NATIONAL MONITORING AND EVALUATION DEPARTMENT

MINISTRY OF FINANCE, BUDGET AND NATIONAL PLANNING

REPORT OF THE JOINT PHYSICAL VERIFICATION EXERCISE BY OFFICIALS OF NM&E DEPARTMENT AND NATIONAL AGENCY OF THE GREAT GREEN WALL (NAGGW)

ON

NATURAL RESOURCES DEVELOPMENT FUND (NRDF) SUPPORTED AFFORESTATION PROJECT IN SEVEN FRONTLINE STATES (BORNO, YOBE, KATSINA, JIGAWA, SOKOTO, ZAMFARA AND KANO) IMPLEMENTED BY NATIONAL AGENCY FOR THE GREAT GREEN WALL (NAGGW)

June, 2022

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EXECUTIVE SUMMARY

The Ministry of Finance, Budget and National Planning received a letter from Chief of Staff to the President requesting for advice on the proposed Work Plan and Budgetary proposed from the National Agency for the Great Green Wall (NAGGW), requesting for approval and release of fund for implementation of the Phase III of the Natural Resources Development Fund (NRDF) supported Afforestation Project/ Tree Planting Campaign. The objective is to guide Mr. President's directives on approval and release of funds to implement phase III of the project.

The project received funding from the Natural Resources Development Fund (NRDF) and Ecological Fund Office (EFO) to implement Phase I and II in 2020 and 2021 respectively. The sum of N2.5 billion from the Natural Resources Development Fund (NRDF) was released with an additional sum of N3.1 billion from the Ecological Fund Office (EFO), totaling N5.6 billion for planting five million trees in 2020 (Phase I). In 2021 (Phase II) the sum of N7.317 billion from the NRDF was released and additional sum of N0.569 from the EFO totaling N7.9 billion to plant Seven Million trees. In aggregate, a total of N13.6 billion has been released thus far to the Agency for the implementation of Phases I and II.

The NM&E department was directed by the HMS and HMFBNP to verify progress and assess level of implementation of the Tree Planting Campaign project implemented in phase I and II and advice accordingly to fast track the release of fund for the implementation of phase III.

The Department conducted physical verification exercise to the project locations of the Phase I and II (2020 and 2021) spread across 7 implementing States (Sokoto, Borno, Zamfara, Kano, Katsina, Jigawa, and Yobe) to determine and review

Implementation progress, validate level of achievements presented in the report submitted to the Ministry and generate performance evidence.

The programme is designed to be implemented in Eight Frontline States that are most affected by desertification. The Four Years project has been phased for implementation as follows:

- Phase I: Borno, Jigawa, Katsina, Sokoto and Yobe (2020)
- Phase II: Borno, Jigawa, Katsina, Sokoto, Yobe, Kano and Zamfara (2021)
- Phase III: Borno, Jigawa, Katsina, Sokoto, Yobe, Kano and Kebbi (2022); and
- Phase IV: Borno, Jigawa, Katsina, Sokoto, Kebbi, Kano and Zamfara (2023).

Objective of the Project

The main objective of the Natural Resources Development Fund (NRDF) Supported Afforestation Project is to support the implementation of the Great Green Wall Initiative in the dry lands of Nigeria and improve quality of affected ecosystem, combat climate change and enhance the livelihoods of the affected communities. The project also aimed at contributing towards meeting the Paris Agreement on climate change.

Summary of Key Findings, Challenges and Recommendations

I. General Findings

A. RELEVANCE OF THE PROJECT TO THE NEEDS OF THE AFFECTED COMMUNITIES

- **The program has the potential of recover degraded land, preserving ecosystems and provision of water to the benefiting communities**

B. COHERENCE OF THE PROJECT WITH OTHER AFFORESTATION FRAMEWORK AT BOTH NATIONAL AND SUB-NATIONAL LEVELS

- The NGGW Implementation Strategy is aligned to the Strategy of Agencies such: River Basin Development Authorities (RBDAs), State

Environmental Protection Agencies (SEPAs), Federal Department of Forestry and Department of Drought and Desertification Amelioration (DDA), Nigerian Meteorological Agency (NIMET) among others.

C. EFFECTIVENESS OF THE PROJECT

- The project is in the right direction towards achieving the set objective *of* preventing or reversing the degradation of ecosystems while improving the living conditions of affected communities by enhancing the provision of ecosystem services

D. IMPACT OF THE PROJECT

- *From* Comparative analysis, it was observed that the Project significant positive improvement and impact of the intervention on beneficiary communities in the implementing states

E. VALUE FOR MONEY

- **The project implementation strategy was found to be efficient especially in the total cost of project delivery and reduced wastage of resource at every level of the programme**

F. SUSTAINABILITY MECHANISM

- **Several Sustainability mechanisms were found to be mainstream into the project they include recruiting of youths from the community to serve as forest guards, involving the communities to own the project, conserve the resources and build their resilience.**

II. SPECIFIC FINDINGS, CHALLENGES AND RECOMMENDATIONS

A. Establishment of Standard Central Nurseries across the states

i. Findings

- The Nurseries are established in the 7 implementing states;
- The Nurseries are all functional with facilities to ensure functionality

ii. Challenges

- Late provision of raw materials to raise seedlings in some locations;
- Inadequate water supply in some of the Nurseries; and
- Delayed payment of Forest guards' salaries.

iii. Recommendations

- Mulching materials should be provided to improve survival rate of seedlings;
- Vandalized equipment (Borehole accessories) should be replaced; and
- Payment of forest guards and Nursery attendants' salaries should be prompt.

B. Establishment of Woodlot Plantation across the states

i. Findings

- The tree planting has been done, including the perimeter fencing and other facilities. Most plants have been established and are doing well; and
- Encroachment of site by the Herdsmen in some location.

ii. Challenges

- Lack of adequate water supply system; and
- Vandalization and encroachment of facilities.

iii. Recommendations

- Members of the host communities, particularly the farmers, should be sensitized more on the long term benefits the trees will bring to their communities so as to stop further encroachment and vandalization;
- There should be adequate remuneration of the forest guards watching over the plantations and they should be paid on time to encourage their commitment; and

- Borehole facilities should be provided in the plantations, where it is not available, to ensure adequate water supply for the survival of the tree.

C. Establishment of Orchard Plantation across the states

i. Findings

- The tree planting has been done, including the perimeter fencing. Most plants have been established and are doing well; and
- The community were happy with the intervention and are pleading with the Federal Government to bring more of the same project to have a wider coverage.

ii. Challenges

- Vandalization of fence around plantation areas; and
- Delayed salaries of the forest guards.

iii. Recommendations

- Continuous community engagement to foster cooperation between farmers-herders in the community and Forest guards;
- Vandalized fences should be replaced; and
- Forest Guards should be paid promptly

D. Establishment of Shelter Belt Plantation across the states

i. Findings

- The trees were planted with facilities such as perimeter fencing, Borehole and reticulation installed in some of the location. While some sites were not fenced, some others were only fenced without the necessary support facility, including water, which could be adduced for the poor performance or survival of the plants in those locations; and
- The community is benefitting from the water at the facilities. The team learnt that the community are contributing money for fuelling of the generator which is used to pump water for the survival of the plants.

ii. Challenges

- The presence of herdsmen and bush burning by farmers constitutes threat to the survival of the trees; and
- Encroachment by farmers in the host community.

iii. Recommendations

- The Agency should continue community engagement to foster cooperation between farmers-herders and other stakeholders in the community.

E. Establishment of Acacia Senegal Plantation across the states

i. Findings

- The tree planting has been done, including the perimeter fencing. Most plants have been established and growing well.

ii. Challenges

- Encroachment by farmers in the host community, theft as well as vandalization of facilities at the plantation; and
- Lack of adequate water supply system in some location.

iii. Recommendations

- The Agency should strengthen community engagement to foster cooperation between farmers-herders in the community and Forest guards; and
- Provision of borehole facilities in the plantations where there is no borehole to ensure adequate water supply for the survival of the tree.

F. Establishment of Indigenous Plantation across the states

i. Finding

- Most of the Plantation visited were fenced

ii. Challenge

- No availability of water in some project sites.

iii. Recommendations

- The Agency should provide boreholes at the project sites where there is no borehole to ensure constant supply of water to sustained good survival of the trees; and
- The Planting of trees should commence soon, as the raining season is fast approaching for the overall achievement of the project's objective.

ADMINISTRATIVE ISSUES

IDENTIFIED ISSUES:

The following are the issues identified during the exercise:

i. The sign posts did not capture the source of funding of the project in the States;
ii. Delay in payment of the forest Guards stipends;
iii. Some of the sites visited by the team were not fenced as at the time of visitation;
iv. Insufficient alternative source of water supply in some sites;
v. Low level awareness of forest fires has led to bush burning which has affected some of the plantations;
vi. Beating up for the projects implemented in 2021 was not done in some states;
vii. Delay in release of funds;
viii. Delay in obtaining "no objection certificates" from Bureau of Public Procurement;
ix. Insecurity in the communities slowed down the implementation process, as some sites could not be visited by the monitoring team due to frequent activities of bandits; and

x. Non commitment and payment of Counterpart Contribution to NAGGW by the States hampered success of the project.

Recommendations: The following measures are recommended to improve project implementation and achieve desired results:

i. The Agency is advised to ensure the completion of the beating-up of 2020 - 2021 phases, for improvement of the 2020-2021 implementation Phases;
ii. Timely release of funds for prompt projects implementation should be ensured;
iii. Procurement processes should be initiated early to reduce delay in execution of projects;
iv. Provision of alternative water supply (boreholes) at plantation sites where there is inadequate soil moisture should be ensured;
v. The Agency is advised to intensify collaboration to ensure synergy with sister organizations toward achievement of common goals;
vi. To ensure seamless implementation, areas devoid of serious security challenges should be identified for next phase of implementation in all the states;
vii. Review and upscale forest guards' stipends to motivate them in carrying out their duties diligently;
viii. Establish mulching materials to improve survival rate of seedlings.
ix. Notify the government on the need to introduce new policies to enable GGW address the issue of drivers of deforestation, especially herders' encroachment
x. There should be increased community sensitization on the long-term benefits of the projects. This will reduce further encroachment and vandalization of facilities at the plantations;
xi. Early preparation of the nurseries should be encouraged to boost the survival rate of the trees; and

xii. For the project to be sustained, the Agency should strengthen partnerships with States, Local Government Areas and Local Communities.

Lessons Learnt/Best Practices: The visiting team noted the following lessons learnt, best practices and benefits of the project:

i. The NAGGW has created good sustainability measures in their implementation processes such as:
   - ✓ Training of Community Youths on techniques of tree planting which has created a culture of environmental conservation and awareness.
   - ✓ Adoption of participatory approach which gave the communities a sense of ownership on the intervention program for sustainability.

ii. The project would restore some degraded land through the production of seedlings, Establishment of shelterbelts, development of community woodlots and orchards, in implementing the States;

iii. There is Improved access to portable drinking water in the Communities through the boreholes constructed;

iv. The project provided alternative sources of livelihood to youths and women through the establishment of orchard plantation and its skill acquisition programs.

v. The replacement (beating up) of non-survival tree is being done by the contractor at no cost to the Agency.

vi. The NAGGW Nigeria created employment by engaging youths of the Communities in seedlings production, plantation establishment and recruitment of forest guards;

vii. The community Chiefs and other members are very supportive of this Government initiative.

General Conclusion

In general, the Team found that the programme is contributing positive towards achieving its objective of improving quality of affected ecosystem, combat climate change and enhance the livelihoods of the affected communities in the

implementing states. **We therefore recommend the funding of the programme should continue but NAGWW should ensure the implementation of the recommendations highlighted in the report**

1. INTRODUCTION

1.1 BACKGROUND

The Ministry of Finance, Budget and National Planning received a letter from Chief of Staff to the President requesting for advice on the proposed Work Plan and Budgetary proposed from the National Agency for the Great Green Wall (NAGGW), requesting for approval and release of fund for implementation of the Phase III of the Natural Resources Development Fund (NRDF) supported Afforestation Project/ Tree Planting Campaign. The objective is to guide Mr. President's directives on approval and release of funds to implement phase III of the project.

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The NM&E department was directed by the HMS and HMFBNP to verify progress and assess level of implementation of the Tree Planting Campaign project implemented in phase I and II and advice accordingly to fast track the release of fund for the implementation of phase III.

The Department conducted physical verification exercise to the project locations of the Phase I and II (2020 and 2021) spread across 7 implementing States (Sokoto, Borno, Zamfara, Kano, Katsina, Jigawa, and Yobe) to determine and review

Implementation progress, validate level of achievements presented in the report submitted to the Ministry and generate performance evidence.

The President approved for the National Agency for Great Green Wall (NAGGW) to embark on massive tree planting in eight (8) frontline States in the next four years beginning from 2020. The directive was in ensuring steady progress of the nation's Nationally Determined Contribution (NDC) and increasing the forest cover in the country by planting 26 million assorted tree seedlings within the four years (2020-2023). This is pursuant to the commitment made by Mr. President in his address to the 74th Session of the Climate Action Summit at the United Nations General Assembly (UNGA) in New York, United States of America in September, 2019.

The programme is designed to be implemented in Eight Frontline States that are most affected by desertification; namely Borno, Yobe, Katsina, Jigawa, Sokoto, Kebbi, Zamfara, and Kano. The Four Years project has been phased for implementation as follows:

- Phase I: Borno, Jigawa, Katsina, Sokoto and Yobe (2020)
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- Phase III: Borno, Jigawa, Katsina, Sokoto, Yobe, Kano and Kebbi (2022); and
- Phase IV: Borno, Jigawa, Katsina, Sokoto, Kebbi, Kano and Zamfara (2023).

The Great Green Wall Programme is a regional effort, signed up to by several Sub-Sahara African nations and designed to halt and reverse land degradation and desertification, prevent depletion of biological diversity as well as ensure that ecosystems are sustainably managed. To ensure steady progress of the nation's Nationally Determined Contribution (NDC) to the Agreement and increase the forest cover in the country the Natural Resources Development Fund Programme (NRDF) was designed for a 4-year duration from 2020-2023 to plant 26 million assorted tree seedlings in eleven frontline states that are most affected by desertification; namely Borno, Yobe, Katsina, Jigawa, Sokoto, Kebbi, Zamfara, Adamawa, Kano, Bauchi, and Gombe.

1.2 OBJECTIVE OF THE PROJECT

The main objective of the Natural Resources Development Fund (NRDF) Supported Afforestation Project is to support the implementation of the Great Green Wall Initiative in the dry lands of Nigeria and improve quality of affected ecosystem, combat climate change and enhance the livelihoods of the affected communities. The project also aimed at contributing towards meeting the Paris Agreement on climate change.

1.3 PURPOSE OF THE PHYSICAL VERIFICATION EXERCISE

The purpose of the exercise was to:

- ✓ Ascertain and review the level of implementation of the Phases 1 and 2 of the NRDF supported Afforestation Projects carried out in 2020 and 2021;
- ✓ Measure Implementation Performance and benefits of the Interventions to the Communities; and
- ✓ Guide and provide HMS with information to foster decision on the release of the funds for the other phases of the NAGGW project implementation, for consideration of the HMFBNP

1.4 METHODOLOGY

To achieve the objective, the NM&E Department adopted the underlisted methodologies;

- ❖ Review of the submitted work plan of the Agency;
- ❖ Review of the Quarterly Implementation Progress Reports;
- ❖ Selection of Sample Site for Field Visit (Sample size was 40% across the planting area;
- ❖ Physical Monitoring Visit to the Implemented sites;
- ❖ Interviews and focus group with beneficiaries of the project;
- ❖ Field observation of project and beneficiaries;

- ❖ Collection of Pictures and GPS of the Project Sites;
- ❖ Analysis of Field Findings; and
- ❖ Presentation of Recommendations

PERFORMANCE ANALYSIS OF THE PROJECTS BY COMPONENTS

2.1 STANDARD CENTRAL NURSERY

2.1.1 Borno State Standard Central Nursery

Two Standard Nurseries were monitored in Borno State

i. Kalari, Konduga LGA with Geo-coordinate(11° 43'49" N, and 13° 17'20" E)
ii. Mashamari, Jere LGA with Geo-cordinate (11° 51' 37" N,13° 12' 6" E)

Kalari, Konduga LGA

The nursery was established in the year 2020 with required facilities available and functional. Facilities available include: Perimeter fencing, Borehole, Overhead Tank, Reticulation, Underground reservoir, Nursery store, Nursery office, Shed and functional Nursery tools.

The types of seedlings raisedwere as following: Acacia Senegal, Mahogany, Baobab, Ziziphus, Neem, Cashew among others. A total number of 600,000 seedlings were raised, while 192,100 were leftovers.

Nursery Office and Store at Kalari Central Nursery

Borehole, Overhead tank and functional Nursery tools at Kalari Central Nursery

Mashamari, Jere LGA

The nursery was established in the year 2020 with required facilities available and functional. Facilities available include: Perimeter fencing, Borehole, Overhead Tank, Reticulation, Underground reservoir, Nursery store, Nursery office, Shed and functional Nursery tools.

The types of seedlings raised were as follows: Acacia Senegal, Mahogany, Ziziphis, Neem, Mango, Citrus, Cashew among others. A total of 600,000 seedlings were raised, while 116,350 were leftovers.

Nursery Office and Store at Mashamari Central Nursery

Underground reservoir and Shed at Mashamari Central Nursery

2.1.2 Kano State Standard Central Nursery

Two Standard Nursery were visited in Kano State

i. Mahuwa, Makoda LGA with a Geo-coordinate(12.3964587N, and 8.4830571 E)
ii. Kumbo, Gabasawa

Mahuwa & Kumbo

The Nurseries visited in Kano, although cited in two different locations have the same specifications, each cover three hectares of land with over 10 species of trees, each of the nurseries has a solar-powered borehole with 20 reticulation points, 22,500 liters fabricated overhead tank, 10,000 liters underground water reservoir, nursery shed, a building with 2 offices, a toilet and a store, with Chain link fence all-round the nursery, each nursery has a total of 600,000 seedlings of different species in it, with survival rate of 95% as at the time of visit, 4 persons were employed to work in each of the standard nursery.

