

# Lofa Landscape Restoration Programme

## - Lofa County, Liberia -

### Section I - Summary



## Protecting forest - increasing production

*The Lofa Landscape Restoration Programme offers multiple opportunities for agricultural production, economic development and environmental conservation.*

- **Agriculture production:** Lofa has a history of relatively high agricultural production including cocoa and palm oil. A tropical, hot and humid climate provides excellent ecological and climatic conditions for agroforestry and agriculture. Permanent rivers provide opportunities for year round irrigation.
- **Economic development:** Intensified agriculture and agroforestry holds great potential for economic gains and employment, critically needed in a region still struggling to overcome the impacts of war and more recently, the Ebola virus.
- **Forest protection:** The county holds large tracts of dense and biodiversity rich natural forest of global significance, including habitat for critically endangered chimpanzee.



## Protecting forest - increasing production

*Deforestation and a rapidly expanding savanna is threatening both forests, wildlife and livelihoods. A combination agriculture/agroforestry and reforestation will shelter against further expansion of the savanna, thus delivering directly on both socioeconomic and conservation objectives.*

- Up to **180.000 Ha** of savannah is estimated to be available for a mosaic of intensive agriculture/agroforestry and forest development.
- **Private sector invitation:** In line with priorities for agricultural development in the region, commodity actors are invited to;
  - support and further develop a network of smallholder suppliers, in particular rice, vegetables, oil palm and cocoa.
  - invest directly in production of the oil palm and cocoa.
- **PPP:** The program will be develop as a public – private partnership, based on strong community participation. Private sector interests will be backed by national authorities and donors to address the high risk investment environment and to ensure that that the roles of private vs public sector is properly balanced.



## Lofa county – Opportunities and threats

- Lofa county in the north-western corner of the Liberia has population of about 280.000. The county spans dens and biodiversity rich natural forest, substantial areas of traditionally farmed and partly degraded forest areas, and a growing area of grass savanna. In the south and east, part of the natural forest is in the process for permanent protection.
- Tropical, hot and humid climate and abundant rainfall provides excellent ecological and climatic conditions for a large diversity of forestry, agroforestry and agricultural crops. Permanent rivers provide opportunities for year round irrigation. A total area of 350.000 Ha has been identified by the EPA as cropland not in use or underutilized. Roughly half of this is now dominated by Savanna grassland.
- Once known as the "food basket" of Liberia, Lofa county has a history and experience of relatively high agricultural productivity including small and medium sized cocoa and palm oil plantations. A xxx capacity palm oil mill was run as a cooperative until the war.

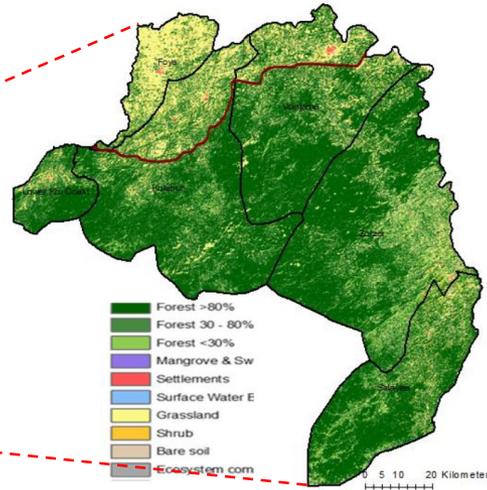


## Lofa county – Opportunities and threats

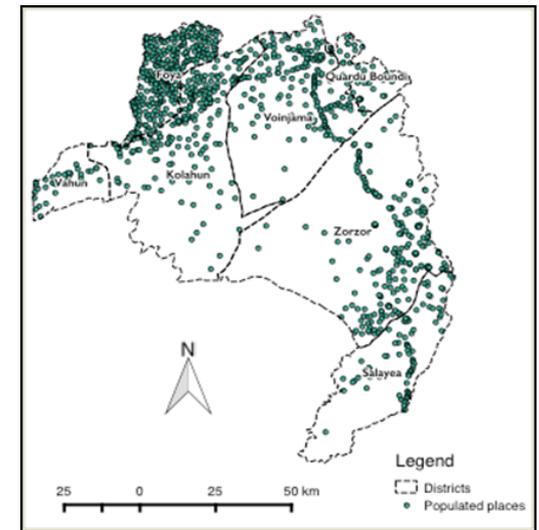
- The impact of low levels of agricultural investments is exacerbated by population growth pushing traditional agricultural practices beyond its carrying capacity, leading to deforestation and intrusion of savanna grassland into the previous forest areas.
- In the north-western most districts, the west African savanna has been expanding over the last 50 years, leaving roughly 180.000 ha largely dominated by savanna grassland. The grass plains now inhibit traditional agricultural practices and puts the local population under threat from wildfires and heavy winds. The savanna intrusion is generally seen as the main environmental challenge threatening livelihoods and the forest landscape.



