



## Sustainable Forest Management, Conservation and the need for dedicated forest plantations in Ghana



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Ghana



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# Who we are

## Form International B.V.

- Worldwide services in forestry and landscape restoration engineering, advisory and project management
- 25+ years experience

### Expertise in:

Climate investments  
Reforestation  
Forest Landscape Restoration  
Sustainable Forest Management



### Principle elements of company's vision



reforest degraded  
forest landscapes



benefits for  
local communities



restoring vital  
environmental services



economically viable  
business model

# Form and SFI Group of companies

- 🌱 Group of companies covers Investment, Management, Technical Assistance, Projects and Advisory Services
- 🌱 Form International since 1993
- 🌱 Sustainable Forestry Investments since 2009
  - 🌱 30,000 ha degraded land
  - 🌱 17,000 ha restored
  - 🌱 2500 staff in 3 countries (NL, GH, TZ)







# Forest Resource Management in Ghana

- Forest cover <5 Million hectares (Ghana FIP)
  - Forest Reserves 1.6 Million hectares
  - Forest and wildlife conservation areas 16.2% of Ghana land area
- Annual Allowable Cut = 2 Million m<sup>3</sup>
- Timber extraction 3.7 Million m<sup>3</sup>/year (1.8 Million m<sup>3</sup> illegal)
- Fuelwood and charcoal estimated 30 Million m<sup>3</sup>/year
- Annual deforestation 2%
- Drivers of deforestation:
  - agricultural expansion 50%),
  - wood harvesting (35%),
  - population and development pressures (10%),
  - mining and mineral exploitation (5%)