Nursery Office, Store and Leftover Seedlings at Central Nursery Mahuwa, Makoda LGA

2.1.3 Zamfara State Standard Central Nursery

One Standard Central Nursery was visited in Zamfara State

i. KwanarNadama, Gusau LGA withGeo-coordinate(N12 8’24’’, E6 46’2’’ and N12 8’26’’, E6 45’57.)

KwanarNadama, Gusau LGA

The Nursery was established in the year 2021 with required facilities available and functional. Facilities available include: Perimeter Fencing, Nursery Store, Nursery Office, Nursery Tools, Overhead Tank, Borehole, Underground Reservoir and 22 Functional Reticulations system. The type of seedlings raise were: AcaciaSenegal; Azadirachta, Indica; Faidherbiaalbida; Khayasenegalenses; Balaniteaegyptiaca; Adansoniadigitata; Parkiabiglobosa; Zizziphusmauritania; Prosopis african;

Philistigmareticulum and Zizzphusspinachristi. A total of 300,000 seedlings were raised, while 4,000 were leftovers.

Standard Nursery with Borehole, Overhead tank established in KwanarNadama, Gusau

Nursery tools and specie at KwanarNadama, Gusau

2.1.4 *Yobe State* Standard Central Nursery

Two Standard Nurseries were visited in Yobe State

i. Balle, Geidam LGA with Geo-Coordinate (N 12° 49'35, AND E 11°41 57)
ii. Yusufari, Yusufari LGA with Geo-Coordinate (N13° 03'25 LATITUDE E11°10 24)

Both nurseries were established in the year 2020, the seeding raised includes, Prosopsisafricana, Philiostigma, Zizphus, Khaya senegalese, Baobab, Citrus, Neem, Acacia species, Balanites, Adansonia among others. The maintenance work is done by the guards, Balle raised 600,000 seedlings with 3,000 leftovers while Yusufari raised 650,000 seedlings with no leftover. The facilities on ground at both locations were the Nursery Stores, Office, Store, shed, functional nursery tools perimeter Fencing of

the Nursery and non-functional Borehole, underground reservoir, overhead Tank and faulty reticulation. The improvement recorded at the projects sites of the Nurseries' sections could be attributed to the Forest Guards' dedication to duty despite being owed allowances.

The 3000 Nursery seedlings' leftover in Geidam

2.1.5 Jigawa State Standard Nursery

Two Standard Nurseries were monitored in Jigawa State

i. Ukuda-Sisi, Babura LGA with Geo-Coordinate (N $12^0$48'2",AND E $9^0$0'24")

ii. Yardakangiwa, Kaugama LGA with Geo-Coordinate (N $12^0$39'44", AND E $9^0$49'41")

Ukuda-Sisi, Babura LGA

At Ukuda-Sisi, Babura LGA, it was observed that the facility under the 2020 intervention has 3-hectares of perimeter fencing, one Bore-hole, one underground reservoir, one nursery store, one nursery office, one shedand one Overhead tank with reticulation. All the facilities are functional and serving its purpose.

The standard nursery raised 600,000 seedlings under the 2020 intervention, the seedlings have been distributed and transferred to the field with only 2,000 seedlings leftovers.




Establish Nursery at Ukuda-Sisi

Yarda Kangiwa, Kaugama LGA

The facility under the 2020 intervention has 3-hectares perimeter fencing, one Bore-hole, one underground reservoir, one nursery store, one nursery office, one shed, one Overhead Tank with reticulation. At the time of Visit all the facilities were functional and serving its purpose.

The standard nursery raised a total of 600,000 seedlings of various species comprising of Neem, Faidherbiaalbida, Parkiabiglobosa, Acacia Senegal, Acacia niloticaamong other in the year 2020. During the monitoring it was observed that all varieties of seedlings were distributed.

Established Standard Nursery at Yardakangiwa

2.1.6 Katsina State Standard Central Nursery

Two Standard Central Nurseries were visited in Katsina State

i.Shamadara, Daura LGA with Geo-Coordinate (12.9667166 N, 8.2673466E)
ii. Barawa, Batagararwa LGA with Geo-Coordinate (12.9153765 N, 7.5086481E)

SHAMADARA, DAURA LGA

The Nursery was established in the year 2020 and equipped with required facilities, including Perimeter fencing, 1 No. motorized Borehole, 1 No. 22,500ltrs Steel Overhead Tank, Reticulation, 10,000ltrs Underground reservoir, 1 No. Nursery store, 1 No. Nursery office, 1 No. Shed and assorted Nursery tools (Wheel barrows, Shovels, Hose, etc). The facilities were confirmed functional. A total of 620,000 seedlings were raised which include Eucalyptus, Neem, Acacia species, Mango, African Locust Beans, Balanites, Baobab and Mahogany, while 105,000 were leftovers.

Nursery Office and Store & Perimeter Fence at Shamadara Central Nursery

Nursery Seedlings, Tools and Shed at Shamadara Central Nursery

BARAWA, BATAGARARWA LGA

The Nursery was established in the year 2020 and equipped with required facilities, including Perimeter fencing, one motorized Borehole, one 22,500ltrs Steel Overhead Tank, Reticulation, 10,000ltrs Underground reservoir, one Nursery store, one Nursery office, one Shed and assorted Nursery tools (Wheel barrows, Shovels, Hose, etc). While the other facilities were confirmed functional, the borehole was dysfunctional due to vandalization of the pumping machine by insurgent and the taps at the reticulation points were also reported to have been vandalized. The following types of seedlings were raised: Neem, Acacia species, Mango, and Cashew. A total of 600,000 seedlings were raised in 2020. The cumulative leftovers were 120,000 seedlings.

Nursery Office and Store, Seedlings and Underground Tank & Perimeter Fence at Shamadara Central Nursery

2.1.7 Sokoto State Standard Central Nursery

One Standard Central Nursery was visited in Sokoto State

i. Munwadata, Illela LGA withGeo-coordinate(N 13°41'45 E 5°15'36,N 13°41'48 E 5°15'36)

Munwadata, Illela LGA

The Nursery was established in the year 2020 with required facilities available and functional. Facilities available include: Perimeter fencing, Borehole, Overhead Tank, Reticulation, Underground reservoir, Nursery store, Nursery office, Shed and functional Nursery tools. The following types of seedlings were raised Neem, Eucalyptus, Acacia Senegal, Balanite, Mango, Guava, Orange etc. A total of 600,000 seedlings were raised, while 171,000 were leftovers.

EstablishedNursery Store, Nursery Office, Overhead tank and Nursery Tools at Munwadata

Project Analysis Summary Table1

2020 Analysis				2021 Analysis		
S/N	States	Targeted Number of Seedlings to be Raised (2020)	Number of Seedlings Raised at sample sites visited (2020)	Targeted Numbers of Seedlings to Be Raised (2021)	Numbers of Seedlings Raised at sample sites visited (2021)	Left Over Seedlings (2020/2021)
1.	Borno	1,200,000	1,200,000	1,200,000	1,200,000	192,100
2.	Yobe	1,200,000	1,200,000	1,200,000	1,200,000	3000
3.	Jigawa	1,200,000	1,200,000	1,200,000	1,200,000	2000
4.	Katsina	1,200,000	1,200,000	1,200,000	1,200,000	345,100
5.	Sokoto	1,200,000	600,000	1,200,000	600,000	171,000
6.	Kano		-	1,200,000	1,200,000	4000
7.	Zamfara		-	1,200,000	600,000	4000
Total		**6,000,000**	**5,400,000**	**8,400,000**	**7,200,000**	

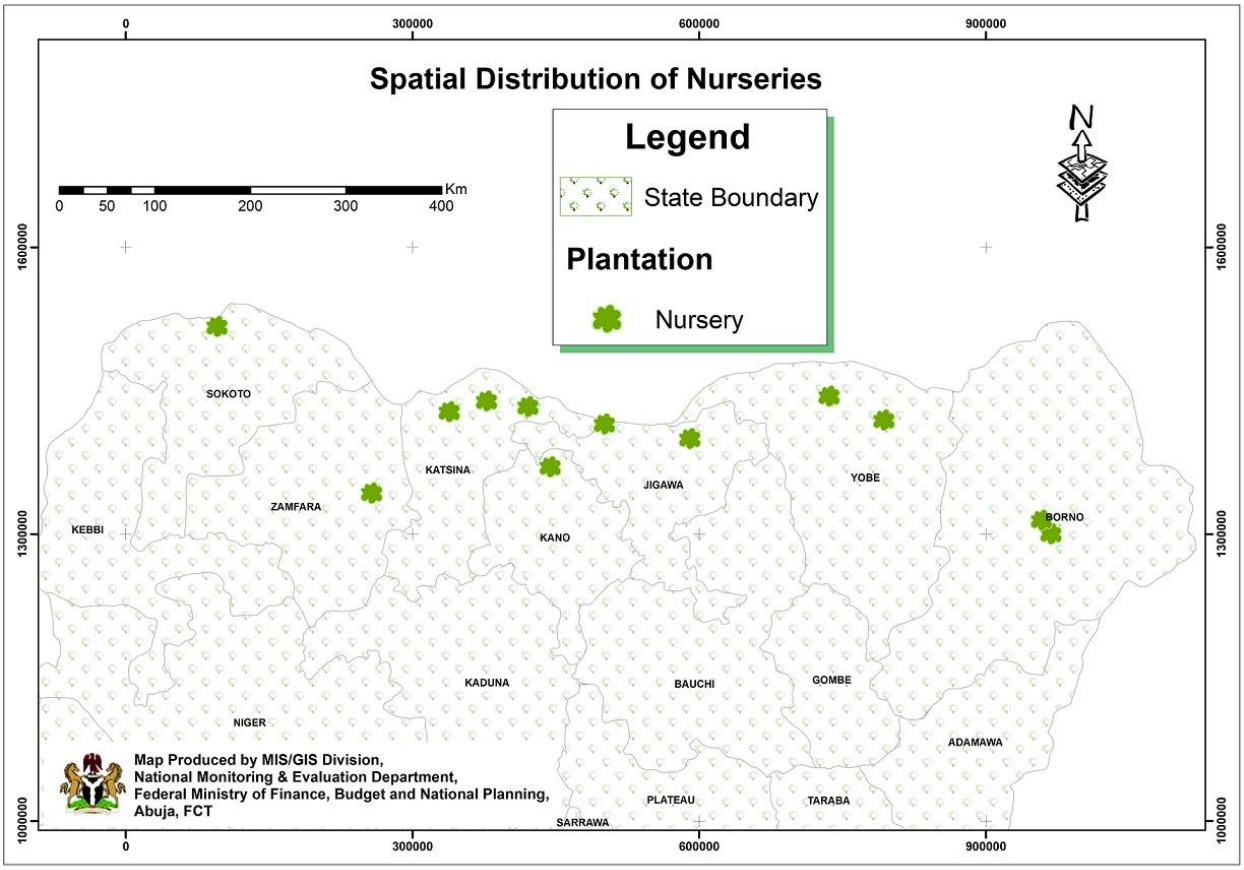
Project Analysis Table for Standard Nursery year 2020/2021

Summary of Findings, Challenges and Recommendations on Standard Central Nursery

S/N	STATE	FINDINGS	CHALLENGES	RECOMMENDATIONS
1	BORNO	Established and functional with required facilities available.	Germinated seedlings exposure to harsh weather conditions affects the survival rate of the plants	i. Provision of mulching materials to improve survival rate of seedlings ii. Continuous training of Staff on Nursery and Seedling management

2.	KANO	Established and functional with required facilities available.	I. Inadequate water supply II. Short cycle of raining season experienced in the state II. Delay due to procurement process	i. Provision of borehole facilities in all the plantations to ensure adequate water supply for the survival of the tree ii. Procurement process should start early
3.	ZAMFARA	Established and functional with required facilities available albeit, about 4000 leftovers seedlings were sighted.	i. Harsh weather conditions ii. Poor water supply system; and ii. Insecurity in the state	i. Provision of mulching materials to improve survival rate of seedlings ii. Provision of borehole facilities in all the plantations to ensure adequate water supply for the survival of the tree ii. More forest guards should be employ for proper securing of the plantations
3.	YOBE	Established and functional with required facilities available.	i. Germinated seeds exposure to harsh weather conditions affects the survival rate of the seedlings ii. Nonfunctional Borehole	i. Provision of mulching materials to improve survival rate of seedlings; ii. Non functional borehole should be rehabilitated
4.	JIGAWA	The Nurseries were established and functional with required facilities available.	Nil	Nil
5.	KATSINA	The Nurseries were established and functional with required facilities available but offtakes of seedlings for the establishment of plantations were poor, leading to overgrown seedlings that are not suitable for transplant and incurring cost of removal for fresh seedlings	i. Late provision of raw materials to raise seedlings, ii. Harsh weather conditions iii. Vandalization of installed equipment by insurgents, iv. Delayed payment of Forest guards' salaries leading to demotivation of the guards towards assigned duties.	i. Sufficient and timely release of funds, ii. Provision of mulching materials to improve survival rate of seedlings iii. Replacement of vandalized equipment (Borehole accessories) iv. Prompt payment of forest guards and Nursery attendants' salaries
7.	SOKOTO	The only Nurseryvisited was established and functional with required facilities available.	i. Delayed payment of Forest guards' salaries ii. The second Nursery in Rugar Alu, Goronyo LGA could not be visited due to security challenge iii. Harsh weather conditions dried up all the leftovers	i. Prompt payment of forest guards and Nursery attendants' salaries, ii. Constant watering of leftover seedlings should be encouraged.

GEO-SPATIAL DISTRIBUTION OF STANDARD CENTRAL NURSERIES ACROSS THE SEVEN FRONTLINE STATES



2.2 WOODLOTS

2.2.1 Borno State Woodlots

Four locations were visited in Borno State

i. Wuyo, Bayo LGA (10° 24' 12" N, 11° 43' 11" E)
ii. Lemisikari, Biu LGA (10° 38' 8" N, 12° 12' 19" E)
iii. Al-AnsarUniversity Campus, Gubio LGA (11° 55' 10" N, 13° 3' 7" E)
iv. Ndiviana Forest Reserve, KwayaKusar LGA(10° 28' 50" N, 11° 47' 37" E)

Wuyo, Bayo LGA

The Woodlot was established in the year 2020 with plantation size of 10Ha and planting spacing of 5mx5m. The facilities available include: Perimeter fencing, Borehole, Overhead Tank, and Reticulation. The main specie of plant at this site is

Neem. The planned area of covered and Implementation was 10Ha. A total of 5,050 seedlings were planted with 50 beneficiaries in the community. The survival rate on the plantation stands at 90%. There was alternative water arrangement in the plantation to support plant growth during the dry season.

Established Woodlot at Wuyo

Lemisikari, Biu LGA

The Woodlot was established in the year 2020 with plantation size of 10Ha and planting spacing of 5m x 5m. The facilities available include: Perimeter fencing, Borehole, Overhead Tank, and Reticulation. The main specie of plant at this site is Neem and Eucalyptus. The planned area of covered and implemented was 10Ha. A total of 4,000 seedlings were planted with 50 beneficiaries in the community. The motorized borehole has provided portable water for about 800 students around the community. The survival rate was 30%, the plants were not doing well due to the flooding experienced on the plantation during the rainy season. It was however recommended that the plantation be changed from Woodlot to Orchard.

Established Woodlot with facilities at Lemisikari

Established Woodlot with facilities at Lemisikari

Al-Ansar University Campus, Gubio LGA

The Woodlot was established in the year 2021 with plantation size of 10Ha and planting spacing of 5mx5m. There are no facilities on this plantation. The main specie of plant at this site is Neem and Eucalyptus. 10Ha was the planned area of coverage and it was achieved during the implementation. A total of 4,000 seedlings were planted with 50 beneficiaries in the community. The survival rate was 80%, the plants were doing well but requires water supply during the dry season to support plant growth, there is need to do beating up to recover dried up plants.

Established Woodlot at Al-Ansar University Gubio

Ndiviana Forest Reserve, Kwaya Kusar LGA

The Woodlot was established in the year 2021 with plantation size of 10Ha and planting spacing of 5mx5m. the facilities available include: Perimeter fencing; Borehole; Overhead Tank and Reticulation. The main specie of plant at this site is Neem. The planned area covered and implemented was 10Ha. A total of 4,000 seedlings were planted with 12 beneficiaries in the community. The survival rate on the plantation stands at 65%.

Established Woodlot with facilities at Ndiviana Forest Reserve

2.2.2Kano State Woodlots

One location for Woodlots was monitored in Kano State

i. Kumbo, Gabasawa LGA with a Geo-Coordinate (12.219075N,8.8875892E)

Kumbo, Gabasawa LGA

The Woodlots Plantation was visited in Kumbo community under Gabasawa Local Government Area, Kano State. The total area of coverage was 20 hectares of land. The plantation was cultivated with 22,000 seedlings of khaya Senegaleses specie (Mahogany trees). Although the trees were about 1.5m high, the survival rate was about 60%. An arrangement for beating up was in place to replenish the trees that could not survive. The plantation was surrounded with perimeter wire fence to prevent animals from encroaching on the plantation.

Established Woodlot at Kumbo

2.2.3 Zamfara State Woodlots

One location for Woodlot was monitored in Zamfara State

i. Baguda, Gusau LGA Zamfara State with Geo-coordinate (N 12 6' 26'', E 6 42'9'' and N 12 6' 17'', E 6 42'16'')

Baguda in Gusau LGA of Zamfara State

The Woodlot was established in the year 2021 with plantation size of 10 hectares. The main specie of plant at this site is Neem. The planned area of coverage was 10Ha, while 9.9 hectares was covered during the implementation. A total number of 11,100 seedlings were planted with 150 beneficiaries in the community. The survival rate was 75% and growth range of 20cm-53cm in height.

Established Woodlot at Baguda

2.2.4 Yobe State Woodlots

Two locations for Woodlotswere monitored in Yobe State

i. Kachallori,Yusufari LGA with Geo-coordinate (N12°58'38, and E11°06'52)

ii. Usmandi, Yusufari LGA with Geo-Coordinate (N13° 01'58, and E11°15'56) both projects commenced in 2021.