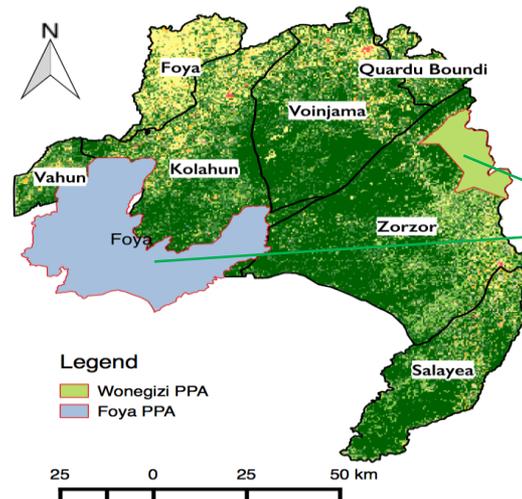
# Lofa county – Geographical overview



*Lofa county forest cover, showing area of savanna intrusion (yellow)*



*Lofa county population. Note overlap between deforestation/savanna intrusion and population density*



*Planned protected areas (Foya and Wonegizi). Program concept proposes buffer zones and wildlife corridor between the PPA's.*



## A comprehensive effort is required to seize opportunities for livelihood and forest, and reverse negative development trends

- Despite unique opportunities and relative advantages for agricultural production and restoration of the Lofa forest landscape, several barriers inhibit the desired development;
  - Poor market infrastructure
  - Aging oil palm and cocoa farms with limited yield
  - Limited access to finance and extension services
  - No functional land use plan or regulatory regime to efficiently counter deforestation and further expansion of the savanna
- Without a comprehensive, multisectorial and resource backed landscape program, overutilization of land in densely populated areas is likely to continue. The savanna will continue to expand into the natural forest, leading to deforestation and lost livelihood opportunities, eventually also threatening the planned protected areas.



## A landscape approach to forest restoration and sustainable land management can increase production and protect forest

- A needs and opportunity assessment conducted early 2016 recommends a landscape approach to sustainable development, poverty reduction and protection of natural forests. The consultants indicate an opportunity to reclaim 180.000 ha of savannah as a mosaic of agriculture/agroforestry and forest restoration. In line with the recommendations by the Ministry of Agriculture, priority can be on palm oil, cocoa and rice, supplemented by various other vegetables.
- Taking a landscape approach will allow for substantial farm/plantation area, intensified agricultural production, while at the same time improving protection of the biodiversity rich natural forest in the region. The consultants recommends that this is ensured by setting aside 100.000 ha of natural forest as buffer zones surrounding the already planned protected areas of Foya and Wonegwsu. Additionally they recommend a 100.000 ha conservation corridor/protected area ensuring connectivity between the two planned protected areas (refer map at slide 6).
- Organizing the landscape approach within the political boundaries of four to five of the six districts in Lofa county provides a practical jurisdictional entity for land use planning and governance.



## A multisector approach is required to implement a landscape scale program

To implement a county wide landscape program as described above will require strong cooperative commitments and engagement by multiple actors.

- Local authorities will take the lead in a comprehensive and inclusive land use planning process, with competence and resource backing from civil society and public sector actors/donors.
- Private sector commodity actors are invited to;
  - develop and support the vast network of smallholders in Lofa through smallholder/out-grower schemes.
  - invest directly in oil palm and cocoa production, in line with national priorities for agricultural development
- Public sector/donors will support a seed and nursery infrastructure for forest Landscape restoration and conservation
- A finance and incentive scheme will be developed with public sector/donor backing, to support long-term, high risk investments in agricultural production - linked with reforestation and forest protection efforts.
- National authorities will support infrastructure development in line with national priorities.

## The Lofa history, experience, climate and donor engagement offer a conducive basis for public and private investments

- Public and private investments in the Lofa landscape program will benefit strongly from:
  - A tropical, hot and humid climate with abundant rainfall providing excellent ecological and climatic conditions for a large diversity of forestry, agroforestry and agricultural crops. Permanent rivers that provide opportunities for year round irrigation
  - A strong sense of urgency and commitment by civil society and local government that is experiencing the negative impacts of expanding savanna and stalled development.
  - Robust practices for land right allocation.
  - Substantial pre-war experience in commercial farming. Existing but over-age, small holder run palm oil and cocoa plantations, and experience with cooperative owned palm oil mill, fed from small holder farms.
  - Multiple ongoing (and funded) projects and programs for agricultural development, forest management and protected area management that will strengthen governance capacity and contribute to a conducive implementation framework.