*\*Source of figures: Ghana Forest Investment Program*

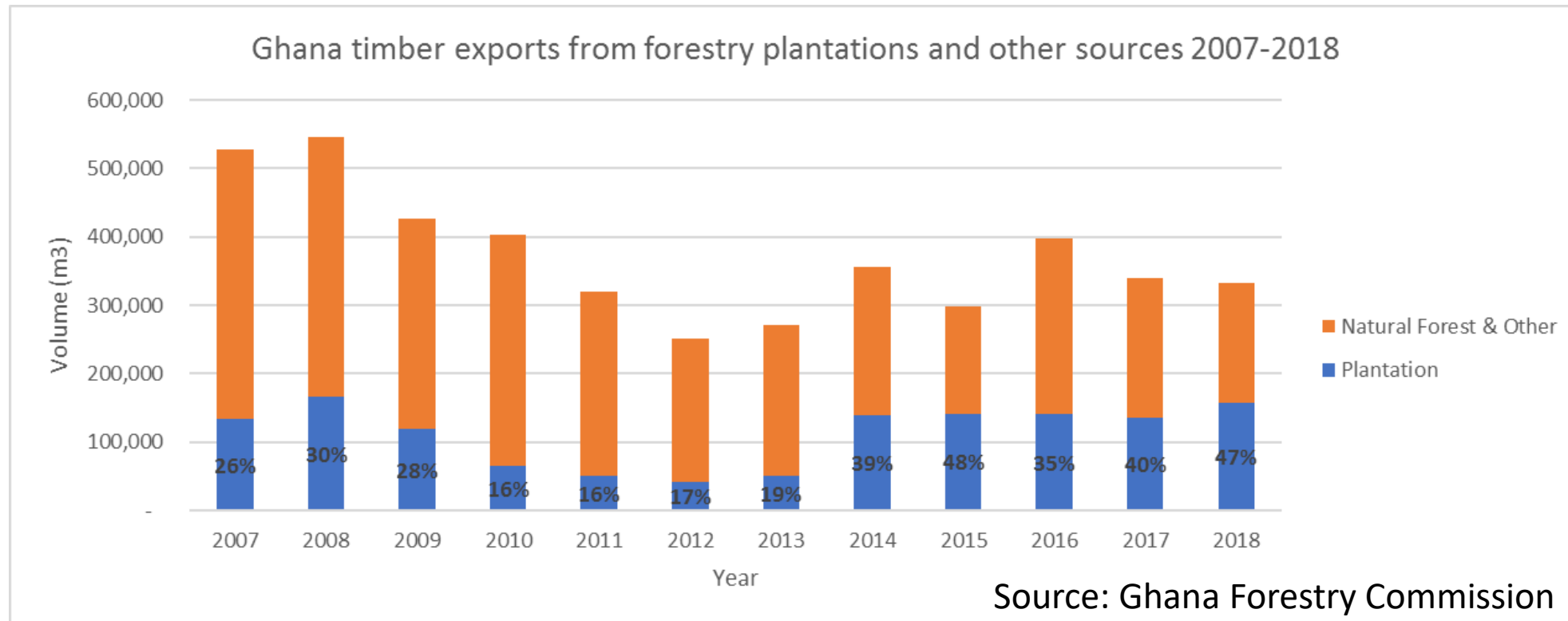


# Formal logging sector options to supply from natural forest

- On reserve: Timber Utilization Contract, regulated timber extraction under management plans and social responsibility agreements. Some operators are certified (FSC Controlled Wood ~250,000 ha).
- Off reserve: Timber Utilization Contract, regulated timber extraction with social responsibility agreements
- Salvage Permit from areas developed into other uses (roads, hydrodams)
- Timber Utilization Permit for small scale community purposes
  
- Formal sectors can provide sustainable and legal sources of wood for energy from residues from timber extraction and processing.
- But natural forest resources are declining and traditional timber businesses in Ghana struggle
- Natural forests increasingly destined towards conservation of biodiversity (flora and fauna) and carbon (REDD+, Ghana NDC)
- Plantations needed to substitute declining produce from natural forests

# Growing importance of plantation timber in Ghana

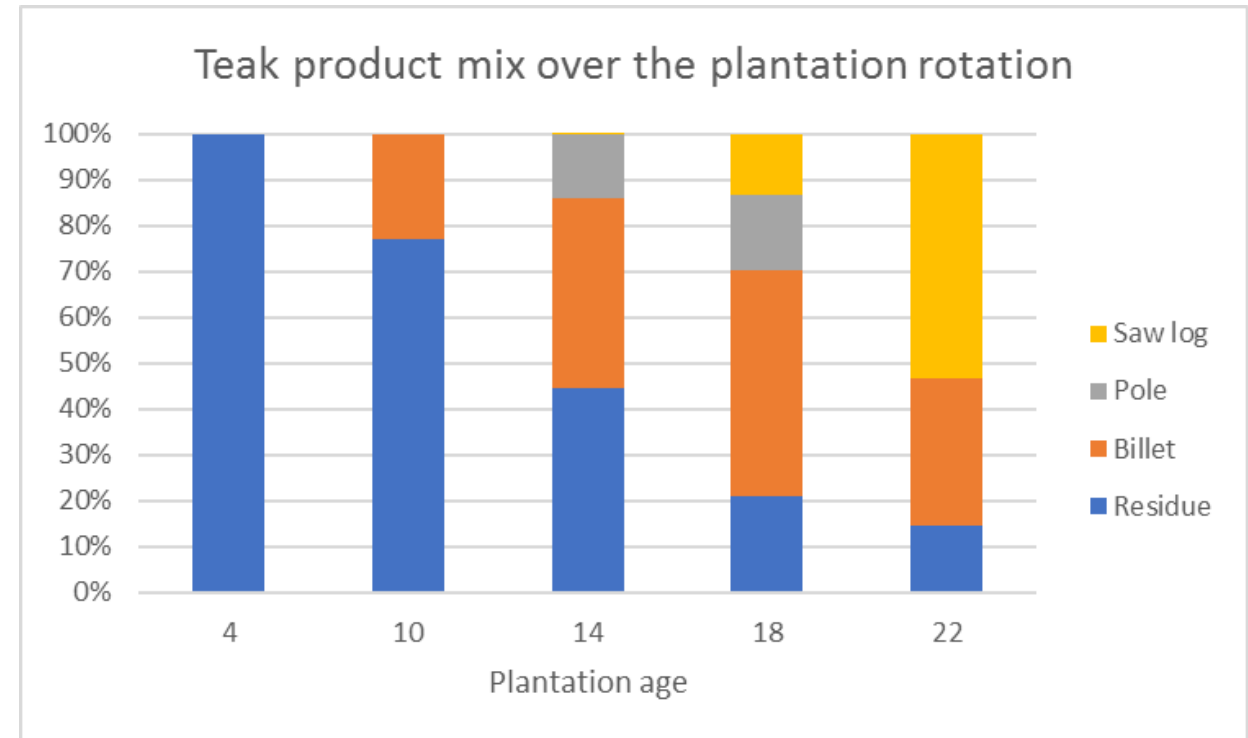
- Timber export volume from mainly natural forest **55% reduced** in 12 years
- Plantation timber almost at 50% of total export volume and is expected to further increase its share
- For wood energy we will see the same trend towards plantations