Kachallori, Yusufari & Usmandi, Yusufari

The 10Hectares land for the Woodlots has been secured and fenced. The seedlings planted were Acacia Senegal species and Neems'. The survival rate was 35% and 30% respectively which was fair; this was due to the grazing activities of Herdsmen before erecting the Perimeter Fence. It was reported that 10,100 worth of seedlings had been planted on the Woodlot project site. The only facility on ground was the perimeter Fence. The project needs functional motorized borehole, solar power, underground reservoir, overhead tank and reticulation system for sustenance of the

Trees and resuscitation of the dead seedlings. 60members of the Community benefitted from the project implementation, as at the time of visit, the recruited Forest Guards were not on duty.

The installed Perimeter Fence in Kachallori

The Visibility Board of Kachallori's Woodlot Project

The landscape reflecting the few survived seedlings

2.2.5 Jigawa State Woodlots

Four locations for Woodlot were visited at Jigawa State

i.KAUGAMA MOTSO, KAUGAMA with a Geo-Coordinate (N $12^0$26'46", E $9^0$39'18")

ii. Maifaru, Maigatari LGA with a Geo- Coordinate (N $12^0$36'51", E $9^0$44'16")

iii. YardaKangiwa, Kaugama LGA with a Geo-Coordinate (N $12^0$38'1", E $9^0$48'1")

iv. KaugamaMotso, Kaugama LGA with a Geo-Coordinate (N$12^0$26'48", E$9^0$39'20"),

KAUGAMA MOTSO, KAUGAMA

The Monitoring team observed that the only facility available on site under the 2020 intervention is perimeter fencing. The total coverage area is 10 hectares **and** number of seedlings planted was 12,000 with about 65% Survival rate. The main specie at the

project location is Neem. A total of 1,800 persons from the community will benefit from the trees planted.



Established Woodlot at kaugamamotso, kaugama

Maifaru, Maigatari LGA

The Monitoring team observed that the facility under the 2020 intervention has put in place 10 hectares perimeter fencing, one Bore-hole, one Overhead tank and reticulation system. The total number of seedlings planted was 12,000 and 7,800 survived, accounting for 65% survival rate. The main specie at the project location is Eucalyptus, Neem and Acacia auricluformis.

Woodlot at Maifaru, Maigatari LGA

Yarda Kangiwa, Kaugama

The Monitoring team observed that the facility under the 2021 intervention has put in place 10 hectares perimeter fencing. However, the remaining facilities were not available on site such as: borehole, Overhead Tank, Underground Reservoir and Reticulation. The total number of seedlings planted was 12,000 and survival rate was 15% attributed to inadequacy of water and harsh weather condition. The main specie at the project location is Neem.

Establishment of Woodlot at YardaKangiwa, Kaugama LGA

Kaugama Motso, Kaugama LGA

The Monitoring team observed that the facility under the 2021 intervention has put in place 10 hectares' perimeter fencing. However, the remaining facilities were not available on site such as: borehole, Overhead Tank, Underground Reservoir and Reticulation. The total number of seedlings planted was 12,000 and survival rate was 40% due to inadequacy of water to irrigate the plantation. The main specie at the project location is Neem. 1,000 persons from the community would be benefitting from the trees planted.



Woodlot at KaugamaMotso, Kaugama

2.2.6 Katsina State Woodlots Site

Five Locations for Woodlots sites were visited in Katsina State

i. Federal University, Dutsin-Ma LGA with a Geo-Coordinate (Latitude12.2996503,Longitude 7.4537712)
ii. Mankar, Mashi LGA with a Geo-Coordinate(13º 3'14" N, 7º 57' 44" E)
iii. Damawa, Mani LGA with a Geo-Coordinate (13º 0' 57" N, 7º 52' 4" E)
iv. Mauchi, Mashi LGA with a Geo-Coordinate (13º 6'14" N, 8º 0'12" E)
v. Dono, Dutsi LGA with a Geo-Coordinate (13º 17'7" N, 7º 51'4" E)

Federal University, Dutsin-Ma LGA

The Woodlot was established in the year 2020 on a 10Ha size plantation with a total of 4000 seedlings planted 5meters apart. The main species of plant at the site are Acacia and Neem and the only facility available was Perimeter fencing. Survival rate was 15% with 50 persons from the community said to have benefitted directly from the project.

Established Woodlot at Federal University, Dutsin-Ma

Mankar, Mashi LGA

The Woodlot was established in the year 2020 on a 10Ha size plantation with a total of 4000 seedlings planted 5meters apart. The main specie of plant at the site is Acacia Senegal (Gum Arabic) and the facilities available include: Perimeter fencing; Two motorized Boreholes; Two 7,500 litres Overhead Tanks and Reticulations system. Survival rate on the plantation stands at 90% with 40 persons from the community said to have benefitted directly from the project. Fetching points are also available for members of the community to access potable water.

Established Woodlot with facilities at Mankar

Damawa, Mani LGA

The Woodlot was established in the year 2021 on a 10Ha size plantation with a total of 4000 seedlings planted 5meters apart. The main specie of plant at the site were Neem and Acacia senegal (Gum Arabic), the facilities available include: Perimeter fencing; two motorized Boreholes; Four 5,000 litres Overhead Tanks and Reticulations system. Survival rate was 70% and 20 persons from the community were said to have benefitted directly from the project.

Established Woodlot at Damawa

Mauchi, Mashi LGA

The Woodlot was established in the year 2021 on a 10Ha size plantation with a total of 4000 seedlings planted 5meters apart. The main specie of plant at the site was Acaciasenegal (Gum Arabic).The only facility on site was perimeter fence. The survival rate was 60% and 45 persons from the community were said to have benefitted directly from the project.

Established Woodlot with facilities at Mauchi

Dono, Dutsi LGA

The Woodlot was established in the year 2021 on a 10Ha size plantation with a total of 4000 seedlings planted 5meters apart. The main specie of plant at the site are Acacia senegal (Gum Arabic) and Neem and no facility, except perimeter fencing was available. Survival rate on the plantation stands at 60% with 35 persons from the community said to have benefitted directly from the project.

Established Woodlot with facilities at Dutsi Ma

2.2.7 Sokoto State Woodlot

Three locations for Woodlots were visited in Sokoto State

i. Damba,Illela LGA with a Geo-Coordinate(N 13°32'50; E 5°13'59,N 13°32'51,E 5°13'56;N 13°32'46,E 5°14'1)
ii. Rajiyar Dono, Yabo LGA with a Geo-Coordinate (N 12°44'5 E 4°57'9)
iii. Rajiyar Dono, Yabo LGA with a Geo-Coordinate (N 12°44'1 E 4°56'52)

Damba, Illela LGA

The Woodlot was established in the year 2020 with plantation size of 10Ha. Facilities available include: Perimeter fencing, Borehole, Overhead Tank, and Reticulation. The main specie of plant at this site is Neem. 12,000 seedlings were planted in the planned area with survival rate of 15%. Number of beneficiaries in the community stands at 22.

Pictorial Evidence of the vandalized fence

Pictorial Evidence of the site being encroached by the Herdsmen

Established Woodlot with Facility at Damba

Rajiyar Dono, Yabo LGA

The Woodlot was established in the year 2020 with plantation size of 5Ha. The facilities available at the site was only Perimeter fence. The main specie of plant at this site was Neem and Eucalyptus. The planned area covered and implemented was 10Ha, same area was covered during the implementation. A total number of 6,000 seedlings were planted and 4,500 survived, accounting for 75% survival rate, and 6 beneficiaries in the community.

Established Woodlot at RijiyarDono

Rajiyar Dono, Yabo LGA

The Woodlot was established in the year 2020 with plantation size of 5Ha. Facilities available at the site is only Perimeter fencing. The following facilities are not available in this location: Borehole, Overhead Tank, Reticulation and Underground reservoir. The main specie of plant at this site is Neem and Eucalyptus. The planned area covered and implemented. A total of 6,000 seedlings were planted with a survival rate of 45% with 6 beneficiaries in the community.

Established Woodlot at RijiyarDono

Project Analysis Summary Table2

2020 Project Analysis						2021 Project Analysis				
States	Planned Area of Coverage (Hectares) 2020	Sample Size visited (40% of planned Area)	Planned no of Trees to be Planted	No of Trees sighted on Sample Sites 2020	Average Survival Rate (%) 2020	Planned Area of Coverage (Hectares)2021	Planned no of Trees	Sample Size visited (40% of planned Area)	No of Trees sighted on Sample Sites 2021	Average Survival Rate (%)2021
Borno	50	20	20,000	9,550	60	50	20,000	20	8000	70
Yobe	-		-	-	-	50	20,000	20	10,100	32.5
Jigawa	50	20	60,000	24,000	65	50	60,000	20	24,000	27.5
Katsina	50	20	20,000	8,000	52.5	50	20,000	20	12,000	63.3

Sokoto	50	20	60,000	24,000	45	50	60,000	20	-	-
Kano	-		-	-	-	50	60,000	20	22,000	60
Zamfara	-		-	-	-	40	48,000	9.9	11100	75

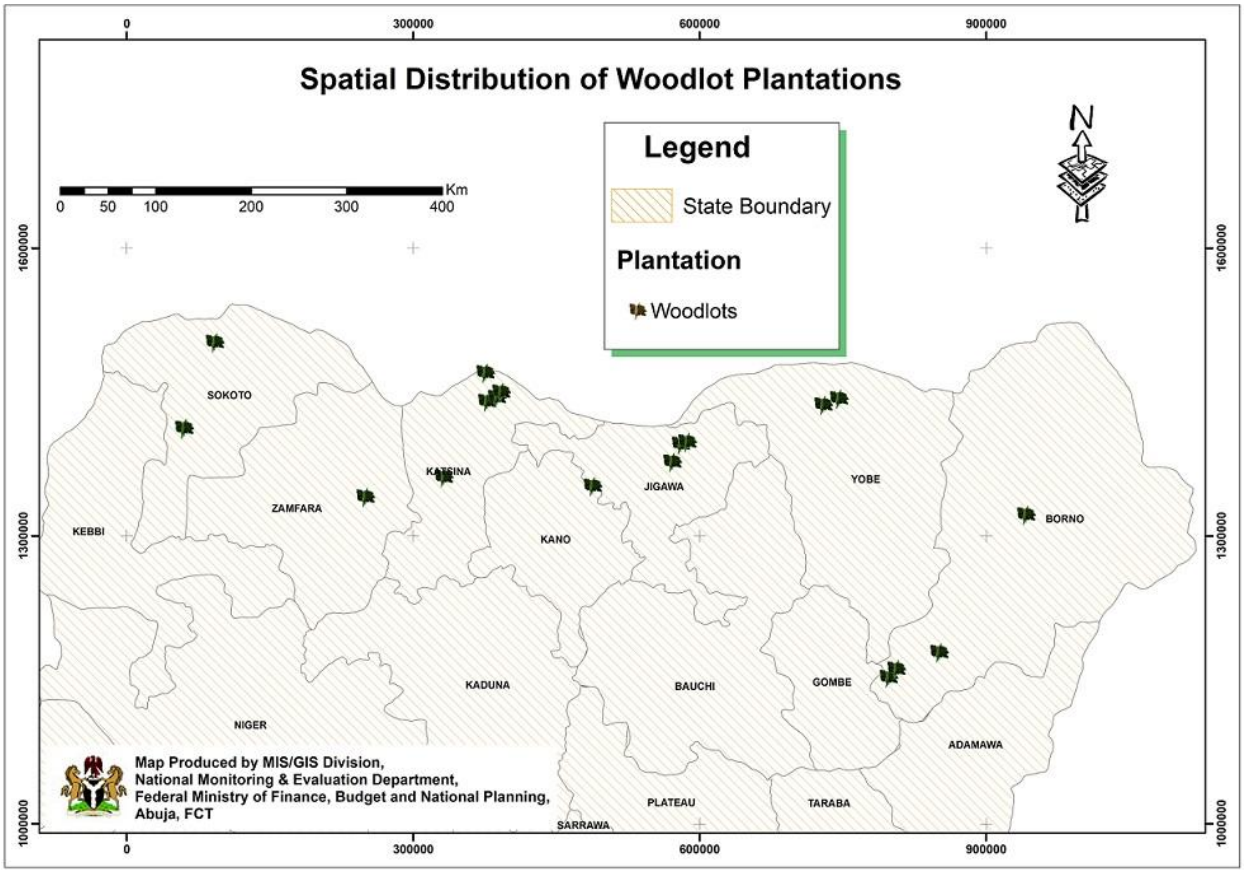
project Analysis Table for Woodlot for year 2020/2021

Summary of Findings, Challenges and Recommendations on Woodlot by States

S/N	STATE	FINDINGS	CHALLENGES	RECOMMENDATIONS
1	BORNO	The tree planting has been done, including the perimeter fencing. Most plants have been established and are doing well.	i. Herders' cattle's grazing on the planted areas ii. Insurgency in the State iii. Vandalization of fence around plantation areas	i. Continuous community engagement to foster cooperation between farmers-herders in the community and Forest guards ii. Vandalized fences should be replaced iii. Provision of basic tools for the Forest guards, (identity cards, torch light)
2.	KANO	The planned areas of coverage for each of the plantation visited were planted with seedlings;	i. The presence of herdsmen constitutes threat to the survival of the trees; ii. Encroachment by farmers in the host community; iii. Theft and vandalization of facilities at the plantation; iv. Poor remuneration of the forest guards; v. There is short cycle of raining season in the region	i. Members of the host communities, particularly the farmers, should be sensitized moreon the long term benefits the trees will bring to their communities so as to stop further encroachment and vandalization of facilities at the plantations; ii. There should be adequate remuneration of the forest guards watching over the plantations and they should be paid on time to encourage their commitment
3.	ZAMFARA	At the time of visit, the team observed that there was no provision of water to irrigate the planted trees	i. No water to irrigate the planted trees	i. Motorized boreholes should be installed for adequate watering of the plants during the dry season;
3.	YOBE	Survival rate was on the average at the plantations	Lack of adequate water supply system	Provision of borehole facilities in all the plantations to ensure adequate water supply for the survival of the tree
4.	JIGAWA	Improved community livelihood through the engagement of community members for the watering of the trees.	Inadequate water supply system at KaugamaMotso, Kaugama	Provision of borehole facilities in all the plantations to ensure adequate water supply for the survival of the tree

5.	KATSINA	i. Seedlings were planted in the planned areas of coverage for each of the plantation visited. Some of the trees had, however dried up due to harsh weather conditions/ inadequate water supply.	i. Encroachment by herders in some locations, ii. Lack of borehole to supply water for the survival of the plants during dry season, iii. Delayed salaries of the forest guards	i. There should be continuous community engagement to foster cooperation between farmers in the community and forest guards ii. Provision of borehole facilities in all the plantations to ensure adequate water supply for the survival of the tree iii. Prompt payment of forest guards salaries.
7.	SOKOTO	i. Forest guards have not been paid salary for over a year which contributes to vandalization; ii. Team could not visit 2021 woodlots due to insecurity in the selectedlocations. iii. Encroachment of site in Damba by the Herdsmen	i. Vandalization and encroachment of facilities ii. Lack of water for the plants to survive	i. Provision of borehole facilities in all the plantations to ensure adequate water supply for the survival of the tree ii. There should be continuous community engagement to foster cooperation between farmers in the community and forest guards

GEO-SPATIAL DISTRIBUTION OF WOODLOT PLANTATIONS ACROSS THE SEVEN FRONTLINE STATES



2.3 ORCHARDS

2.3.1 Borno State Orchards

One Orchard was visited in Borno State

i. Briyel, BayoLGAwith a Geo-Coordinate(10º 25’ 38” N, 11º 43’ 50” E)

Briyel, Bayo LGA

The Orchard was established in the year 2020 with plantation size of 10Ha. The facilities available include: Perimeter fencing, Tube-well with complete accessories and Reticulation. The main species of plants at this site are Guava, Orange, Mango, and Date. The planned area of coverage is 10Ha, same area was covered during the implementation. A total of 4,000 seedlings were planted with 10 beneficiaries in the community. The survival rate on the plantation stands at 90%.

Established Orchard with facilities at Briyel

Established Orchard at Briyel

Established Orchard at Briyel

2.3.2 Yobe State Orchards

One Orchard was visited in Yobe State

i. Yan Diya Community of Karasuwa Local Government Area with a Geo-Coordinate (N 13° 11’46,E 10°52’32)

Yan Diya Community of Karasuwa Local Government Area

The project commenced in year 2020.The land size was 10Hectares, secured and duly fenced against encroachment on Geo-locations N 13° 11’46 Latitude E 10°52’32 Longitude. The 10,100 seedlings planted were a variety of Dates, Mangos, Oranges, Cashews and Guavas. The survival rate was 50%. Perimeter Fence installation and other facilities including the tube-well with complete accessories and solar powered pumping machine had been mobilized and were functioning. Irrigation and maintenance work had commenced on this project as the required facilities were available except road network. The Forest Guards were on duty at the time of visit to the project location and they granted an interview.


2.3.3 Jigawa State Orchards

Two Orchards were visited in Jigawa State

ii. HADIN, KAUGAMA LGA with a Geo-coordinate (N $12^0$20'12", E $9^0$47'59")

iii. MARMAR, KIRIKASAMA LGA with a Geo-Coordinate (N $12^0$39'9", E $10^0$20'8")

HADIN, KAUGAMA LGA

The Monitoring team observed that the facility under the 2020 intervention had put in place 10 hectares perimeter fence, 5nos Tube well and solar powered pump (i.e 1 per 2 hectares). A 10 hectare land was planned for and acquired. The total of seedlings planted was 4,000, with a 95% Survival rate (3,800). The main species at the project location included Mango, Orange, Guava, and date palm. The Agency maintained the 5m interval spacing between the trees. A total of 45 persons from the community were beneficiaries.

Orchard at Hadin, Kaugama LGA

MARMAR, KIRIKASAMA LGA

The Monitoring team observed that the facility under the 2020 intervention has put in place about 10 hectares perimeter fencing, 5nos Tube wells and solar powered pump that is, 1 per 2 hectares. The total of seedlings planted was 4,000 with a 97% Survival rate (3,880) as a result of soil nature. The main species at the project location included Mango, Orange, Guava, and Date Palm. The Agency maintained the 5m interval spacing between the trees. A total of 40 persons from the community are beneficiaries.