# Lofa Landscape Restoration Programme

## Section II – Program details (first draft)



# Forest and Mosaic Landscape Restoration in Lofa County, Liberia

Pre-study report  
and  
Program proposal



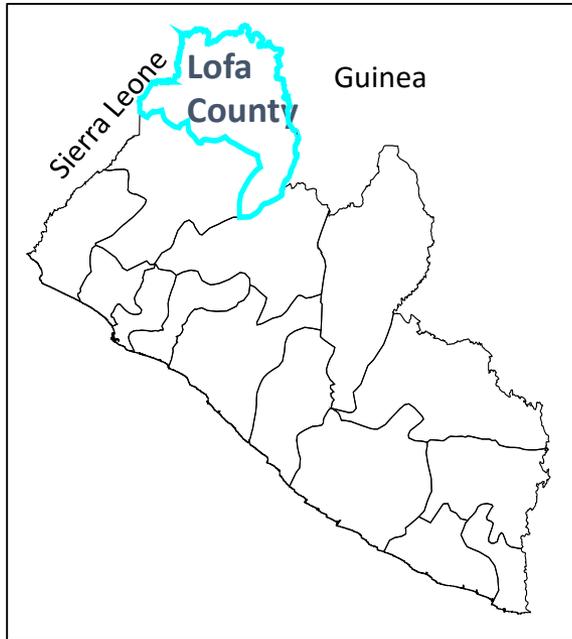
**NIBIO**  
NORWEGIAN INSTITUTE OF  
BIOECONOMY RESEARCH



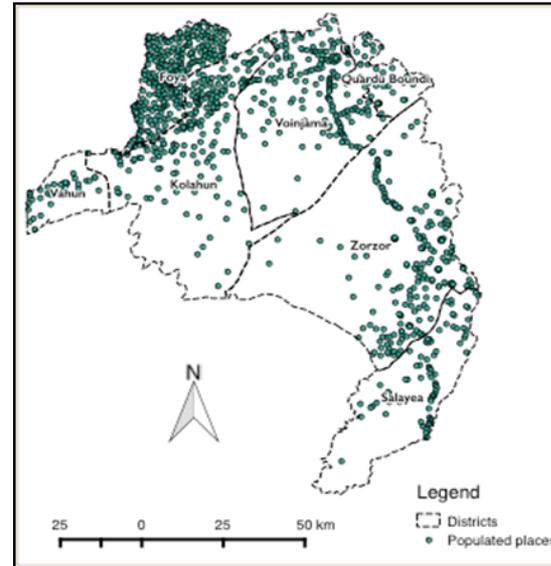
This section is slightly adapted from NRC/NIBIO/ICRAF report summary and summary presentation.