# How wood energy fits with timber plantations for in Ghana

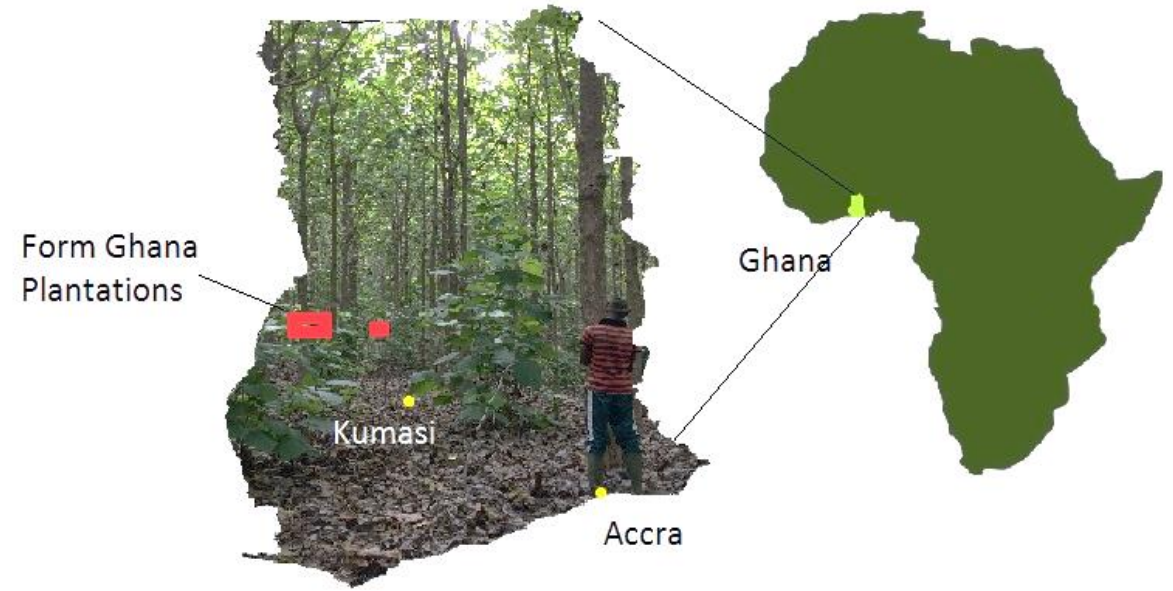
- ~93% of plantation timber is teak (Gmelina and Cedrela ~7%)
- Main products
  - Billets
  - Rough squares
  - Poles (domestic market)
  - Saw logs
- No secondary or tertiary processing (yet) in Ghana
- Cascade use of wood, best and optimal use first, also from a financial point of view (energy wood prices low)
- Residue from forest plantations and processing is substantial: could be used for e.g. fire wood, charcoal or pellets (biofuel)





