners from elsewhere.
- Prime examples of the affect of *galamsey* are in:
  - Fanteakwa District (e.g Saaman and Juaso (near Osino)
  - East Akyem Municipality (e.g. Asiakwa, Bunsu, Sagyimase, Kibi)



# Situation at Project Sites



# Situation at Project Sites





Saaman

Kibi Goldfields

Akyem Juaso

Google



200 m

Paradise Resort

Kibi - Juaso Road

Nsutem  
Google



200 m





Degraded mining areas near Nsutem



# Current Site Situation

- The Birim River basin is a typical locality for Birimian Sediments, a high concentration of gold deposits
- This has attracted :
  - A few small scale mining concessions, e.g. Kibi Goldfields Ltd
  - numerous *galamsey* sites scattered along Rivers Birim and Densu, and their tributaries and virtually all wetlands in the area  
(Birim and Densu are the key water sources for Accra (Weija Dam) and intervening communities)
- The Atewa Range (with a Forest reserve and proposed National Park) is a central feature in the area
  - ⇒ International biodiversity importance (endangered species of plants and animals)
  - ⇒ Steep slopes make for a fragile ecosystem (flash floods, erosion)

# Current Site Situation



**Intact Forest**



**Farmland**



**Glamsey 1**



**Glamsey 2**



# Valuable environment and livelihood



# Situation at Project Sites

Typically, degraded mining areas are “reclaimed” through

***Passive action*** – reduce or remove causes of degradation, but allow habitat to heal itself through time (lower cost / less risk)

- *Glamsey* operators simply abandon sites

***Active action*** - human manipulation used to accelerate restoration (higher cost and risk)

- small scale mining alluvial gold concession (e.g Kibi Goldfields Limited)
- pay (probably) mining site reclamation fees and reclaims degraded sites as part of Environmental Management Plan.

- **QUESTION:** Who really ensures compliance for reclamation?



# Situation at Project Site



# Project Interventions

## **Our Goal :**

To enhance environmental and socio-economic opportunities in agricultural landscapes affected by alluvial gold mining in the Eastern Region of Ghana.

## **Objective**

Reclaim/rehabilitate/restore at least 5,000 ha of mining-degraded land in 20 major communities in the Fanteakwa District and the East Akyem Municipality of the Eastern Region to their pre-disturbance status by year 2020.

We have done a demonstration trial at Saaman/Juaso to roughly assesses community buy-in for such intervention.



# Project Interventions

## Our Current Activities:

We have conducted a one –year demonstration on reclaimed land from KGL at Saaman-Juaso (6.324374, -0.499525).

- Planted indigenous trees, vegetables and other food crops with farmers



# Core Activities

1. ***Reclamation and stabilization of degraded land***
2. ***Nursing and planting at least 2.5 million plants*** (500 x 5,000ha) of suitable tree and crop species to increase tree and carbon stock, restore ecosystem services and provide socio-economic benefits.
3. Enhance the livelihood potential of the local community members, especially the youth and women groups, through the ***development of income generating ventures***
4. Use the reclaimed and rehabilitated sites as a ***learning facility for inter-cultural tourism and youth placement programs***



# Project Challenges

Despite our considerable achievements, the ***extent of affected areas*** and ***technical/financial requirement*** is far beyond our present capacity.

Our biggest ***strength*** now are:

- => travel and youth placement management
- => strong access to and understanding of local community dynamics

We need support to expand immediately in order to capitalize on the growing enthusiasm of the target communities we have so far.

- => Promoting participatory community self-help

# Project Interventions

We are using the following approaches:

1. ***Participatory stakeholder action*** on environmental rehabilitation/restoration
  - local communities and their leadership,
  - relevant government agencies,
  - educational institutions and
  - tourist/youth exchange volunteer programs.
2. ***Tourists/youth exchange volunteer programs*** to promote inter-cultural exchange and learning in the affected communities .

Building on our experience from rehabilitating itate a 40.5 ha of degraded land at Kazigu, Upper-East Region





# Project Benefits and Sustainability

## Benefits

- Approx. 5,000 hectares of land reclaimed and greened by planting various economic and medicinal tree species.
- Local ***institutional capacities*** of youth and women groups will be strengthened (e.g collective decision-making and action, gender equality).
- Communities regain ***livelihood and economic benefits*** from the rehabilitated lands.
- The tree planting would effectively ***increase the tree stock*** on the land and eventually contribute to enhancing the carbon stock in the landscape, restore ecosystem services and provide socio-economic benefits.
- Establishment of ***tree nurseries*** will enhance local knowledge on nursery construction, tree planting, composting and environmental awareness.
- ***Youth entrepreneurship, leadership and advocacy skills*** would also be strengthened / developed in the operational communities.
- Local communities acquire ***a better appreciation of s of current global environmental issues*** such as global warming and climate change and national adaption and mitigation measures.

# Project Benefits and Sustainability

## Sustainability:

To be achieved through **active community ownership**.

- Two existing youth and women groups as well as interested individuals in project districts are/would be trained as local implementing partners of the project to undertake in field activities.
- ***Incentive packages*** (e.g. support for income generating additional livelihoods ventures, women empowerment and youth in leadership programs) would be given to beneficiaries to ensure a win-win situation.
- As much as possible, ***local service providers*** would be engaged to provide some of the needed products and services.



# Summary Activities

## **Phase I (Y1)**

- Planning
- Stakeholder consultation and sensitization

## **Phase II (Y1 & Y2)**

- Site assessment and participatory mapping
- Site preparation (manipulation of landform, soil cover, etc)
- Re-vegetation of degraded sites
  - e.g. planting (nursery-raised, seedlings), layering, natural regeneration

## **Phase III (Y2-Y5)**

Management of re-vegetated areas

-weeding, mulching, Fire control, Erosion control, etc

Promotion of livelihood activities (e.g beekeeping)

Management Plan development

Monitoring & evaluation

Awareness creation (public and educational institutions)

# Thank You



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# DEGRADED LAND REMEDIATION TYPES

***Reclamation:*** The site is hospitable to organisms that were originally present or others that approximate the original inhabitants.

***Rehabilitation:*** The land is returned to a form and productivity in conformity with a prior land-use plan including a stable ecological state that does not contribute substantially to environmental deterioration and is consistent with surrounding aesthetic values.

***Restoration:*** The condition of the site at the time of disturbance is replicated after the action.

Restoration will usually focus on restoring ecosystem functions such as nutrient cycling, hydrological balance, and ecosystem resilience (Hobbs, 2002), although restoring the original flora may on occasions be a realistic and appropriate goal.

Generally, the industry favours rehabilitation, regulatory authorities favour reclamation, and many ecologists favour restoration.