# Lofa County

## Lofa in Liberia

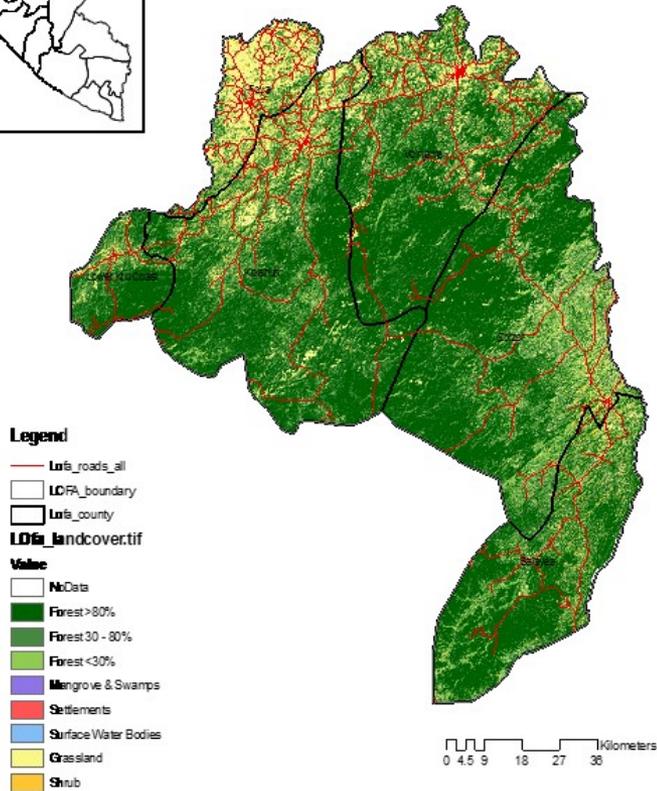


## Population density in Lofa County



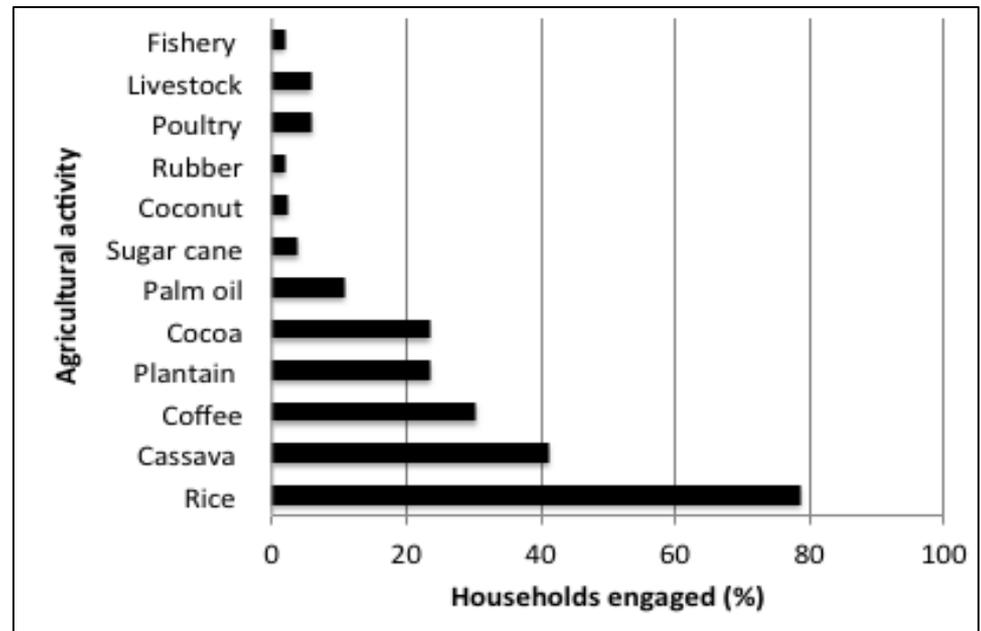
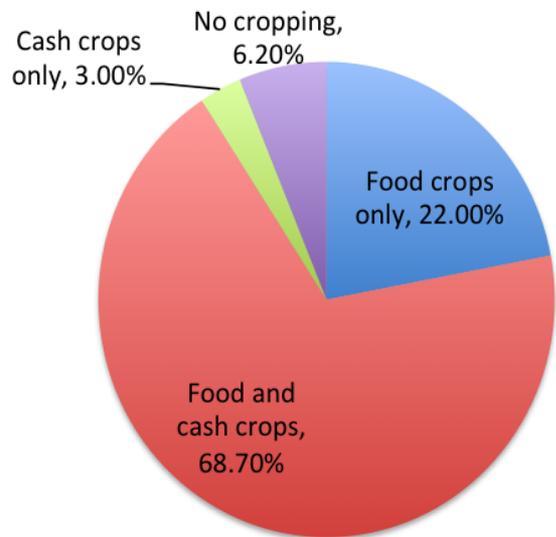
- Total land area of about 9982 km<sup>2</sup> (2<sup>nd</sup> largest county in Liberia)
- Population: ~ 276000
- Forests, including two proposed protected areas
- Agriculture main source of income (more than 60% of pop.)
- Mineral resources

# Land cover of Lofa County



- Tropical rainforest including primary forest, disturbed secondary forest and bush land, as well as savannah.
- Most of the forest in the county belongs to mixed green / moist semi deciduous forest type.