Orchard at Marmar, Kirikasama LGA

2.3.4 Katsina State Orchards

Three Orchards were visited in Katsina

i. Dutsi, LGA with a Geo-Coordinate (12º 49' 48" N, 8º 7' 39" E)

ii. Dutsi, Dutsi, LGA with a Geo-Coordinate (12º 49' 56" N, 8º 8' 29" E)

iii. Minawa, Dutsi, LGA with a Geo-Coordinate (12º 52' 20" N, 8º 15' 13" E)

Dutsi, Dutsi, LGA

The Orchard was established in the year 2020 with plantation size of 5Ha. Facilities available include: Perimeter fencing, 1 nos. Tube well and solar powered pump and Reticulation. The main species of plants at this site are Guava and Date palm as well as other plants. A total of 2,000 seedlings were planted with 10 beneficiaries in the community. The survival rate on the plantation stands at 15% for the planned trees.

Established Orchard with facilities at Dutsi

Dutsi, Dutsi, LGA

The Orchard was established in the year 2020 with plantation size of 5Ha. Facilities available include: Perimeter fencing, 1 nos. Tube well, solar powered pump, Underground reservoir and Reticulation. The main species of plant at this site is Date. A total of 2,000 seedlings were planted with 20 beneficiaries in the community. The survival rate on the plantation stands at 50%.

Established Orchard with facilities at Dutsi

Minawa, Dutsi, LGA (12° 52' 20" N, 8° 15' 13" E).

The Orchard was established in the year 2020 with plantation size of 10Ha. Facilities available include: Perimeter fencing, one Tube well, Solar Powered Pump, Underground reservoirand Reticulation. The main species of plant at this site is Date. A total of 4,000 seedlings were planted with 40 beneficiaries in the community. The survival rate on the plantation stands at 40%.

Established Orchard with facilities at Minawa

2.3.5 Sokoto State Orchards Site

Two Orchards were monitored in Sokoto State

i. Damba, Illela LGA with a Geo-Coordinate(N 13°32'45 E 5°14'48, N 13°32'44 E 5°14'58)

ii. Gundunga, Kware LGA with a Geo-Coordinate (N 13°15'45 E 5°9'22)

Damba, Illela LGA

The Orchard was established in the year 2020 with plantation size of 10Ha. Facilities available include: Perimeter fencing, Tube well, solar powered pump. The main species of plants at this site are Guava, Mango and Orange. The planned area of coverage is 10Ha, same area was covered during the implementation. A total of 4,000 seedlings were planted with 1 beneficiary in the community. The survival rate on the plantation stands at 2,800 (70%).

Established Orchard at Damba

Gundunga, Kware LGA

The Orchard was established in the year 2020 with plantation size of 10Ha. Facilities available include: Perimeter fencing, Tube well and solar powered pump. The main species of plants at this site are Guava, Mango and Orange. The planned area of coverage is 10Ha, same area was covered during the implementation. However,the 10Ha was divided into 5 and were given to 5 people from the community (2Ha each). A total of 4,000 seedlings were planted in site visited with 5 beneficiaries in the community. The survival rate on the plantation stands at 360 (90%).

Established Orchard with Facilities at Gundunga

Project Analysis Summary Table3 Project Analysis Summary Table2

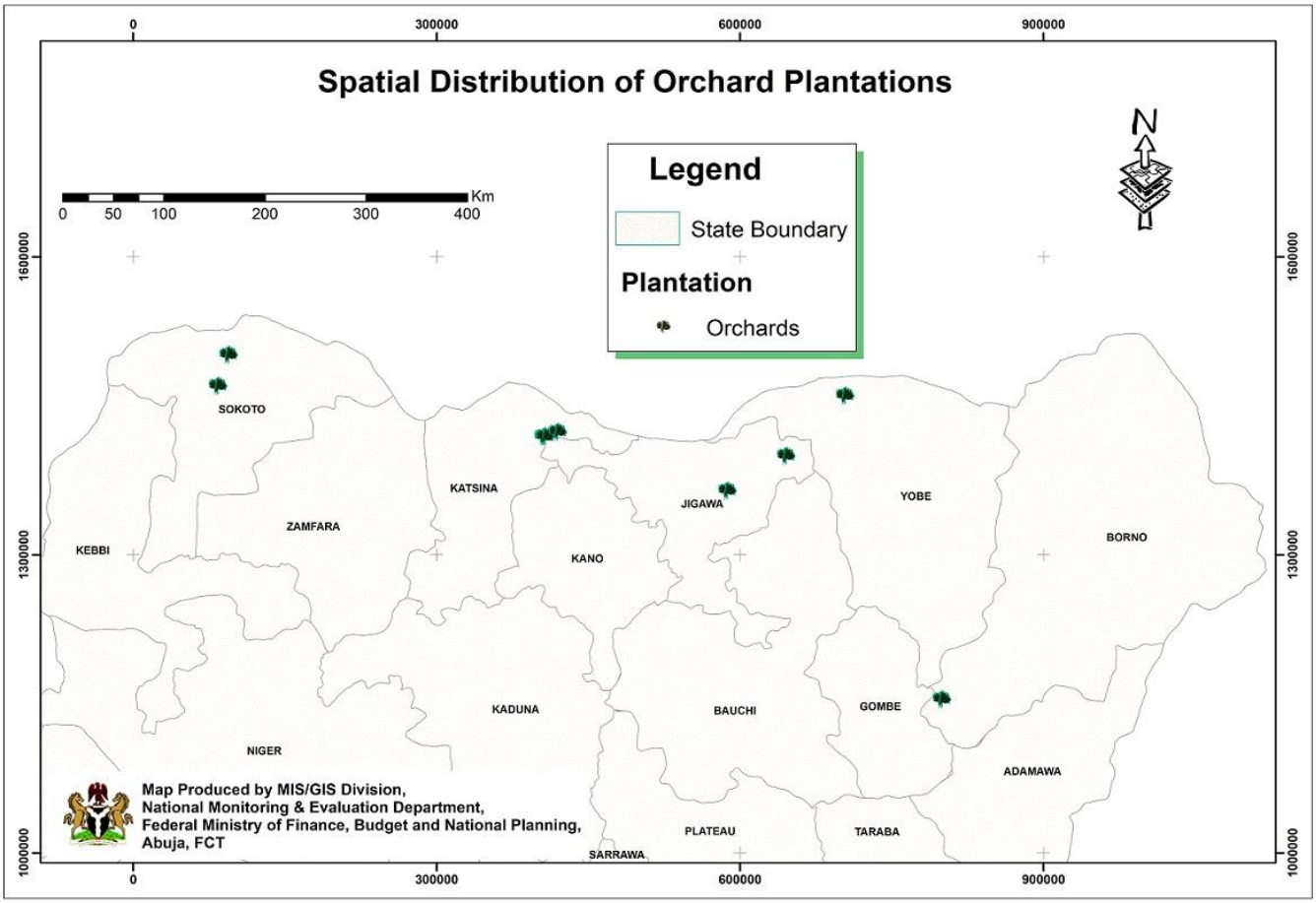
2020 Project Analysis					
States	**Planned Area of Coverage (Hectares)**	**Sample Size visited (40% of planned Area)**	**No. of Trees planned to be Planted**	**Number of Planted Trees Sighted on Sample Sites**	**Average Survival Rate (%)**
Borno	50	20	20,000	4,000	90
Jigawa	50	20	20,000	8,000	96
Yobe	50	20	20,000	10,100	50
Katsina	50	20	20,000	8,000	35
Sokoto	50	20	20,000	8,000	80

Project Analysis Table for Orchard for year 2020

Summary of Findings, Challenges and Recommendations on Orchard by States

S/N	STATE	FINDINGS	CHALLENGES	RECOMMENDATIONS
1	BORNO	The tree planting has been done, including the perimeter fencing. Most plants have been established and are doing well.	i. Herders' cattles grazing on the planted areas ii. Insurgency in the State iii. Vandalization of fence around plantation areas	i. Continuous community engagement to foster cooperation between farmers-herders in the community and Forest guards ii. Vandalized fences should be replaced
2.	YOBE	All the Plantation visited were fenced	Nil	Nil
3.	JIGAWA	The tree planting has been done, including the perimeter fencing. Most plants have been established and growing well.	No Challenge was encountered during Implementation process.	Continued community partnership will further createa sense of ownership for the farmers and assure the successand sustainability of the intervention.
4.	KATSINA	The project was executed with economic seedlings planted and solar powered tube-well constructed, including the perimeter fencing. The plants are not matured for any physical assessment of effect on the environment	i. Delayed salaries of the forest guards,	i. Prompt Payment of Forest Guards salaries
5.	SOKOTO	The community were happy with the intervention and are pleading with the Federal Government to bring more of the same project so that other members can benefit Forest guards have not been paid salary for over a year which contributed to the vandalization.	Nonpayment of Forest Guard stipends	i. Forest Guards should be paid promptly ii. There should be continuous community engagement to foster cooperation between farmers in the community and forest guards

GEO-SPATIAL DISTRIBUTION OF ORCHARD PLANTATIONS IN THE SEVEN FRONTLINE STATES



2.4 SHELTER BELTS

2.4.1 Borno State Shelter Belts

Eight Shelter Belts Project sites were monitored in Borno State

i.Konduga, Konduga LGA with a Geo-Coordinate(11º 40' 15" N, 13º 23' 0" E)

ii. Malari, Konduga LGA with a Geo-Coordinate (11º 40' 44" N, 13º 22' 9" E)

iii. Auno, KondugaLGA with a Geo-Coordinate (11º 51' 9" N, 12º 57' 41" E)

iv. Njimtilo, Maiduguri LGA with a Geo-Coordinate (11º 51' 9" N, 12º 57' 46" E).

v.Yanakari-Kondori, Konduga LGA with Geo-Coordinate(11º 51' 0" N, 12º 50' 15"E)

vi. Ngamdu-Tamsukawu,Kaga LGA with Geo-Coordinate(11º46'23" N, 12º 18' 54"E)

vii. Mafa, MafaLGAwith a Geo-Coordinate (11º 46' 23" N, 12º 18' 54" E)

viii. Makintakuri-Tamsukawu, Kaga LGA with Geo-Coordinate(11º47'2"N,12º24'12"E).

Konduga, Konduga LGA

The Shelter Belt was established in the year 2020 with plantation size of 5km and planting spacing of 3m x 3m. The only available facility in this location is Perimeter fencing. The main specie of plant at this site is Neem. The planned area of coverage is 5km, same area was covered during the implementation. A total of 9,990 seedlings were planted with 30 beneficiaries in the community. The survival rate on the plantation stands at 70%.

Established Shelter Belt at Konduga

Established Shelter Belt at Konduga

Malari, Konduga LGA

The Shelter Belt was established in the year 2020 with plantation size of 5km and planting spacing of 3m x 3m. The only available facility in this location is Perimeter fencing. The main specie of plant at this site is Neem. The planned area of coverage is 5km, same area was covered during the implementation. A total of 9,990seedlings were planted with 30 beneficiaries in the community. The survival rate on the plantation stands at 80%.

Established Shelter Belt at Malari

Auno, Konduga LGA

The Shelter Belt was established in the year 2020 with plantation size of 5km and planting spacing of 3m x 3m. The available facilities in this location include: Perimeter fencing, Borehole, Overhead Tank, and Reticulation. The main specie of

plant at this site is Neem. The planned area of coverage is 5km, same area was covered during the implementation. A total number of 9,990 seedlings were planted with 11 beneficiaries in the community. The survival rate on the plantation stands at 80%.

Established Shelter Belt with facilities at Auno

Njimtilo, Maiduguri Metropolitan Council

The Shelter Belt was established in the year 2020 with plantation size of 5km and planting spacing of 3m x 3m. The available facilities in this location include: Perimeter fencing, Borehole, Overhead Tank, Reticulation, and Generator for pumping water. The main specie of plant at this site is Neem. The planned area of coverage is 5km, same area was covered during the implementation. A total of 9,990 seedlings were planted with 11 beneficiaries in the community. The survival rate on the plantation stands at 80%.

Established Shelter Belt with facilities at Njimtilo

Yanakari-Kondori, Konduga LGA

The Shelter Belt was established in the year 2021 with plantation size of 5km and planting spacing of 3m x 3m. The only available facility in this location is Perimeter fencing. The main specie of plant at this site is Neem. The planned area of coverage is 5km, same area was covered during the implementation. A total of 9,990 seedlings

were planted with 15 beneficiaries in the community. The survival rate on the plantation stands at 45% due to absence of water during the dry season, it is advisable to make temporal arrangement for water supply pending when Borehole will be installed on this site.

Established Shelter Belt at Yanakari-Kondori

Ngamdu-Tamsukawu, Kaga LGA

The Shelter Belt was established in the year 2021 with plantation size of 5km and planting spacing of 3m x 3m. The only available facility in this location is Perimeter fencing. The main specie of plant at this site is Neem. The planned area of coverage is 5km, same area was covered during the implementation. A total of 9,990 seedlings were planted with 55 beneficiaries in the community. The survival rate on the plantation stands at 70%.

Established Shelter Belt at Ngamdu-Tamsukawu

Mafa, Mafa LGA

The Shelter Belt was established in the year 2021 with plantation size of 5km and planting spacing of 3m x 3m. There is no facility in this location, the Perimeter fencing has been awarded but not yet installed at the time of visit, also there is no Borehole, Overhead Tank, and Reticulation in this location. The main specie of plant at this site is Neem. The planned area of coverage is 5km, same area was covered

during the implementation. A total of 9,990 seedlings were planted with 58 beneficiaries in the community. The survival rate on the plantation stands at 65%. There has been water arrangement in the plantation through water tanker, this has helped the trees to be established after transplanting. Six (6) water tankers are being brought to site twice a week to water the plantation.

Established Shelter Belt at Mafa

Makintakuri-Tamsukawu, Kaga LGA

The Shelter Belt was established in the year 2021 with plantation size of 5km and planting spacing of 3m x 3m. There is no facility in this location, there is no signpost installed, the Perimeter fencing has been awarded but not yet installed at the time of visit, also there is no Borehole, Overhead Tank, and Reticulation in this location. The main specie of plant at this site is Neem. The planned area of coverage is 5km, same area was covered during the implementation. A total of 9,990 seedlings were planted with 55 beneficiaries in the community. The survival rate on the plantation stands at 40%. There has been water arrangement in the plantation to support plant growth during the dry season.

Established Shelter Belt at Makintakuri-Tamsukawu

2.4.2 Kano state Shelter Belts

Two project sites were monitored in Kano State

i. Fagwalawa, Dambatta LGA with a Geo-Coordinate (latitude: 12.3043722 longitude: 8.6648271).
ii. Takalmawa, Gabasawa LGA with a Geo-Coordinate (latitude:12.2119856 longitude:8.8614915)

Fagwalawa, Dambatta LGA

The plantation has a total coverage of 10km cultivated with 33,333 seedlings of Neem species. At the time of visit to the plantation, the height of the seedlings was about 11cm, and the survival rate of the plants was about 90%. The plantation was fenced. The major benefit of the plantation is to serve as wind breaker against sandstorm. The trees are expected to serve as source of bio-diversity and for medicinal purpose.


Established Shelter Belt at Fagwalawa Community

Takalmawa, Gabasawa LGA

At the time of visit, the height of the trees was about 10 - 11cm, with 33,300 seedlings planted and survival rate of the plants was about 85%. The team was informed that, there is a plan in place for "Beating Up" after a period of time whereby the withered trees that could not survive will be replaced with new seedlings.

Established Shelter Belt at Talkamawa Community

2.4.3 Zamfara State Shelter Belts

One project site was monitored in Zamfara State

i. Baguda, Gusau LGA with a Geo-Coordinate(N 12 6' 26'', E 6 42'13'' and N 12 6' 28, E 6 42' 19'')

Baguda, Gusau LGA

The Shelter Belt was established in the year 2021 with plantation size of 5km. A total of 16,650 Neem specie seedlings were planted with a survival rate of 40%. The trees had a growth range of 10cm to 50cm in height. The project has a total of 180 beneficiaries.

Established Shelter Belt at Baguda

3.4.4 Yobe State Shelter Belts

The Team visited six (6) selected sites of the Shelter Belts' projects in Yobe State.

i. Afunori Town with a Geo-Coordinate (N 12°52'19, E 10°28 3 Longitude); 2021
ii. GGSS, Nguru in Nguru LGA with a Geo-Coordinate (N13°03'20,E10°50.58); with commencement date of 2020;
iii. GGSS, Jajimari LGA with a Geo-Coordinate (N 12° 95'10.7,E 10°79 22)
iv. Gariguna Communities in Karasuwa LGA with a Geo-Coordinate (N 12° 53'53, E 10°49.43); that commenced since 2021; while
v. Maimalari in Yusufari LGA with a Geo-Coordinate (N 13° 06'16,E 11°29.37) 2020/2021
vi. Kalgi in Yusufari Towns of Yunusari LGA with a Geo-Coordinate (N 13° 06'56,E 11°46 30 Longitude)'s projects commenced in year 2020

The only facility spotted on the sites are the installed Perimeter Fence in Nguru LGA (Afunari and GGSS), Karisuwa LGA (Garinguna), while more than 5,000 Hectares of trees has been planted. All of these are the Neem specie. One of the key components of the Nigerian GGW program is the establishment of a 1,359km shelterbelt in Yobe State, serving as a windbreak amidst all else.

In terms of provided Facility, the Perimeter Fencing covering a total area of 10KM split in two locations across a major road is the only available facility on Site in Afunari. However, Project planned coverage Area is 1KM and approximately 60 of the community members benefitted in the course of job delivery. The supposed Borehole, underground reservoir and Water Reticulation pipings, overhead Tanks were unavailable at the project sites of Afunari Town and the Government Girls Secondary School, Nguru in Nguru LGA with allotted survival Rate is between 10% and 91% respectively. Afunari Town's planned and coverage Area is 10Kms and the total numbers of seedlings that had been planted in Afunari Town's Project is 10,100while GGSS has been furnished with 3,330 number of seedlings.

Presently the expected effect on the environment could be tagged Negative as cattles has fed on a magnitude number of some seedlings that could have survived due to late installation of the Perimeter Fencing deliverable. It is therefore strongly recommended that the Borehole is avital facility required to improve the rate of seedlings survival and also since the location has been duly secured with the fence, planting should commence in earnest as the raining season is fast approaching. The success margins between these two projects' site could be traced to the fact that one is well guarded while the other is not enclosed being an open-field project that is easily accessible for grazing. Here, the project's closeness to a major road could also have multiple advantage on the environment, that is, when it attains maturity, it can serve as desert control, and road side beautification.