# Example 1: Form Ghana Ltd.

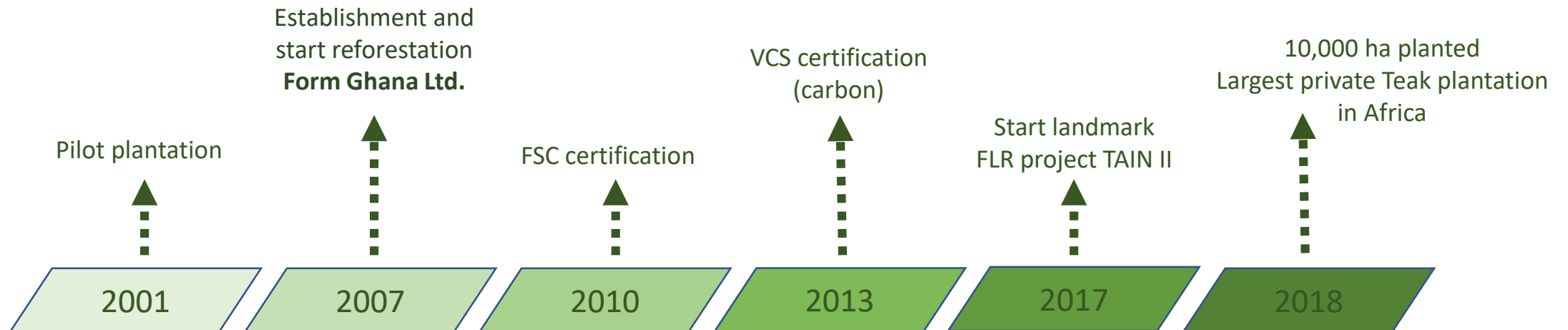
- Largest private teak company in Africa (20k ha land, 10k ha planted)
- National PPP concept developed, 20% benefit sharing
- Conservation and restoration of native forest & trees
- Intercropping with >500 farmers
- Only company in Africa to attract FIP climate funds
- Landscape restoration around plantations 3000 ha





# History and Milestones

- Commercial reforestation and restoration of degraded Forest Reserves
- Initiative of **Form International B.V.**, since 2009 subsidiary of **Sustainable Forestry Investments B.V.**
- 18,000 ha under management, 50 year land lease (renewable)
- >1,200 staff employed
- Sales of FSC certified Teak and Voluntary Carbon Credits (VCS)
- Blended finance