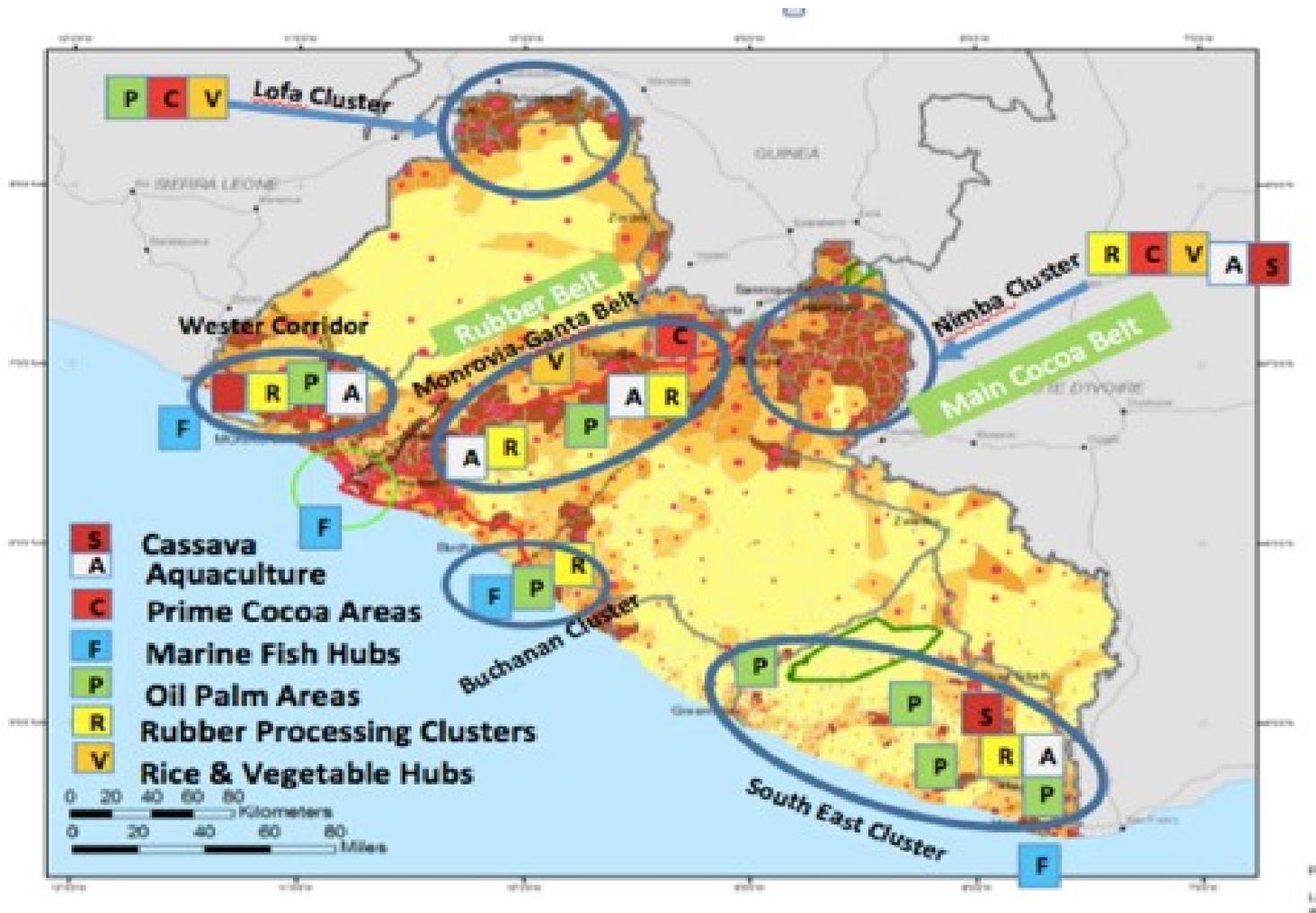
# Agricultural production



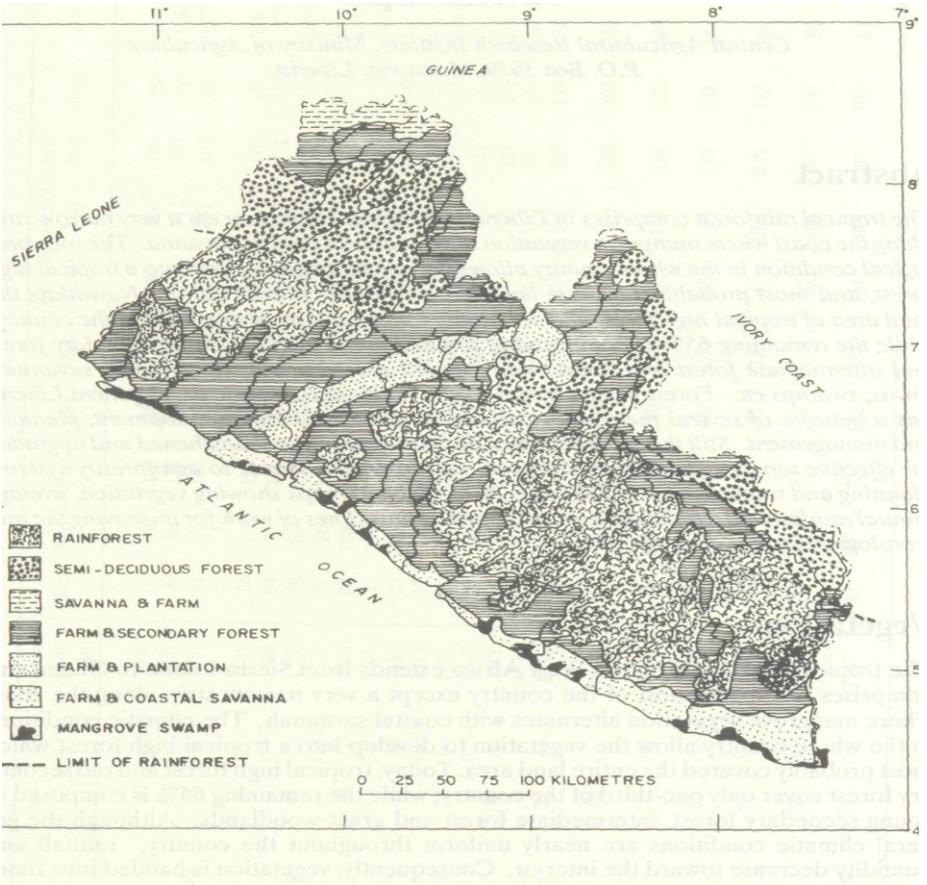
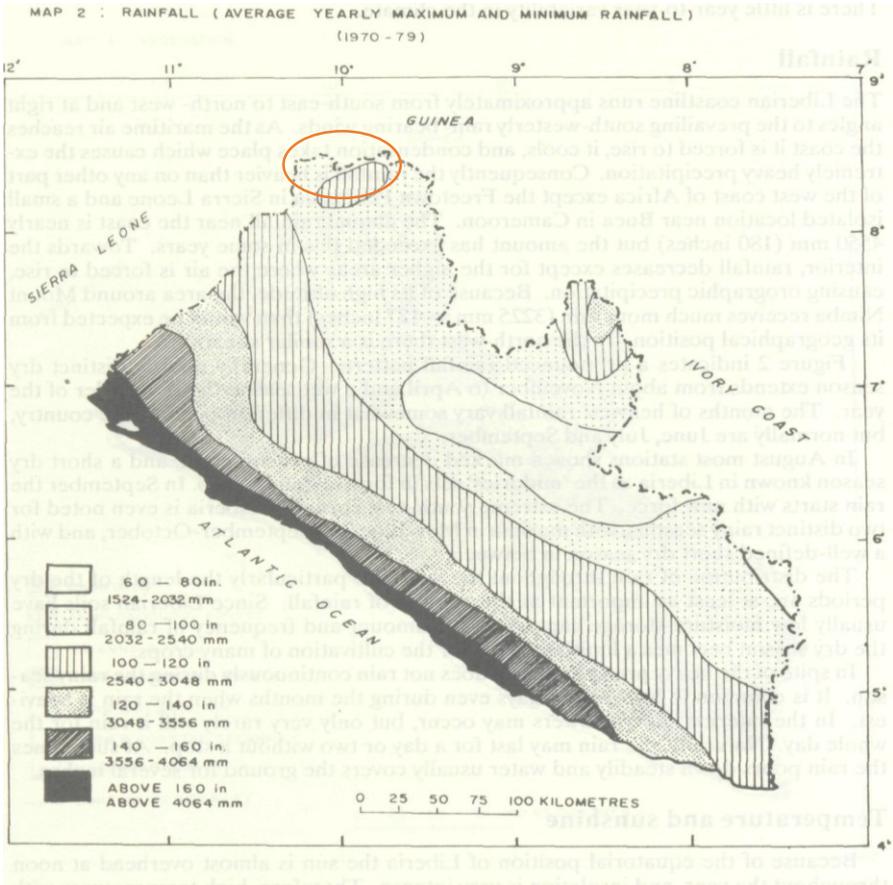
## Agriculture in the county:

- Largely subsistence
- 60 % of the population are food insecure or moderately food insecure
- Slash and burn (shifting cultivation), the driving force for deforestation
- Aging oil palm and cocoa farms
- Poor market infrastructure

# Palm oil and Cocoa priority areas identified by Minister of Agriculture (LATA)



# Oil Palm suitability based on rainfall in Lofa



# Program Goal, Objectives and Outcomes

**Program Goal:** Contribute to sustainable development and poverty reduction through protecting natural forests, restoring degraded landscapes and developing the agricultural and forestry sectors and value chain in Lofa County.