GGSS Nguru, Nguru LGA

ShelterBelt in Kalgi, Yusufari LGA

Shelter Belt project with Perimeter Fencing in Maimalari

Shelter Belt at JajiMaji Community, Karasuwa LGA.

Shelter Belt Project at Afunori, Nguru LGA

Shelter Belt Project at Yusufari Town in Yunusari LGA.

2.4.5 Jigawa State Shelter Belts

Five Shelter Belts Sites were monitored in Jigawa State

i. WURU MANGA, BIRNIWA LGA with a Geo-Coordinate (N $12^0$49'32", E $10^0$11'43")
ii. GABASMARI BIRNIWA LGA with a Geo-Coordinate (N $12^0$49'30", E $10^0$12'28")
iii. BATU, BIRNIWA LGA with a Geo-Coordinate (N $12^0$46'35", E $10^0$3'12")
iv. KIRILLA & MADUGUMSUMI, BIRNIWA LGA with a Geo-Coordinate(N $12^0$46'30", E $10^0$3'9
v. KukaInkiwa, Birniwa LGA with a Geo-coordinate (N $12^0$47'49", E $10^0$4'40")

WURU MANGA, BIRNIWA LGA

The Monitoring team observed that the facility under the 2020 intervention has put in place about 5 km of shelter belt in Wuru Manga. The 5-kilometer shelter belt is broken into one km each and proximate to each other. All the shelter belts have perimeter fencing, Borehole, Overhead tank, and Reticulation.

The number of seedlings planted in the 5km shelter belt was 16,665 with each km having 3,333 trees. A survival rate of about 85% was observed in all 5 locations. The main species at locations included Neem and Acacia Senegal. The Agency maintained the 3m by 3m interval spacing between the trees. A total of 3,000 persons from 2 communities are going to be beneficiaries.


NATIONAL AGENCY FOR THE GREAT GREEN WALL
LOCATION
WUROMANGO BIRNIWA L G A
JIGAWA STATE
PROJECT
CONSTRUCTION OF 3 MOTORIZED BOREHOLES
WITH COMPLETE ACCESSORIES & RETICULATION
OF 3KM SHELTER BELT DECEMBER, 2021
CONTRACTOR
M/S GREENTECH MULTILINK VENTURES LTD


FEDERAL REPUBLIC OF NIGERIA
NATIONAL AGENCY FOR THE GREAT GREEN WALL
PROJECT & LOCATION
CONTRACTOR
HABMIN GLOBAL RESOURCES

Shelterbelts Wuru Manga, Birniwa LGA

GABASMARI BIRNIWA LGA

The Monitoring team observed that the facility under the 2020 intervention has put in place about 5 km of shelter belt in Gabasmari. The shelter belts are broken into 5 of 1 km each that are proximate to each other. All the shelter belts have perimeter fencing, Borehole, Overhead tank, and Reticulation.

The total of seedlings planted was 16,665 broken into 3,333 seedlings per hectare. A survival rate of about 90% was observed in all 5 locations. The main species at the project location included Neem, and Acacia Senegal. The Agency maintained the 3m by 3m interval spacing between the trees. A total of 10,000 persons from communities are going to be beneficiaries.

Shelterbelts at Gabasmari Birniwa LGA

BATU, BIRNIWA LGA

The Monitoring team observed that the facility under the 2020 intervention has put in place about 5 km of shelter belt in Batu. The shelter belts are broken into 5 of 1 km each that are proximate to each other. All the shelter belts have perimeter fencing, Borehole, Overhead tank, and Reticulation. The total of seedlings planted was 16,665 broken into 3,336 seedlings per hectare. A survival rate of about 80% was observed in all 5 locations. The main species at the project location included Acacia Senegal. The Agency maintained the 3m by 3m interval spacing between the trees. A total of 2,800 persons from communities are going to be beneficiaries.




Shelterbelt at Batu, Birniwa LGA

KIRILLA & MADUGUMSUMI, BIRNIWA LGA

The Monitoring team observed that the facility under the 2020 intervention has put in place about 5 km of shelter belt in Kirilla & Madugunsumi. The shelter belt is

broken into 5 of 1 km each that are proximate to each other. Madugunsimi has 1km-Neem, and 1km of Acacia Senegal. While Kirilla had a mix of Neem and Acacia Senegal covering the 3km. All the shelter belts have perimeter fencing, Borehole, Overhead tank, and Reticulation. The number of seedlings planted was 16,665 broken into 3,333 seedlings per Kilometer. A survival rate of about 85% was observed in all 5 locations. The main species at the project location included Neem, and Acacia Senegal. The Agency maintained the 3m by 3m interval spacing between the trees. A total of 5,000 persons from communities are going to be beneficiaries.

Shelterbelt at Kirilla & Madugumsumi, Birniwa LGA

KukaInkiwa, Birniwa LGA

The Monitoring team observed that the facility under the 2021 intervention has put in place about 5km of shelter belt in KukaInkiwa out of 10km while the remaining 5km is ongoing. The shelter belts are broken into 5 of 1 km each that are proximate to each other. All the shelter belt has perimeter fencing. The number of seedlings planted was 16,665 broken into 3,333 seedlings per Kilometer. A survival rate of about 70%, was observed in all 5 locations. The main species at the project location included Neem, and Acacia Senegal. The Agency maintained the 3m by 3m interval spacing between the trees. A total number of 17,000 persons from the communities are going to be beneficiaries.

Shelterbelt at KukaInkiwa, Birniwa

2.4.6 Katsina State Shelter Belts

Eleven Shelterbelts were monitored in Katsina State

i. Shamadara, Daura LGA with a Geo-Coordinate (N12.9653646;E 8.2652478)
ii. Kirbo, Mashi LGA with a Geo-Coordinate (13° 17' 10" N, 8° 2' 35" E)
iii. Bumbum, Mai'adua LGA with a Geo-Coordinate (13° 16' 31" N, 8° 6' 15" E)
iv. Gara, Daura LGA with a Geo-Coordinate (13° 1' 10" N, 8° 21' 44" E)
v. Gurdo, Zango LGA with a Geo-Coordinate(12° 59' 56" N, 8° 30' 3" E)
vi. Kawurigwaba,Zango LGA with a Geo-Coordinate(12° 55' 15" N, 8° 37' 6" E)
vii. Yardaje, Zango LGA with a Geo-coordinate(13° 0' 20" N, 8° 34' 11" E)
viii. Kaibaki, Sandamu LGA with a Geo-Coordinate (12° 51' 36" N, 8° 25' 47" E)
ix. Rade, Sandamu LGA with a Geo-Coordinate (12° 53' 25" N, 8° 18' 36" E)
x. Danmanau, Mashi LGA with a Geo-Coordinate(12° 57' 28" N, 7° 55' 46" E).
Xi Shamadara, Daura LGA with a Geo-Coordinate (12° 57' 55" N, 8° 15' 54" E)

Shamadara, Daura LGA

The Shelter Belt was established in the year 2020 with plantation size of 5km arranged 3 meters apart. The only available facility in this location is Perimeter fencing. The main specie of plant at this site is Acacia. The planned area of coverage is 5km, same area was covered during the implementation. A total of 16,665 seedlings were planted with 25 beneficiaries in the community. The survival rate on the plantation stands at 70%.

Established Shelter Belt at Shamadara

Kirbo, Mashi LGA

The Shelter Belt was established in the year 2021 with plantation size of 3km arranged 3 meters apart. The only available facility in this location is Perimeter fencing. The main specie of plant at this site are Neem and Eucalyptus. The planned area of covered is 3km, same area was covered during the implementation. A total of 9,999 seedlings were planted with 15 beneficiaries in the community. The survival rate on the plantation stands at 75%. The main challenge in the implementation was the difficult terrain.

Established Shelter Belt at Kirbo

Bumbum, Mai'adua LGA

The Shelter Belt was established in the year 2021 with plantation size of 2km arranged 3 meters apart. The only available facility in this location is Perimeter fencing. The main specie of plant at this site are Neem and Eucalyptus. The planned area of coverage is 2km, same area was covered during the implementation. A total of 6,666 seedlings were planted with 15 beneficiaries in the community. The survival rate on the plantation stands at 70%.

Established Shelter Belt with facilities at Bumbum

Gara, Daura LGA

The Shelter Belt was established in the year 2021 with plantation size of 3km arranged 3 meters apart. The main specie of plant at the site are Neem and the facilities available include: Perimeter fencing; 1nos motorized Borehole; 4 nos. 5,000 litres Overhead Tanks; and Reticulations. A total of 9,999 seedlings were planted with 57 beneficiaries in the community. The survival rate on the plantation stands at 55%. Before installation of the perimeter fence, the plantation was destroyed as a result of smuggling activities in the area.

Established Shelter Belt with facilities at Gara

Gurdo, Zango LGA

The Shelter Belt was established in the year 2021 with plantation size of 2km arranged 3 meters apart. The main specie of plant at the site are Neem and the plantation was neither fenced nor equipped with support facility. A total of 6,666 seedlings were planted with beneficiaries15 in the community. The survival rate on the plantation stands at 20%. The implementation was challenged with encroachment of plantation by animals and herdsmen destruction by trampling animals and herdsmen who intentionally uproot the plants to feed cattle.

Established Shelter Belt at Gurdo

Kawurigwaba, Zango LGA

The Shelter Belt was established in the year 2021 with plantation size of 2km arranged 3 meters apart. The main specie of plant at the site is Neem and the plantation was neither fenced nor equipped with support facility. However, actions had commenced on the Perimeter fencing. A total of 6,666 seedlings were planted with beneficiaries 21 in the community. The survival rate on the plantation stands at 20%. The implementation was challenged with encroachment of plantation by animals and herdsmen. To forestall further destruction of the surviving plants on the plantation, it is recommended that the ongoing perimeter fencing be expedited while beating-up activities are embarked on, thereafter.

Established Shelter Belt at Kawuri

Yardaje, Zango LGA

The Shelter Belt was established in the year 2021 with plantation size of 2km arranged 3 meters apart. The main specie of plant at the site is Neem and the plantation was neither fenced nor equipped with support facility. However, actions had commenced on the Perimeter fencing. A total of 6,666 seedlings were planted with beneficiaries 20 in the community. The survival rate on the plantation stands at 5%. The plantation was affected by bush burning activities carried out by the community as well as the intentional uprooting of plants due to the Community's fear of increased insecurity that could arise from trees serving as hideouts for insurgents. This perception is responsible for felling of trees and non-disposition to tree planting in the community. It is, therefore recommended that there should be a renewed engagement with the community head and members of the community on

the benefit of the plantation to the environment; Perimeter fencing should be constructed and beating up activities conducted, thereafter.

Established Shelter Belt at Yardaje

Kaibaki, Sandamu LGA

The Shelter Belt was established in the year 2021 with plantation size of 5km arranged 3meters apart. Available facilities on site are one Borehole, Perimeter Fencing, Overhead tanks and Reticulation. However, the borehole is not functional yet as at the time of the verification as it appeared recently constructed and awaiting final installations. Tank support were also ongoing along with trenches for the reticulation have been made. The main specie of plant at this site is Neem and a total of 16,665 seedlings were planted with 35 beneficiaries in the community. The survival rate on the plantation stands at 7%. Animal encroachment has been adduced for the poor performance.

Established Shelter Belt at Kaibaki

Rade, Sandamu LGA

The Shelter Belt was established in the year 2020 with plantation size of 5km arranged 3 meters apart. Available facilities on site are 1no. Borehole, Perimeter Fencing, 2nos. 7,500 Overhead tanks and Reticulation. However, part of the Perimeter fencing has broken allowing easy passage for destructive human and animal activities. The main specie of plant at this site is Neem and Eucalyptus and a total of 16,665 seedlings were planted with 35 beneficiaries in the community. The survival rate of the plantation stands at 10%. Animal encroachment, due to late installation of perimeter fence, has been adduced for the poor performance.

Established Shelter Belt at Rade

Danmanau, Mashi LGA

The Shelter Belt was established in the year 2021 with plantation size of 5km arranged 3 meters apart. Aside Perimeter fencing, no other facility is available on site. However, part of the Perimeter fencing has broken allowing easy passage for destructive human and animal activities. The main specie of plant at this site is Neem and a total of 16,665 seedlings were planted with 35 beneficiaries in the community. The survival rate of the plantation stands at 60%. The plantation is challenged by vandalization and lack of cooperation of the Community.

Established Shelter Belt at Danmanau

Shamadara, Daura LGA

The Shelter Belt was established in the year 2020 with plantation size of 5km arranged 3 meters apart. Aside Perimeter fencing, no other facility is available on site. However, part of the Perimeter fencing has broken allowing easy passage for destructive human and animal activities. The main specie of plant at this site is Neem and Acacia Senegal and a total of 16,665 seedlings were planted with 40 beneficiaries in the community. The survival rate of the plantation stands at 80%.

Established Shelter Belt at Daura

2.4.7 Sokoto State Shelter Belts

Six Shelterbelts were monitored in Sokoto State

i. Runji, Illela LGA with a Geo-Coordinate (N 13°41'49, E 5°10'57)

ii. Kamfanin Diya, Tureta LGA with a Geo-Coordinate (N 12°37'54, E 5°40'32)

iii. RafinSanyi, Tambuwal LGA with a Geo-Coordinate (N 12°42'5, E 4°43'55)

iv. KamfaninDiya, Tureta LGA with a Geo-Coordinate (N 12°38'43,E 5°37'56)

v. Dabagi, Dange/Shuni LGA with a Geo-Coordinate (N 12°45'8 E 5°25'54, N 12°45'46 E 5°25'31).

vi. Kilgori, Yabo LGA with a Geo-Coordinate (N 12°51'15, E 5°0'35)

Runji, Illela LGA

The Shelter Belt was established in the year 2020 with plantation size of 5kmand planting spacing of 3m x 3m. The available facility in this location include Perimeter Fence, Borehole, Overhead Tank and Reticulation. The main specie of plant at this site is Neem. The planned area of coverage is 5km, same area was covered during the implementation. A total of 16,665 seedlings were planted with 10 beneficiaries in the community. The survival rate on the plantation stands at 55%.

Established Shelter belts with Facility at Runji

Kamfanin Diya, Tureta LGA

The Shelter Belt was established in the year 2020 with plantation size of 5km and planting spacing of 3m x 3m. The available facilities in this location include Perimeter Fence, Borehole, Overhead Tank and Reticulation. The main specie of plant at this site is Neem. The planned area of coverage is 5km, same area was

covered during the implementation. A total of 16,665 seedlings were planted with 18 beneficiaries in the community. The survival rate on the plantation stands at 60%.

Established Shelter belts with Facility at Kamfanin Diya

RafinSanyi, Tambuwal LGA

The Shelter Belt was established in the year 2020 with plantation size of 5km and planting spacing of 3m x 3m. The only available facility in this location is Perimeter fencing. The main specie of plant at this site is Neem. The planned area of coverage is 5km, same area was covered during the implementation. A total of 16,665 seedlings were planted with 11 beneficiaries in the community. The survival rate on the plantation stands at 60%.


Established Shelter belts at RafinSanyi

Kamfanin Diya, Tureta LGA

The Shelter Belt was established in the year 2021 with plantation size of 5km and planting spacing of 3m x 3m. The only available facility in this location is Perimeter fencing which is ongoing. The main specie of plant at this site is Neem. The planned area of coverage is 5km, same area was covered during the implementation. A total of 16,665 seedlings were planted with 3 beneficiaries in the community. The survival rate on the plantation stands at 10%.

Ongoing construction of fencing at Kamfanin Diya

Dabagi, Dange/Shuni LGA

The Shelter Belt was established in the year 2021 with plantation size of 5km and planting spacing of 3m x 3m. The only available facility in this location is Perimeter fencing. The main specie of plant at this site is Neem. The planned area of coverage is 5km, same area was covered during the implementation. A total of 16,665 seedlings were planted with 6 beneficiaries in the community. The survival rate on the plantation stands at only 10%due to lack of water during the dry season.

Established Shelter belts at Dabagi

Kilgori, Yabo LGA

The Shelter Belt was established in the year 2021 with plantation size of 5km and planting spacing of 3m x 3m. The only available facility in this location is Perimeter fencing. The main specie of plant at this site is Neem. The planned area of coverage is 5km, same area was covered during the implementation. A total of 16,665 seedlings were planted with 2 beneficiaries in the community. The survival rate on the plantation stands at less than 5%.