# Form Ghana Plantation Areas







**Degraded Forest Reserve Asubima Central Ghana before project in 2003**





**Forest Reserve 2018**  
**>10,000 ha of Teak plantations -13 million trees planted – 10% indigenous tree species**



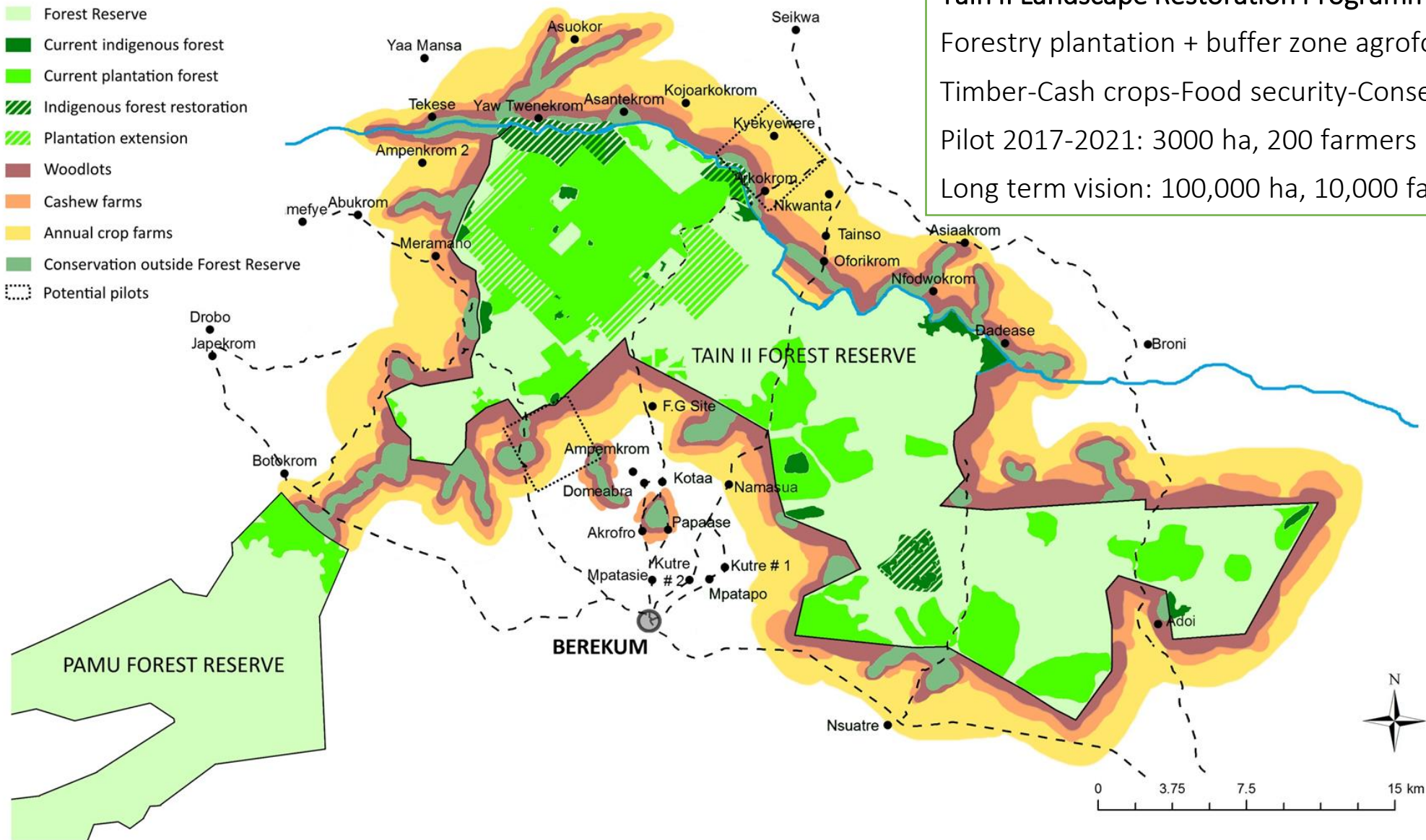








- Forest Reserve
- Current indigenous forest
- Current plantation forest
- Indigenous forest restoration
- Plantation extension
- Woodlots
- Cashew farms
- Annual crop farms
- Conservation outside Forest Reserve
- Potential pilots



**Tain II Landscape Restoration Programme**  
 Forestry plantation + buffer zone agroforestry  
 Timber-Cash crops-Food security-Conservation  
 Pilot 2017-2021: 3000 ha, 200 farmers  
 Long term vision: 100,000 ha, 10,000 farmers





# Intervention strategy

- Improve **governance**: landscape governance board and working groups
- Promote **diversified agroforestry value chain development** for improved, sustainable land use and higher farmer income
- **Ecological restoration** by reforestation with mixed local species
- **Community fire management** to safeguard agroforestry investments and halt land degradation



# Achievements

Current programme phase: 2017 – 2021

- ✓ Innovative mixed agroforestry models designed
- ✓ Governance board operational
- ✓ Changed local bylaws for fire use and free roaming cattle
- ✓ +200 farmers in project
- ✓ 1,200 hectares under agreement
- ✓ > 400 hectares of agroforestry systems established
- ✓ Market linkage and value chain development Maize and Cashew
- ✓ 6,000 ha community fire management programme (6 communities, 7 fire squads)
- ✓ 52 km roads and fire belts on community land established
- ✓ 650 hectares natural forest restoration