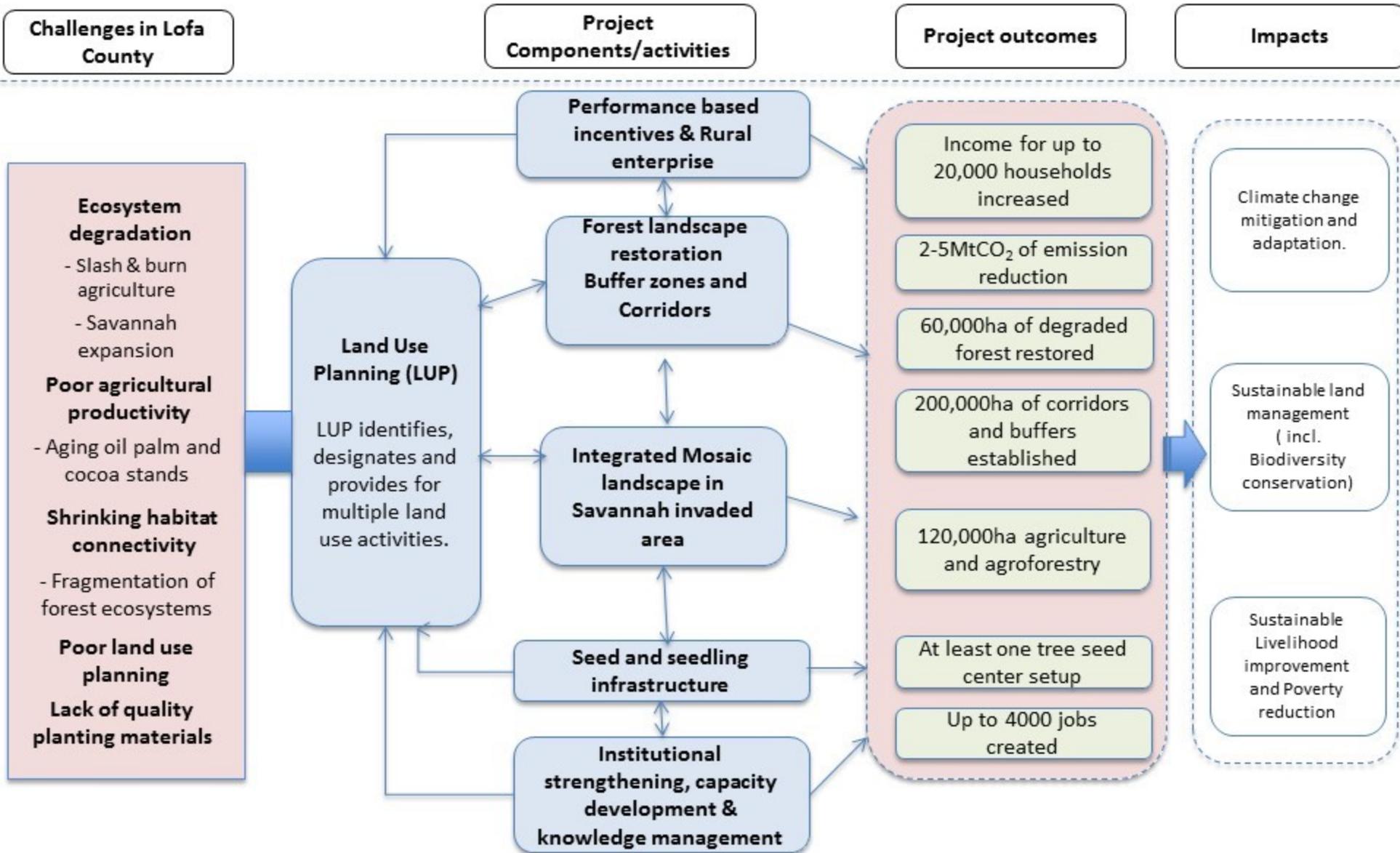
## Specific Objectives and Outcomes

1. **Savannah restoration** [180,000 ha] in Foya, Kolahun and Voinjama districts
  - a) Up to 120,000 ha **agriculture and agroforestry** (including oil palm, cocoa, coffee, rice, vegetables) sustainably intensified and diversified
  - b) 60,000 ha of **degraded forest land restored and / or conserved**, including plantations, corridors and buffer zones around remaining natural forests
2. **Buffer zones** [100,000 ha]
  - a) Upto **100,000 ha of forest** restored and/or conserved
  - b) **10,000 ha agriculture and agroforestry** in buffer areas (crops as outlined above)
3. **Conservation corridors** [100,000 ha] connecting Foya and Wonegesi PPAs
4. **Income** from land-based activities improved for up to 20,000 households
5. **Job creation** - Up to 4000 jobs created through rural enterprises
6. **Emission reduction** - 2-5MtCO<sub>2</sub> of emission reduction.