Established Shelter belts at Kilgori

Project Analysis Summary Table4

2020 Project Analysis						2021 Project Analysis				
States	Planned Area of Coverage (KM) 2020	Sample Size visited (40% of planned Area)	Planned no of Trees	No of Trees sighted on Sample Sites 2020	Average Survival Rate (%) 2020	Planned Area of Coverage (KM)2021	Planned no of Trees	Sample Size visited (40% of planned Area)	No of Trees sighted on Sample Sites 2021	Average Survival Rate (%)2021
Borno	60	20	199,980	39,960	77.5	50	199,980	20	39,960	55
Yobe	60		199,980	33,330	91	50	199,980	20	10,300	10
Jigawa	60	20	199,980	66,650	85	50	199,980	20	16,665	70

Katsina	60	20	199,980	49,995	53.3	50	199,980	20	79,992	30
Sokoto	60	20	199,980	49,995	41.6	50	199,980	20	49,965	8.3
Kano	-		-	-	-	50	199,980	20	66,333	87.5
Zamfara	-		-	-	-	40	199,980	9.9	16,650	40

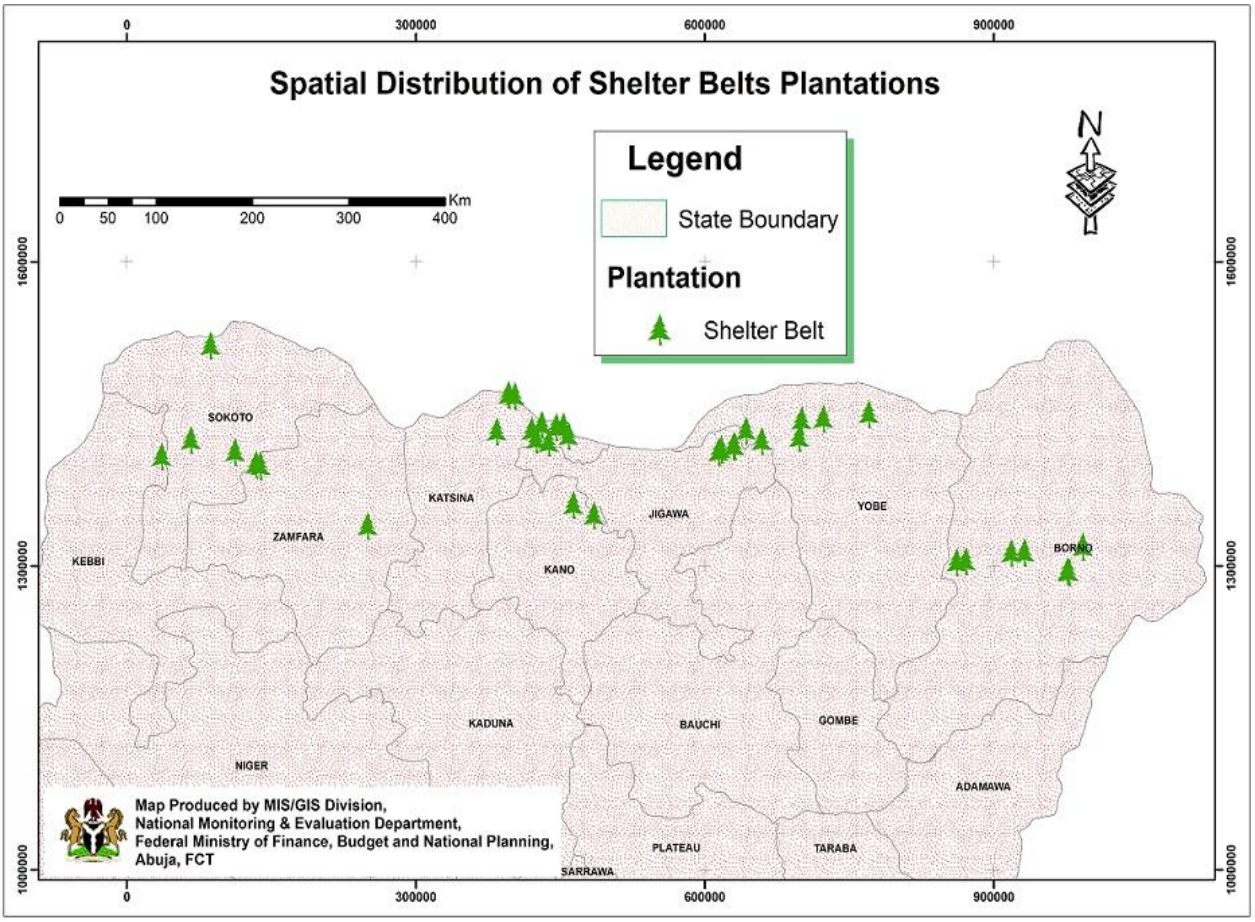
Project Analysis Table for Shelter Belt for year 2020/2021

Summary of Findings, Challenges and Recommendations on Shelter Belt by States

S/N	STATE	FINDINGS	CHALLENGES	RECOMMENDATIONS
1	BORNO	The tree planting has been done. Most plants have been established and doing well.	Cattle grazing on the planted areas	i. Continuous community engagement to foster cooperation between farmers-herders in the community and the Agency
2.	KANO	The planned areas of coverage for each of the plantation visited were planted with Trees;	i. The presence of herdsmen constitutes threat to the survival of the trees; ii. Encroachment by farmers in the host community	i. Continuous community engagement to foster cooperation between farmers-herders in the community and the Agency
3.	ZAMFARA	At the time of visit, the team observed that the projects were executed at the various sites with varying level of success.	Activities of bandits around the shelter belts.	Nil
3.	YOBE	All the plantations visited are fenced.	-	-
4.	JIGAWA	The tree planting has been done, including the perimeter fencing. Most plants have been established and ae doing well.	i. Early cessation of rain ii. Intrusion of animal into plantation site	i. There should be timely commencement of project particularly at the beginning of the raining season ii. Constant sensitization of the community
5.	KATSINA	The trees were planted and facilities such as perimeter fencing, Borehole and reticulation installed in some of the location. While some sites were not fenced, some others were only fenced without the necessary support facility, including water, which could be adduced for the poor performance or survival of the plants in those locations.	i. Plantations without perimeter fencing are being encroached and fed on by animals while some are being trampled by humans; ii. drying up of plants due to encroachment of facilities not fenced iii. Sabotage by the Community for fear that the trees could serve as hideouts for criminals when mature.	i. Perimeter fence should be provided in locations that have none to prevent encroachment. ii. motorized boreholes should be installed in some locations that are yet to have water source to enable watering during the dry season for young plants that are yet to be established. iii. Continuous engagement with the community on the economic and environmental importance

				of the trees.
7.	SOKOTO	The community is benefitting from the water at the facilities. The team learnt that the community are contributing money for fueling of the generator which is used to pump water for the survival of the plants No availability of water in some sites	i. The money for fueling of Generator was a challenge, ii. Delay in payment of Forest Guards Salaries iii. some Sites were burnt due to bush burning by some farmers. iv. No borehole in Kilogori, Rafinsari community	i. Water facility should be installed for adequate watering of the plants during the dry season; ii. Prompt payment of forest guards' salaries

GEO-SPATIAL DISTRIBUTION OF SHELTER BELTS PLANTATION ACROSS THE SEVEN FRONTLINE STATES



2.5 ACACIASENEGAL(GUM ARABIC)

2.5.1 Borno State Acacia

Four Gum Arabicsites were monitored in Borno State

i. Al-Ansar University, Gubio LGA with a Geo-Coordinate(11° 54' 53" N,13°3'30"E)

ii GarinKuturu, Konduga LGA with a Geo-Coordinate (11° 51' 3" N, 12° 52' 13" E)

iii. Yenakiri, Konduga LGA with a Geo-Coordinate (11° 51' 8" N, 12° 51' 4" E)

iv. Benisheikh, Kaga LGA with a Geo-Coordinate (11 ° 51' 8" N, 12 ° 51' 4" E)

Al-Ansar University, Gubio LGA

The Acacia Senegal plantation was established in the year 2021 with plantation size of 10Ha. There are no facilities available in this location. The main specie of plant at this site is Acacia Senegal. The planned area of coverage is 10Ha, same area was covered during the implementation. A total of 11,022 seedlings were planted with 10 beneficiaries in the community. The survival rate on the plantation stands at 80%.

Established Acacia Senegal plantation at Al-Ansar University, Gubio

GarinKuturu, Konduga LGA

The Acacia Senegal plantation was established in the year 2020 with plantation size of 10Ha. The only available facility in this location is a Perimeter fence. The main specie of plant at this site is Acacia Senegal. The planned area of coverage is 10Ha, same area was covered during the implementation. A total of 4,000 seedlings were planted with 10 beneficiaries in the community. The survival rate on the plantation stands at 50%.

Established Acacia Senegal plantation at GarinKuturu

Yenakiri, Konduga LGA

The Acacia Senegal plantation was established in the year 2020 with plantation size of 10Ha. The only available facility in this location is a Perimeter fence. The main specie of plant at this site is Acacia Senegal. The planned area of coverage is 10Ha, same area was covered during the implementation. A total of 4,000 seedlings were planted with 10 beneficiaries in the community. The survival rate on the plantation stands at 45%.

Established Acacia Senegal plantation at Yenakiri

Benisheikh, Kaga LGA

The Acacia Senegal plantation was established in the year 2020 with plantation size of 10Ha. The only available facility in this location is Perimeter fence. The main specie of plant at this site is Acacia Senegal. The planned area of coverage is 10Ha, same area was covered during the implementation. A total of 4,000 seedlings were planted with 10 beneficiaries in the community. The survival rate on the plantation stands at 60%.

Established Acacia Senegal plantation at Benisheikh

2.5.2Kano stateAcacia Senegal (Gum Arabic)

One Gum Arabic was monitoredin Kano State

i. Gabasawa (Latitude 12.1904281-Longtitude 8.93569)

Gabasawa

The Acaccia Plantation was visited in Magama community under Gabasawa Local Government Area, Kano State. The total area of coverage for this plantation was 20 hectares of land. The plantation was cultivated with 20,000 seedlings of Gum Arabic specie. At the time of visit to the plantation, the height of the seedlings was close to 1m, and the survival rate was 80%. The plantation was surrounded with perimeter wire fence to prevent animals from encroaching on the plantation. The benefit of the plantation, aside mitigation of desertification effect, is that it can serve as source of raw materials for gum production when the trees become mature.

Established Acacia Senegal plantation at Magama Community, Gabasawa LGA

2.5.3 Zamfara State ACACIA SENEGAL(GUM ARABIC)

One Gum Arabic was monitored in Zamfara State

i. Ngaski,Gusau LGA with a Geo-Coordinate (N12 6'5'',E 6 42'5'')

Ngaski, Gusau LGA

The name of the specie at the site is Acacia Senegal which is a drought resistance tree. The project had a planned coverage of 20 Hectares with actual coverage of 19 Hectares. At the time of visit, 10 Hectares was fenced while 10 Hectares was yet to be fenced. A total of 22,200 seedlings were planted with a survival rate of 70%. At the time of visit, the trees had a range of 10cm to 47cm in height. In the course of implementation, a total of 237 both skilled and unskilled labours were employed for

site clearance, plaguing, planting, watering, fetching of water, digging and fencing.

Acacia Senegal Site at Ngaski Town

2.5.4 Yobe State Acacia Senegal (Gum Arabic)

Two Gum Arabic were monitored in Yobe State

i. Kalgi (Yunusari LGA) with a Geo-locations (N 13° 04'12, E 11°27'59)
ii. Damaturu LGA with a Geo-Coordinate (N 11° 40'55,E11°54'32)

Kalgi (Yunusari LGA) & Damaturu LGA

The team visited the Hybiz Damaturu plantation site and Engr. Samaila farms both in Damaturu LGA of Yobe State. The Hybiz, Damaturu project commenced in 2021 with 10,100 seedlings while workcommenced on the private farm of Engr. Samaila in 2020 with 10,100 seedlings. The plantations which had mainly Acacia and Neem seedlings had a 10Ha coverage respectively. The land has been secured and duly fenced against encroachment.

At the Kalgi Acacia Plantation site, water supply facility has not been provided and survival rate was 30%. However, the survival rate for the private farm in Damaturu was 90% which can be attributed to availability of water supply. Facility on ground is

the perimeter fencing. These projects are in dire need of functional motorized borehole, solar power, underground reservoir, overhead tank and effective reticulation for sustenance of the trees and resuscitation of the dead seedlings. Here, Forest Guards were also not on duty as at the time of the Team's visit.



Image of the Acacia Plantation in Kalgi, Yusufari LGA




The Acacia Plantation at Hybiz Farm in Damaturu*(The Project with the highest survival Rate in Yobe State).*

2.5.5 Jigawa State Acacia Senegal (Gum Arabic)

Three Gum Arabic were monitored in Jigawa State

i. Kukule, Gagarawa LGA with a Geo-Coordinate (N $12^0$34'14", E $9^0$28'38")

ii. Hardo Ali, Kafin Hausa LGA with a Geo-Coordinate (N $12^0$16'17", E $10^0$5'36")

iii. Maifari, Maigatari LGA with a Geo-Coordinate (N $12^0$38'2", E $9^0$48'3")

Kukule, Gagarawa LGA

The Monitoring team observed that the facility under the 2020 intervention had put in place about 10 hectares perimeter fencing, Borehole, Overhead Tank, and

Reticulation. However, there is no Underground Reservoir. A total of 10 hectare of land was planned for and acquired. The total number of seedlings planted was 12,000 with a 20% Survival rate (2,400). The main specie at the project location is Acacia Senegal. The Agency maintained the 3m planting space between the trees.

Acacia at **Kukule, Gagarawa LGA**

Hardo Ali, Kafin Hausa LGA

The Monitoring team observed that the facility under the 2020 intervention has put in place about 10 hectares perimeter fencing, Borehole, Overhead Tank, and Reticulation. However, there is no Underground Reservoir. A total of 10 hectare land was planned for and acquired. The total of seedlings planted was 10,000 with a 40% Survival rate (4000). The main specie at the project location is Acacia Senegal. The Agency maintained the 3m plant spacing between the trees.

AcaciaatHardo Ali, KafinHausa LGA

Maifari, Maigatari LGA

The Monitoring team observed that the facility under the 2021 intervention has put in place about 10 hectares perimeter fencing. However, there is no Borehole, Overhead Tank, Reticulation, and Underground Reservoir. A total of 10 hectare land was planned for and acquired. The total of seedlings planted was 12,000 with a 10% Survival rate (1,200). The main specie at the project location is Acacia Senegal. The Agency maintained the 3 m planting space between the trees.

Acacia at Maifari, Maigatari LGA

2.5.6 Katsina State Acacia Senegal (Gum Arabic)

Three Gum Arabic were monitored in Katsina State

i. Maturmi, Mai'Adua LGA with a Geo-Coordinate (13° 10' 15" N, 8° 15' 45" E)

ii. Gagir, Mai'Adua LGA with a Geo-Coordinate (13° 5' 23" N, 8° 22' 37" E)

iii. Garo, Mashi LGA with a Geo-Coordinate (12° 58' 7" N, 7° 59' 7" E)

Maturmi, Mai'Adua LGA

The Acacia Senegal plantation was established in the year 2021 with plantation size of 10Ha. Aside Perimeter fencing, there are no facilities available in this location. The main specie of plant at this site is Acacia Senegal. The planned area of covered was 10Ha and same area was covered with a total of 4,000 seedlings. The survival rate on the plantation stands at 90% with 35 beneficiaries in the community.

Established Acacia Senegal plantation Mai'Adua

Gagir, Mai'Adua LGA

The Acacia was established in the year 2020 with plantation size of 10km arranged 3m apart. Aside Perimeter fencing, no other facility is available on site. The main specie of plant at this site is Acacia and a total of 4,000 seedlings were planted with 35 beneficiaries in the community. The survival rate of the plantation stands at 85%.

Established Acacia Senegal plantation at Gagir

Garo, Mashi LGA

The Shelter Belt was established in the year 2020 with plantation size of 10km arranged 3m apart. The plantation does not have any facility which has exposed it to destruction by human and animal activities. The main specie of plant at this site is Acacia Senegal and a total of 4,000 seedlings were planted with 20 beneficiaries in the community. The survival rate of the plantation stands at 5% as there is practically no sight of planted seedlings on site.

Established Acacia Senegal plantation at Garo

2.5.7 Sokoto State Acacia Senegal (Gum Arabic)

Three Gum Arabic sites were monitored in Sokoto State

i.Gundunga, Kware LGA with a Geo-Coordinate (N 13°14'24 E 5°10'14)

ii. Saturu, Bodinga LGA with a Geo-Coordinate (N 12°49'55 E 5°17'24)

iii. Dangaji, Bodinga LGA with a Geo-Coordinate (N 12°49'55 E 5°17'24)

Gundunga, Kware LGA

The Acacia Senegal plantation was established in the year 2020 with plantation size of 10Ha. The only facility available in this location is perimeter fencing. The main specie of plant at this site is Acacia Senegal. The planned area covered was 10Ha, same area was only fenced during the implementation with 10 beneficiaries in the community.

Established Acacia Senegal at Gundunga

Saturu, Bodinga LGA (N 12°49'55 E 5°17'24).

The Acacia Senegal plantation was established in the year 2021 with plantation size of 10Ha. The only available facility in this location is Perimeter fence. The main specie of plant at this site is Acacia Senegal. The planned area covered was 10Ha, same area was covered during the implementation with 2 beneficiaries in the community. However, the seedlings planted had to be returned to the Nursery due to none availability of water at the sites until when the rain resumes, then the seedlings will be replanted.

Established Acacia Senegal at Saturu

Dangaji, Bodinga LGA

The Acacia Senegal plantation was established in the year 2021 with plantation size of 10Ha. The only available facility in this location is Perimeter fence. The main specie of plant at this site is Acacia Senegal. The planned area covered was 10Ha, same area was covered during the implementation with 2 beneficiaries in the community. However, the seedlings planted had to be relocated to the Nursery due to none availability of water at the sites until when the rain resumes, then the seedlings will be replanted.