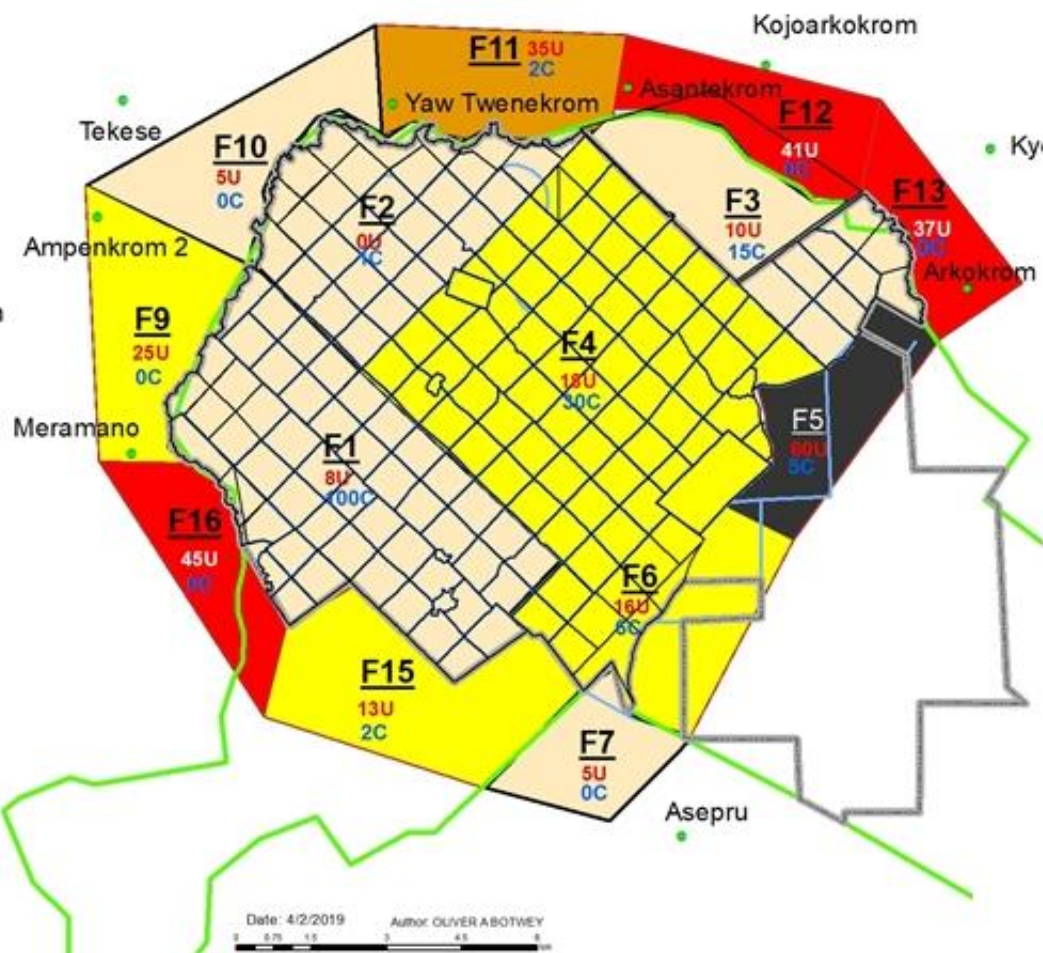


# Community Fire Management Project

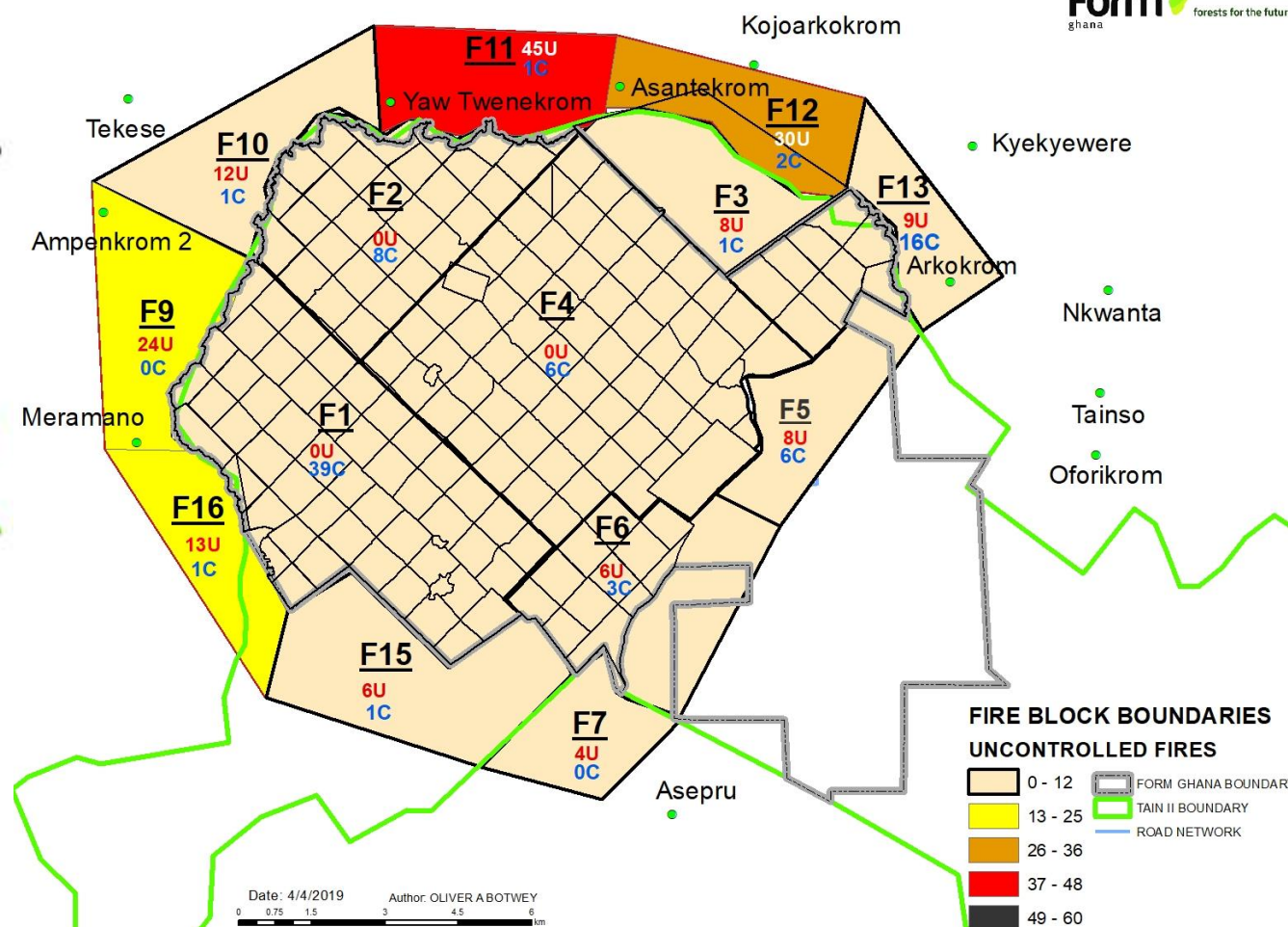
## Fire season 2018/2019 – RESULTS



FIRE FREQUENCY MAP DECEMBER - MARCH 2018



FIRE FREQUENCY MAP DECEMBER - MARCH 2019







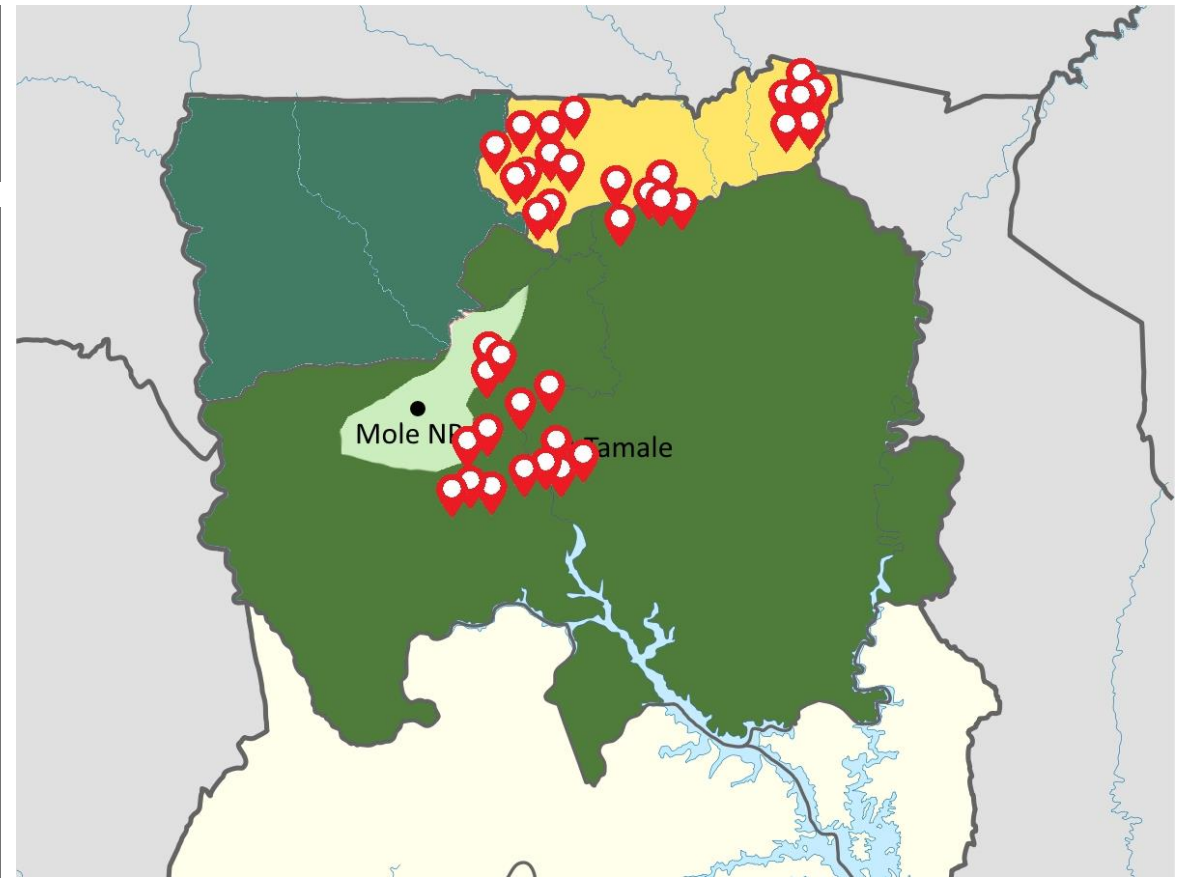
# Next steps

- Continue tree plantation development, agroforestry and promoting trees on farms across the landscape
- Upscale fire programme
- Pilot interventions to farmers to plant and monetize trees for timber (Gmelina, Teak)
  - Focus more on fast growing trees
  - Assist farmers with financial support, TA and intercropping
  - Assist with clear land tenure arrangements between farmer and land owner
- Lower grade wood produce suitable for firewood and charcoal



## Example 2: Shea Landscape Restoration

- 55,000 seedlings raised: 35,000 shea seedlings + 20,000 other savannah species
- 2 tree nurseries for savannah tree species
- >3000 women and men in 40 communities trained on Improved Parkland Management
- >6,000 hectares supported on improved management
- 13,000 seedlings planted by 500 farmers, 2 companies, 1 NGO, 1 donor project
- Partners: A Rocha Ghana, IUCN Netherlands, Global Shea Alliance