# Project Components

1. Land use planning and governance
2. Integrated Mosaic landscape: forest-agricultural-agroforestry in savannah invaded areas
3. Forest Landscape restoration and conservation (buffer zones and corridors)
4. Performance based incentives and rural enterprise
5. Seed and seedling infrastructure
6. Institutional strengthening, capacity development and knowledge management
7. Project management, monitoring and evaluation

# Programme components and outcomes



# Component 1:

## Land use planning and governance

**Aim:** Facilitate the development of an enabling planning and policy environment for implementing sustainable development approaches.

### **Sub-components**

- Land Use Planning & GIS including management of agriculture land, forests and protected areas
- Land Resource Governance, Administration and Certification
- Policy Support and Citizen Engagement

## Component 2:

# Integrated Mosaic landscape: forest-agricultural-agroforestry in Savannah invaded areas

**Aim:** Support the adoption and scaling up of forest landscape restoration and afforestation in degraded savannah areas, while contributing to increased productivity and incomes and nutritional security through diversification.

### **Sub-components**

- Mosaic landscape restoration
- Sustainable Intensification of agricultural and agroforestry crops (including Oil Palm, Cocoa, coffee, rice, vegetables, fruit trees etc.)
- Vocational training, agriculture and natural resource management
- Woodlots and plantation forest establishment
- Protection of remaining natural forest in the savannah area

## Component 3:

# Forest landscape restoration and conservation (buffer zones and corridors)

**Aim:** Support the adoption and scaling up of forest conservation and forest landscape restoration and preserve the country's unique biodiversity.

### **Sub-components**

- Community-based forest landscape restoration (in buffer zones around PPAs)
- Establishment of forest / ecological corridor (between Foya and Wonegesi PPAs)
- Establishment of forest woodlots and plantations
- Improve forest management
- Vocational training, for natural resource management and agriculture
- Sustainable Intensification of agricultural and agroforestry crops in and outside the corridor and buffer zone areas

# Component 4:

## Performance based incentives and rural enterprises

**Aim:** Enhance incomes of farmers and local communities through value chains development and incentives for land related enterprises

### **Sub-components**

- Development of product value chains
- Performance-based financing of land-based enterprise
- Development of incentive schemes
- Strengthen community-based natural resource management and farmers' associations

## Component 5: Seed and seedling infrastructure

**Aim:** Complements and supports the development of tree-based restoration activities by developing quality planting material delivery systems.

### **Sub-components**

- Review of tree-seed sub-sector knowledge and information base
- Contribute to establishment of functional county/national seed infrastructure
- Strengthen / establish new nurseries
- Establishment of functional Rural Resource Centre network

## Component 6: Institutional strengthening, capacity development and knowledge management

**Aim:** To complement the ground implementation of activities in components 1-5 by strengthening and enhancing capacity at the institutional level and building relevant skills and knowledge of key stakeholders including government, community, farmers, private sector, schools, vocational training institutions and academia engaged in sustainable land management in Lofa County.

### **Sub-components**

- Institutional support and capacity development
- Land management enterprise support
- Facilitate public-private-partnerships
- Knowledge generation and management (ICT-Based information systems)

## Component 7: Project management, Monitoring and Evaluation

**Aim:** To ensure effective and efficient project management arrangements and mechanisms, including planning, contracting, coordination and integration, reporting, monitoring and evaluation.

### **Sub-components**

- Project administration
- Change management and catalysis
- Learning, monitoring and impact evaluation

## Estimated component costs

<b>COMPONENTS</b>	<b>PHASE I</b>	<b>PHASE II</b>	<b>TOTAL</b>
1. Land use planning and governance	2.000.000	2.500.000	4.500.000
2. Integrated mosaic landscapes	2.500.000	20.000.000	22.500.000
3. Forest landscape restoration and conservation	2.000.000	8.000.000	10.00.000
4. Performance based incentives and rural enterprises	2.000.000	7.500.000	9.500.000
5. Seed and seedling infrastructure	2.000.000	3.500.000	5.500.000
6. Institutional strengthening, capacity and knowledge management	1.000.000	3.500.000	4.500.000
7. Project management, monitoring and evaluation	1.200.000	2.300.000	3.500.000
Totals in USD	12.700.000	47.300.000	60.000.000