Established Acacia Senegal at Dangaji

Project Analysis Summary Table5

2020 Project Analysis						2021 Project Analysis				
States	Planned Area of Coverage (Hectares) 2020	Sample Size visited (40% of planned Area)	Planned no of Trees to be Planted	No of Trees sighted on Sample Sites 2020	Average Survival Rate (%) 2020	Planned Area of Coverage (Hectares)2021	Planned no of Trees	Sample Size visited (40% of planned Area)	No of Trees sighted on Sample Sites 2021	Average Survival Rate (%)2021
Borno	50	20	60,000	12,000	51.6	50	60,000	20	11,022	80
Yobe	-		60,000	10,000	30	50	60,000	20	11,100	90
Jigawa	50	20	60,000	22,000	30	50	60,000	20	12,000	10
Katsina	50	20	20,000	8,000	45	50	20,000	20	4,000	90
Sokoto	50	20	60,000	-	-	50	60,000	20	-	-
Kano	-		-	-	-	50	60,000	20	20,000	80
Zamfara	-		-	-	-	40	60,000	9.9	22,200	70

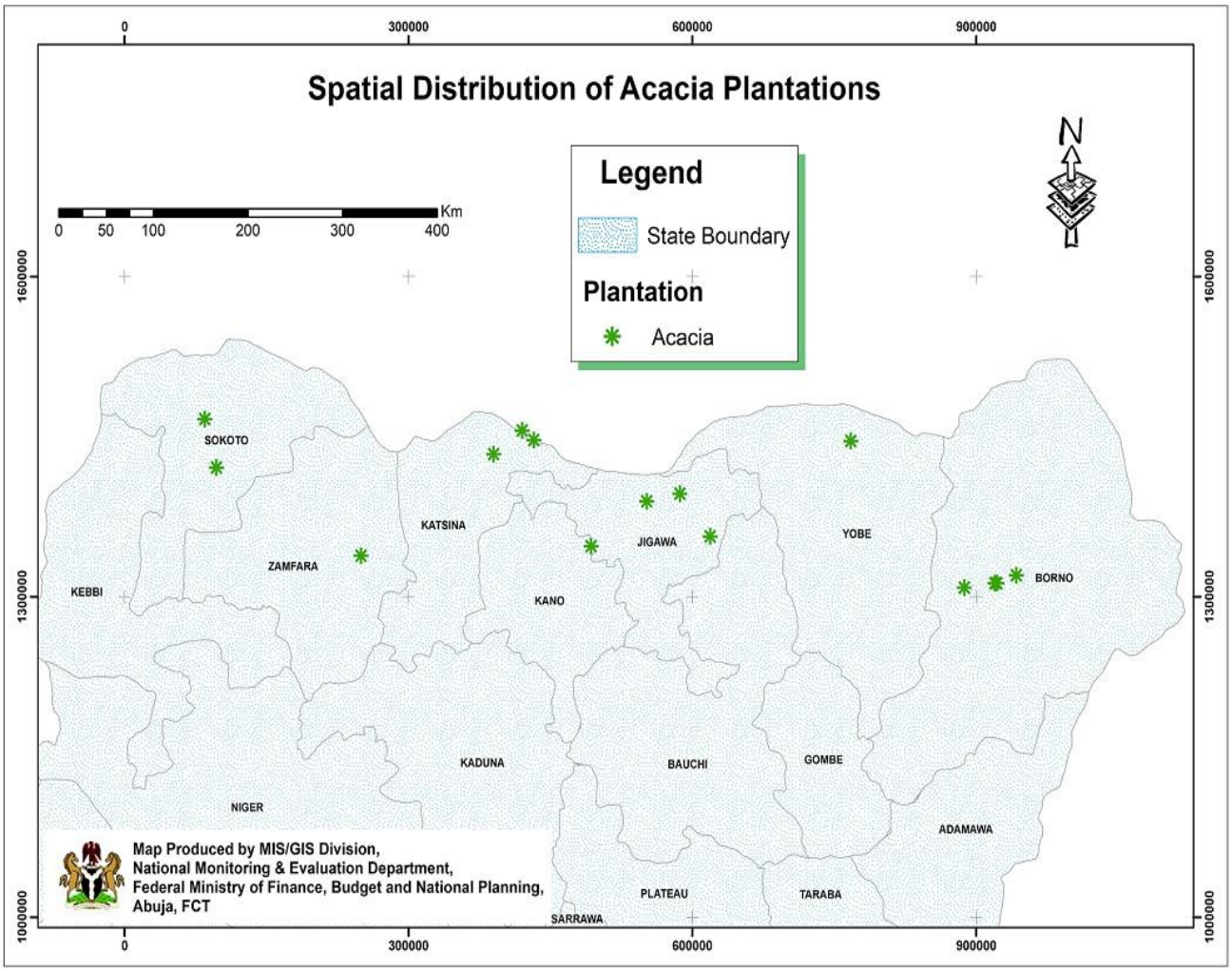
Project Analysis Table for Acacia for year 2020/2021

Summary of Findings, Challenges and Recommendations on Acacia by States

S/N	STATE	FINDINGS	CHALLENGES	RECOMMENDATIONS
1	BORNO	The tree planting has been done, including the perimeter fencing. Most plants have been established and growing well.	i. Herders' cattle grazing on the planted areas ii. Insurgency in the State iii. Vandalization of fence around plantation areas	i. Continuous community engagement to foster cooperation between farmers-herders in the community and Forest guards ii. Vandalized fences should be replaced
2.	KANO	The planned areas of coverage for each of the plantation visited were planted with seedlings;	i. The presence of herdsmen constitutes threat to the survival of the trees; ii. Encroachment by farmers in the host community; iii. Theft and vandalization of facilities at the plantation;	i. Continuous community engagement to foster cooperation between farmers-herders in the community and Forest guards
3.	ZAMFARA	At the time of visit, the team observed that the perimeter fence was yet to be erected as the contractor was yet to mobilize to site	i. Delay in the erection of perimeter fencing; ii. Activities of bandits around the shelter belts.	i. Motorized boreholes should be installed for adequate watering of the plants during the dry season; ii. The contractor should be contacted and immediately mobilized to site for the erection of perimeter fence

3.	YOBE	All the Plantation visited were fenced	Lack of adequate water supply system	Provision of borehole facilities in all the plantations to ensure adequate water supply for the survival of the tree
4.	JIGAWA	The tree planting has been done, including the perimeter fencing. Most plants have been established and growing well.	i. The harsh environment has affected the survival rate of the trees ii. Late planting of economic trees due weather has affected the growth rate of the plants iii. Due to the topography of the area, the water table is very low as a result only one borehole was sunk instead of two	To dig more boreholes to cover the 10 Hecters
5.	KATSINA	Areas with no Perimeter fencing performed poorly compared to areas with perimeter fencing. Also, availability of boreholes and reticulation facilities contributes survival of plants considering the harsh weather condition in the region	i. Animal grazing and sabotage the success of the project	Areas (**Garo, MashiLGA)**without fencing should be fence to control cattle grazing
7.	SOKOTO	No seedlings were planted at this location Gundunga, Kware LGA as the sites were relocated due to herdsmen crises at the old location, so they are yet to start plantation, in addition, there is non-availability of water supply in other 2 locations Saturu and Dangaji, Bodinga LGA so the seedlings were returned to the Nursery.	i. No seedlings were planted at this location as the sites were relocated due to herdsmen crises at the old location and non-availability of water so they are yet to start plantation	i. The need to provide water facility at the new locations ii. The plantations should commence soon as the raining season is fast approaching for the overall achievement of the projects objective.

GEO-SPATIAL DISTRIBUTION OF ACACIA PLANTATIONS ACROSS THE SEVEN FRONTLINE STATES



2.6 INDIGENOUS SITE TREE SPECIES

2.6.1 Borno State Indigenous

Two Indigenous Sites were monitored in Borno State

i. Miringa, Biu LGA with a Geo-Coordinate(10º 42' 34" N, 12º 9' 3" E)

ii. Dalori, Konduga LGA with a Geo-Coordinate(11 º 46' 46" N, 13 º 13' 11" E)

Miringa, Biu LGA

The Indigenous tree species plantation was established in the year 2021 with plantation size of 10Ha. Facilities available include: Perimeter fencing, Borehole, Overhead tank, and Reticulation. The species of plant at this site are Balanites, Zizziphis, and Baobab. The planned area covered was 10Ha, same area was covered during the implementation. A total of 4,000 seedlings were planted with 40 beneficiaries in the community. The survival rate on the plantation stands at 60%.

Established Indigenous trees at Miringa

Dalori, Konduga LGA

The Indigenous tree species plantation was established in the year 2020 with plantation size of 10Ha. Facilities available include: Perimeter fencing, Borehole, Overhead tank, and Reticulation. Except for the perimeter fence, other facilities are not functional due tovandalization by bandits. The species of plant at this site are Balanites, Zizziphis, and Parlcia. The planned area of coverage is 10Ha, same area was covered during the implementation. A total number of 4,000 seedlings were planted with 20 beneficiaries in the community. The survival rate on the plantation stands at 40% due to drying up of plants as a result of harsh weather condition.

Established Indigenous trees with facilities at Dalori

Animals grazing on established plantation

2.6.2 Kano State Indigenous

One Indigenous was monitored in Kano State

Mahuwa, Makoda LGA with a Geo-Coordinate (N12.4038121, E 8.4787399)

i. Mahuwa, Makoda LGA

The total area covered was 20 hectares of land, divided into two sections of 10 hectares each. The first plantation was cultivated with 11,000 species of Parkia Biglobiosa seedlings, while the second one was cultivated with a mixture of same number trees of two species, namely: ParkiaBiglobiosa and Adansonia Digitation. At the time of visit to the plantation, the height of the seedlings was about 9cm, and the survival rate based on random sampling was about 95%. The entire plantation was surrounded with perimeter wire fence to prevent animals from encroaching on the plantation. The major benefit of the plantation is to mitigate the effect of desertification, restore degraded lands, and for the replenishment of the indigenous

species, which are gradually going into extinction. It can also serve as source of production of Baobab fruits for local consumption and for export purposes.

Established Indigenous trees at Mahuwa Community

2.6.3 Zamfara State Indigenous

One Indigenous was monitored in Zamfara State

i. Geba, Gusau, LGA (N 12 6'24, E6 42' 1'' and N 12 6' 27'', E 6 42'12'')

Geba, Gusau, LGA

The indigenous tree species plantation was established in the year 2021 with plantation size of 20Ha. The only available facility at the time of site visit was the perimeter fencing. The main species at the sites were mainly indigenous trees like Balanite, Baobab, Zizziphis, Parlcia, Prosopis, Magogany, Philostigma and Reticulation. The planned area of coverage is 20Ha, same area was covered during

the implementation. A total of 22,000 seedlings were planted with 40% survival rates. This is because most of these species are not resistant to drought like Acacia. The project has a total of 285 beneficiaries both skilled and unskilled labour. At the time of visit, the trees had a range of 6cm to 32cm in height.

Indigenuous Tree Specie Plantation at Geba

2.6.4 INDIGENOEUOS TREES PLANTING (YOBE STATE)

Three Indigenous were monitored in Yobe State

i. Bulatura, Yusufari LGA with a Geo-Coordinate (N 13° 21'07,E 11°14'20)
ii. Balle in Geidam LGA with a Geo-Coordinate (N 12° 49'36, E 11°42'0)
iii. Mai Matari Community in Yusufari LGA with a Geo-Coordinate (N11°41'30,E 11°58'13)

In fulfilment of this mandate towards replicating this project in Yobe State being one of the Northern State where deforestation is more prevalent occasioned by decade-long insurgency and human activities, the Team visited three (3) Projects Site of the established Indigenous Trees Plantations which has since commence in 2021 in Bulatura, Yusufari LGA while Balle in Geidam LGA commenced in 2020 in the following Towns and LGAs:

Bulatura Community in Yusufari LGA

The Team's visit to **Bulatura Community in Yusufari LGA** on GPS Location N 13° 21'07 Latitude E 11°14'20 Longitude. The 10Hectares land space has engulfed 10,100 seedlings planted vertically by approximately 75 members of the Community and its environs. The allotted survival rate as at the time of the Team's visit has been put at 5% as the Team could barely spots survived seedlings on the 10Hectares Plantation on which Perimeter Fencing was newly introduced with no source of Water Supply nor temporary reservoir; secondly, the Team's visit to Bulatura Community in Yusufari LGA unveiled that same units of indigenous seedlings planted but the difference is, this site has achieved 40% survival rate while the similarity is in the types of sowed species identified to be Biobab, Balanites, Acacia, piliostigma, packia, Mauritania, zizziphus, and vaticulatum.

Balle Town in Geidam LGA

Further in the course of the assignment, Balle Town in Geidam LGA on GPS Location N 12° 49'36 Latitude E 11°42'0 Longitude was the third point of call on Indigenous Trees Plantation with project's commencement year of 2020 which similarly has same 10,100 seedlings planted on 10 Hectares of land with the same survival rate of 40% as of the plantation in Bulatura Community, Yusufari LGA. This project engaged 60 Labours with Technically skilled inclusive.

Mai Matari Community in Yusufari LGA

Mai Matari Community in Yusufari local Government on GPS Location N 11° 41'30 Latitude E 11°58'13 Longitude with 10,100 numbers of seedlings sowed, survival rate as at the time of the Team's visit has been put at 10% as barely could the Team

identify a survived seedling on the 10Hectares Plantation on which Perimeter Fencing was newly introduced with no source of Water Supply not temporary reservoir.

Images of the ongoing Indigenous Trees' planting in Bulatarai, Yusufari LGA

Indigenous Trees Plantation in Balle Town, GeidamLGA.

2.6.5Jigawa State Indigenous

Three Indigenous were monitored in Jigawa State

GURMINA, BIRNIN KUDU LGA with a Geo-Coordinate (N $11^0$21’28”, E $9^0$25’12”)

IGGI, BIRNIN KUDU LGA with a Geo-Coordinate (N $11^0$21’28”, E $9^0$25’12”)

Gurmina, Birnin Kudu LGA with a Geo-Coordinate (N $11^0$21’23”, E $9^0$24’8”)

GURMINA, BIRNIN KUDU LGA

The Monitoring team observed that the facility under the 2021 intervention had put in place about 10 hectares perimeter fencing. However, there is no Borehole, Overhead Tank, Reticulation, and Underground Reservoir. A total of 10-hectare land was planned and acquired. The total number of seedlings planted was 12,000, Survival rate could not be determined because the Team met them planting the trees. The Agency maintained the 3m by 3m planting spacing between the trees. The main specie at the project locationsis Khaya Senegal, Parkiabiolobosa, Lucia Leucocephala, Balanite Aegyptiaca.

Indigenous at Gurmina, Birnin Kudu

IGGI, BIRNIN KUDU LGA

The Monitoring team observed that the facility under the 2021 intervention has put in place about 10 hectares perimeter fencing. However, there is no Borehole, Overhead Tank, Reticulation, and Underground Reservoir. A total of 10 hectare land was planned for and acquired. The total number of seedlings planted was 12,000 Survival rate could not be determined because the Team met them planting the trees. The Agency maintained the 4 meter planting spacing between the trees. The main species at the project location include Khaya Senegal, Parkiabiolobosa, Lucia Leucocephala, BalaniteAegyptiaca. The intervention is aimed at raising Medicinal indigenous trees, Fodder, Shade, protection against erosion, wind destruction and overall, environmental improvement.

Indigenous at Iggi, Birnin Kudu LGA

Gurmina, Birnin Kudu LGA

The Monitoring team observed that the facility under the 2020 intervention had put in place about 10 hectares perimeter fence, Borehole, Overhead Tank, Reticulation as planned. However, there was no Underground Reservoir. A total of 10 hectare land was acquired and planned; 12,000 seedlings were planted with 5% survival rate. The project site was covered by weed and the remaining seedlings in the project site had overgrown. The Agency maintained the 3m by 3m planting spacing between the trees. The main species at the project location include Khaya senegal, Parkiabiglobosa, Lucia leucocephala, Balanitesaegyptiaca.

Indigenous at Gurmina, Birnin Kudu LGA

2.6.6 Katsina State Indigenous

One Indigenous was monitored in Katsina State

I.Kurneji-Suduje, Daura LGA (12º 55' 20" N, 8º 18' 6" E)

Kurneji-Suduje, Daura LGA

The Indigenous tree species plantation was established in the year 2020 with plantation size of 10Ha. Facilities available include: Perimeter fencing, 1 Borehole, 4nos. 5000 litres Overhead tanks, and Reticulation. The species of plant at this site are Balanites, and Baobab. The planned area covered was 10Ha, same area was covered during the implementation. A total of 4,000 seedlings were planted with 40 beneficiaries in the community. The survival rate on the plantation stands at 71%.

Established Indigenous trees at Kurneji-Suduje

2.6.7 Sokoto State Indigenous Trees

Two Indigenous were monitored in Sokoto State

i. Gundunga, Kware LGA with a Geo-Coordinate (N 13°14'24 E 5°10'14)

ii. Gundunga, Kware LGA with a Geo-Coordinate (N 13°14'10 E 5°10'41)

Gundunga, Kware LGA

The Indigenous tree species plantation was established in the year 2021 with plantation size of 10Ha in the first site. The only facility available is Perimeter fence while Borehole, Overhead Tank and Reticulation system were not at the site. The planned area covered was 10Ha, same area was only fenced during the implementation with 22 beneficiaries in the community. No seedlings were planted at this location as the sites were relocated due to herdsmen crises at the old location, so they are yet to start plantation.

Established Indigenous Trees at Gundunga

Gundunga, Kware LGA (N 13°14'10 E 5°10'41)

The indigenous tree species plantation was established in the year 2021 with plantation size of 10Ha. Facilities available include: Perimeter fence, Borehole, Overhead tank, and Reticulation system. The species of plant at this site are Balanites, Zizziphus, and Parkia. The planned area covered was 10Ha, same area was covered during the implementation. A total of 12,000 seedlings were planted with 4 beneficiaries in the community. The survival rate on the plantation stands at70%.