# Lessons learned for shea landscape restoration

- Community awareness and buy-in is there, including paramountcy
- Technical feasibility proven
- Critical to manage fire and cattle risk
- Tailor restoration and conservation interventions to the natural resource state: e.g. intensive planting, enrichment planting, farm boundary planting, natural regeneration, conserving.
- Tree planting & regeneration not feasible in isolation → link to other economic activities in the landscape: shea value chain, agriculture, charcoal/firewood, carbon finance
- Protecting and restoring soil quality and water sources for food production through tree cover is key
- Landscape approach essential





# Next steps

- Opportunities to translate experience and lessons learned into new REDD+ and FLR programmes for the Savannah zone
- Showcase an integrated intervention model with:
  - Tree plantation development
  - Assisted natural regeneration
  - Fire management
  - Alternative livelihoods (jobs, improved agriculture and agribusiness, organic shea, beekeeping etc.)
  - Regulated charcoal production and value chains
  - With the right enabling conditions: governance, land access, benefit sharing, inclusive development





# Conclusions and recommendations

- The future of timber and wood energy supply in Ghana and most West African countries depends on plantations, both for export and domestic consumption
- Invest and plant more! Ghana needs dramatically more plantations to substitute 1.8 Million m<sup>3</sup> of timber and 30 Million m<sup>3</sup> of energy wood unsustainably harvested each year.
- PPP and blended finance examples available in Ghana to learn from, replicate and upscale
- Change the mindset, reduce reliance on natural forest: they will increasingly move to conservation of biodiversity and carbon (REDD+, NDC)
- Wood energy is often a by-product for high quality plantations.
- Plantations specifically for energy wood make sense for rural energy supply, but ROI is low, which warrants public sector support.
- Government of Ghana, and other public sector support needed by providing incentives (e.g. subsidies, TA, fiscal), support new projects and R&D



# Q&A

Contact:

[r.soofs@forminternational.nl](mailto:r.soofs@forminternational.nl)

[www.forminternational.nl](http://www.forminternational.nl)

[www.formghana.com](http://www.formghana.com)