Established Indigenous Trees with facilities at Gundunga

Project Analysis Summary Table6

2020 Project Analysis						2021 Project Analysis				
States	Planned Area of Coverage (Hectares) 2020	Sample Size visited (40% of planned Area)	Planned no of Trees to be Planted	No of Trees sighted on Sample Sites 2020	Average Survival Rate (%) 2020	Planned Area of Coverage (Hectares)2021	Planned no of Trees	Sample Size visited (40% of planned Area)	No of Trees sighted on Sample Sites 2021	Average Survival Rate (%)2021
Borno	50	20	60,000	4,000	40	50	26,000	20	4,000	60
Yobe	-		60,000	10,100	5	50	78,000	20	10,100	40
Jigawa	50	20	60,000	24,000	5	50	78,000	20	12,000	
Katsina	50	20	26,000	4,000	71	50	-	20		
Sokoto	50	20	60,000	-	-	50	78,000	20	12,000	70
Kano	-		-	-	-	50	78,000	20	11,000	95
Zamfara	-		-	-	-	40	78,000	9.9	22,000	40

Project Analysis Table for Indigenous Trees for year 2020/2021

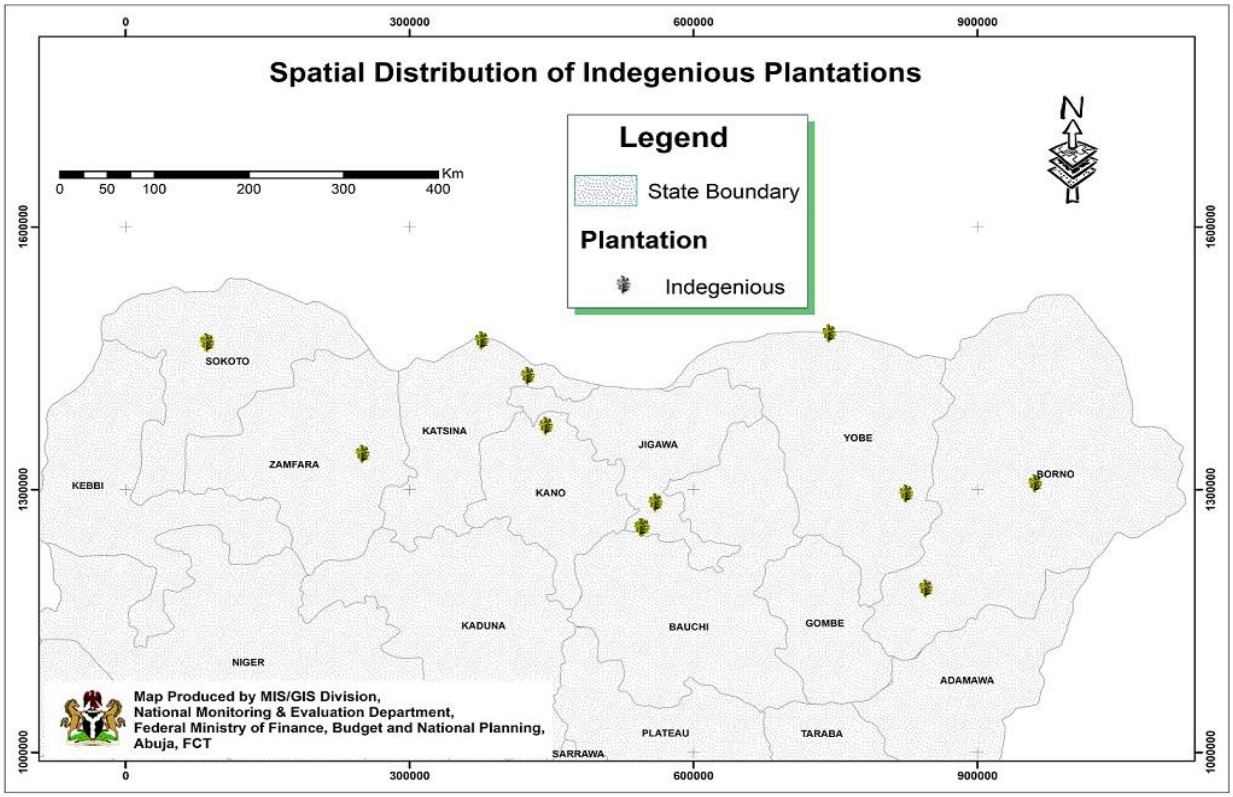
Summary of Findings, Challenges and Recommendations on Indigenous by States

S/N	STATE	FINDINGS	CHALLENGES	RECOMMENDATIONS
1	BORNO	The tree planting has been done, including the perimeter fencing. Most plants have been established and growing well.	i. Herders' cattles grazing on the planted areas ii. Insurgency in the State iii. Vandalization of fence around	i. Continuous community engagement to foster cooperation between farmers-herders in the community and Forest guards ii. Vandalized fences should be

			plantation area	replaced
2.	KANO	The planned areas of coverage for each of the plantation visited were planted with seedlings;	i. The presence of herdsmen constitutes threat to the survival of the trees; ii. Encroachment by farmers in the host community; iii. Theft and vandalization of facilities at the plantation;	i. Continuous community engagement to foster cooperation between farmers-herders in the community and Forest guards of forest guards salaries.
3.	ZAMFARA	Tree planting has been done, including the perimeter fencing. Most plants established did not survive, this is because most of the species are not drought resistant like Acacia and needs adequate water supply to enhance their growth. The monitoring team also observed that the planting area was ploughed to retain moisture.	i. Insurgency, sabotage and activities of bandits	i. The need to provide water facility at the new locations ii. More forest guards should be employed to improve security
3.	YOBE	All the Plantation visited were fenced	i. Lack of adequate water supply system ii. Encroachment by herders in some locations	i. Provision of borehole facilities in all the plantations to ensure adequate water supply for the survival of the tree
4.	JIGAWA	All the Plantation visited were fenced	No supply of water at the project sites	There is need for construction of boreholes at the project sites to ensure constant supply of water to sustained good survival of the trees
5.	KATSINA	The Plantation visited is fenced and equipped with necessary facility to enhance plant growth	-	-
7.	SOKOTO	Tree planting has been done, including the perimeter fencing. Most plants established did not survive, this is because most of the species are not drought resistant like Acacia and needs adequate water supply to enhance their growth. While there is non-availability of water in other location in Gundunga.	i. No seedlings were planted at the first location as the sites were relocated due to herdsmen crises at the old location, so they are yet to start plantation ii. Non- availability of water in other site (Gundunga)	i. The need to provide water facility at the new locations i. Planting should commence soon as the raining season is fast approaching for the overall achievement of the project's objective. i.

		The team could not monitor 2020 indigenous trees due to insecurity in selected sites.		

GEO-SPATIAL DISTRIBUTION OF INDEGENIOUS PLANTATION ACROSS THE SEVEN FRONTLINE STATES



3.0 KEY FINDINGS, CHALLENGES AND RECOMMENDATIONS

3.1 GENERAL FINDINGS

The Team in the course of the monitoring visit assessed the performance of the NGGW against some important criteria that include:

i. Relevance of the Project to the Needs of the Affected Communities;
ii. Coherence of the Project with other Afforestation Framework at both National and Sub-National Levels;
iii. Impact of the project;
iv. Value for Money; and
v. Sustainability Mechanism

3.1.1 RELEVANCE OF THE PROJECT TO THE NEEDS OF THE AFFECTED COMMUNITIES

In assessing the extent to which the intervention objectives and design respond to beneficiaries,needs and priorities which are to support the implementation of the Great Green Wall Initiative in the dry lands of Nigeria and improve quality of affected ecosystem, combat climate change and enhance the livelihoods of the affected communities. The Monitoring Team during the course of the exercise observed that in most of the communities visited, the underlisted benefit were observed among others:

i. The program has the potential of recover degraded land, preserving ecosystems through the shelterbelt and woodlots, and providing sustainable livelihood opportunities for communities, especially the youths and women through skill acquisition programs such as Bead

making, Tailoring, baking, etc and the orchard projects for the men; and

ii. Water sources (boreholes) also in addition of support the seedling production also provide a good source of drinking water to the benefiting communities.

3.1.2 COHERENCE OF THE PROJECT WITH OTHER AFFORESTATION FRAMEWORK AT BOTH NATIONAL AND SUB-NATIONAL LEVELS

Towards assessing the compatibility of the intervention with other environmental remediation interventions in states, sectors and institutions, the team interacted with NGGW Officials. From the interaction, the Team observed thatthe project implementation framework is aligned to other projects and institutions. For instance, it discovered that:

i. The NGGW Implementation Strategy is aligned to the Strategy of Agencies such: River Basin Development Authorities (RBDAs), State Environmental Protection Agencies (SEPAs), Federal Department of Forestry and Department of Drought and Desertification Amelioration (DDA), Nigerian Meteorological Agency (NIMET)among others.

ii. It is also aligned to the apex national environmental policy body in the country i.e the National Council on Environment (NCENV), which provides platform for all representatives of governments at the Federal and State levels, academia and other stakeholders that deals with environmental issues; and

iii. Similarly, many Government Agencies are represented on the Governing Council of the NAGGW; and there is a constant engagement and collaboration with those Agencies and other relevant ones that are not on the Council in the implementation of the NAGGW projects.

3.1.3 Effectiveness of the Project:

The team had an assessment of the effectiveness of the projects, that is, the extent to which the intervention achieved, or is expected to achieve, its objectives, and its results, including any differential results across the benefiting sates. Findings on effectiveness of the project was that it is in the right direction towards achieving the set objective *of* preventing or reversing the degradation of ecosystems while improving the living conditions of affected communities by enhancing the provision of ecosystem services. The following had been achieved by the project from 2020-2021.

i. Sensitization and Awareness Campaign for public awareness campaign;
ii. Afforestation and Land Management involving:

- Establishment of 640km shelter belt in 2020 and 2021
- Establishment of 540HC community woodlots in 2020 and 2021
- Establishment of 300HC community orchards in 2020
- Establishment of 2 Standard Central Nurseries each in benefiting states
- Training of selected farmers on tree planting

iii. Promotion of Alternative Livelihoods leading to:

- Diversification of income for the affected communities
- Reduction of rural poverty
- Generation of employment
- Enhancement of rural economy

iv. Provision of Rural Infrastructure such as solar and motorized boreholes as sources of water to ameliorate the impact of drought.

3.1.4 IMPACT OF THE PROJECT

The impact of the project was also of major concern to the team to measure extent to which the intervention has generated or is expected to generate significant positive or negative, intended or unintended, higher-level effects. *From* Comparative analysis of the Phase 1 and 2, the team observed

significant positive improvement and impact of the intervention on beneficiary communities in the implementing states. The Team observed some of the underlisted benefits:

i. Provision of employment to the benefiting communities e.g Recruitment of Forest Guards;
ii. Provision of potable water in the communities from the water sources established by the agencies;
iii. Empowerment of Local people, especially women and youth to participate in decision making processes in combating desertification, land degradation and drought;
iv. Improved agricultural practices that guarantee food security and adequate access to water for people in affected areas; and
v. Increased Communities' resilience to drought via provision of motorized boreholes to complement rain fed planting activities.

3.1.5 VALUE FOR MONEY

In examining the value for money, that is, the extent to which the intervention delivers, or is likely to deliver, results in an economic and timely way; the team interacted with the NAGGW and Community members. The Team observed the following measure that promote efficiency in the delivery of the project, they include:

i. The budget forthe components of the projects were quite low compared to what is obtainable in other countries for tree planting. It is, therefore, clear that the project fund was effectively managed for results; and
ii. To reduce wastage of resources at every level of the programme, NAGGW:

- Engaged direct labour in some Afforestation activities;
- Promptly distributed left-over seedlings to the communities to plant in their farm lands and homesteads;
- Synergized with local, state and national environmental actors which reduced cost;
- committed to environmental agreements and processes.

3.1.6 SUSTAINABILITY MECHANISM

Sustainability mechanism measure the extent to which the net benefits of the intervention continue, or are likely to continue. Findings revealed that the approach taken by NAGGW Nigeria to ensure sustainability of the interventions include the underlisted strategies:

i. Recruiting and training the youth from the communities to serve as forest guards;
ii. The Agency also made the communities to own the intervention program by recruiting youths into the afforestation processes and field activities;
iii. The NAGGW involved the community in the tree planting program. The process allows the community to have knowledge on the importance of natural environment. Involving communities to own the project, conserve the resources and build their resilience;
iv. Embarked on a capacity building program in the frontline states on techniques of tree planting to create a culture of environmental conservation and awareness;
v. The community participatory approach adopted by the Agency gave the communities a sense of ownership on the intervention program.
vi. Involvement of the Communities in the management of restoration activities in frontline States in Nigeria;

vii. Setting up of Project Implementation Committees (PICs) at State, LGA and Community levels to guarantee project sustainability, community buy-in and ownership as well as reduce conflicts between herdsmen and farmers; and

viii. Leveraging on the opportunities of involving Private Sector, Non-Governmental Organizations (NGOs), Community Based Organizations (CBOs) and Donors in tackling the hydra-headed problem of desertification.

3.2 SPECIFIC FINDINGS, CHALLENGES AND RECOMMENDATIONS

The visiting team made the following key findings, challenges and recommendations under the key components of the program:

3.2 STANDARD CENTRAL NURSERY

3.2.1 Findings

- The Nurseries were established in the 7 implementing States
- The Nurseries are all functional with facilities to ensure functionality.

3.2.2 Challenges

- Germinated seedlings exposure to harsh weather conditions affects the survival rate of the plants;
- Late provision of raw materials to raise seedlings;
- Inadequate water supply; and
- Delayed payment of Forest guards' salaries

3.2.3 Recommendations

- Provision of mulching materials to improve survival rate of seedlings;
- Constant watering of leftover seedlings;
- Replacement of vandalized equipment (Borehole accessories); and
- Prompt payment of forest guards and Nursery attendants' salaries

3.2 WOODLOT PLANTATION

3.2.1 Findings

- The tree planting has been done, including the perimeter fencing and other facilities. Most plants have been established and are doing well; and
- Encroachment of site by the Herdsmen in some location

3.2.2 Challenges

- Lack of adequate water supply system; and
- Vandalization and encroachment of facilities.

3.2.3 Recommendation

- Members of the host communities, particularly the farmers, should be sensitized more on the long term benefits the trees will bring to their communities so as to stop further
- NAGGW should put in place mechanism to prevent encroachment and vandalization of facilities at the plantations;
- There should be adequate remuneration of the forest guards watching over the plantations and they should be paid on time to encourage their commitment; and
- Provision of borehole facilities in all the plantations to ensure adequate water supply for the survival of the tree.

3.3 ORCHARD PLANTATION

3.3.1 Findings

- The tree planting has been done, including the perimeter fencing. Most plants have been established and are doing well; and
- The community were happy with the intervention and are pleading with the Federal Government to bring more of the same project so that other members can benefit.

3.3.2 Challenges

- Vandalization of fence around plantation areas; and
- Delayed salaries of the forest guards.

3.3.3 Recommendations

- Continuous community engagement to foster cooperation between farmers-herders in the community and Forest guards;
- Vandalized fences should be replaced; and
- Forest Guards should be paid promptly

3.4 SHELTER BELT PLANTATION

3.4.1 Findings

- The trees were planted and facilities such as perimeter fencing, Borehole and reticulation installed in some of the location. While some sites were not fenced, some others were only fenced without the necessary support facility, including water, which could be adduced for the poor performance or survival of the plants in those locations; and
- The community is benefitting from the water at the facilities. The team learnt that the community are contributing money for fueling of the generator which is used to pump water for the survival of the plants.

4.4.2 Challenges

- The presence of herdsmen and bush burning by farmers constitutes threat to the survival of the trees; and
- Encroachment by farmers in the host community

3.4.3 Recommendation

- The Agency should continuous community engagement to foster cooperation between farmers-herders and other stakeholders in the community.

3.5 ACACIA SENEGAL PLANTATION

3.5.1 Findings

- The tree planting has been done, including the perimeter fencing. Most plants have been established and growing well.

3.5.2 Challenges

- Encroachment by farmers in the host community, theft as well as vandalization of facilities at the plantation; and
- Lack of adequate water supply system.

3.5.3 Recommendation

- The Agency should continuous community engagement to foster cooperation between farmers-herders in the community and Forest guards; and
- Provision of borehole facilities in all the plantations to ensure adequate water supply for the survival of the tree.

3.6 INDIGENOUS PLANTATION

3.6.1 Finding

- All the Plantation visited were fenced

3.6.2 Challenge

- No supply of water at the project sites

3.6.3 RECOMMENDATION

- There is need for construction of boreholes at the project sites to ensure constant supply of water to sustained good survival of the trees; and
- The Planting of trees should commence soon as the raining season is fast approaching for the overall achievement of the project's objective.

4.0 ADMINISTRATIVE ISSUES

4.1 IDENTIFIED ISSUES

The following are the issues identified during the exercise:

i. The sign posts did not capture the source of funding of the project in the States;
ii. Delay in payment of the forest Guards stipends;
iii. Some of the sites visited by the team were not fenced as at the time of visitation;
iv. Insufficient alternative source of water supply in some sites;
v. Low level awareness of forest fires has led to bush burning which has affected some of the plantations;
vi. Beating up for the projects implemented in 2021 was not done in some states;
vii. Delay in release of funds;
viii. Delay in obtaining "no objection certificates" from Bureau of Public Procurement;
ix. Insecurity in the communities slowed down the implementation process, as some sites could not be visited by the monitoring team due to frequent activities of bandits;
x. Non commitment and payment of Counterpart Contribution to NAGGW by the States hampered success of the project;
xi. Poor community participation; and
xii. Weak institutional capacity at all levels.

4.2 Recommendations

The following measures are recommended to improve project implementation and achieve desired results:

i. The Agency is advised to ensure the completion of the beating-up of 2020 - 2021 phases, for improvement of the 2020-2021 implementation Phases;
ii. Timely release of funds for prompt projects implementation should be ensured;
iii. Procurement processes should be initiated early to reduce delay in execution of projects;
iv. Provision of alternative water supply (boreholes) at plantation sites where there is inadequate soil moisture should be ensured;
v. The Agency is advised to intensify collaboration to ensure synergy with sister organizations toward achievement of common goals;
vi. To ensure seamless implementation, areas devoid of serious security challenges should be identified for next phase of implementation in all the states;
vii. Review and upscale forest guards' stipends to motivate them in carrying out their duties diligently;
viii. Establish mulching materials to improve survival rate of seedlings.
ix. Notify the government on the need to introduce new policies to enable GGW address the issue of drivers of deforestation, especially herders' encroachment
x. There should be increased community sensitization on the long-term benefits of the projects. This will reduce further encroachment and vandalization of facilities at the plantations;
xi. Early preparation of the nurseries should be encouraged to boost the survival rate of the trees; and
xii. For the project to be sustained, the Agency should strengthen partnerships with States, Local Government Areas and Local Communities.

5.0 LESSONS LEARNT/BEST PRACTICES

The visiting team noted the following best practices and benefits of the project:

i. The NAGGW has created good sustainability measures in their implementation processes such as:
   - ✓ Training of Community Youths on techniques of tree planting which has created a culture of environmental conservation and awareness.
   - ✓ Adoption of participatory approach which gave the communities a sense of ownership on the intervention program for sustainability.

ii. The project would restore some degraded land through the production of seedlings, Establishment of shelterbelts, development of community woodlots and orchards, in implementing the States;

iii. There is Improved access to portable drinking water in the Communities through the boreholes constructed;

iv. The project provided alternative sources of livelihood to youths and women through the establishment of orchard plantation and its skill acquisition programs.

v. The replacement (beating up) of non-survival tree is being done by the contractor at no cost to the Agency.

vi. The NAGGW Nigeria created employment by engaging youths of the Communities in seedlings production, plantation establishment and recruitment of forest guards;

vii. The community Chiefs and other members are very supportive of this Government initiative.

6.0 Commendation/ General Conclusion

In general, the Team found that the programme is contributing positive towards achieving its objective of improving quality of affected ecosystem, combat climate change and enhance the livelihoods of the affected communities in the implementing states. **We therefore recommend the funding of the programme should continue but NAGWW should ensure the implementation of the recommendations highlighted in the report.**