



Progress Report Collaborative Seed Programme Nigeria

Programme under the Nigeria-Netherlands Seed Partnership
Reporting Period: 1 January - 31 December 2022

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Photo cover: Salamun KMHRM brownfield days at Soba LGA in Kaduna. Photo by Ilesanmi Pupa.

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1 Reporting Details

Reporting period	1 June – 31 December 2022
Reporting manager	Marja Thijssen, Programme leader
Reporting institution	Wageningen University & Research (WUR), Wageningen Centre for Development Innovation (WC DI)
Date	5 April 2023

2 Key Project Data

Project title	Collaborative Seed Programme (CSP) under the Nigeria-Netherlands Seed Partnership (NNSP)
Current project phase	Second full project year (2022)
Project launch	01-11-2020
Closing date	31-10-2024
Budget for reporting period	€ 984,801
Overall budget	€ 3,536,850

3 Executive Summary

a. Main results or progress towards achieving results, lessons learned and conclusions

The CSP made significant progress on its eight topics in 2022, i.e. (1) Decentralization of seed quality assurance; (2) Extension of seed and cultivation practices; (3) Seed company marketing and promotion; (4) Institutional markets; (5) Seed sector platform; (6) Alignment of donor interventions; (7) Plant variety protection; and (8) Variety release.

After mostly studies in 2021, topic teams engaged in field activities in 2022, including field demonstrations and pilots. Under the topic 'Seed company promotion' 13 seed companies established variety demonstration plots in over 40 communities. The 'Extension' topic demonstrated the value of improved versus local vegetable varieties and showed the value of using protected nurseries and proper post-transplanting handling. Both topics created awareness with farmers on the value of modern farming techniques. Progress was made in reaching female and youth farmers in the 'Seed company marketing and promotion' topic (43% and 46% of targets reached, respectively), and the CSP will continue to push for women and youth inclusion, also in other topics like 'Seed quality assurance'.

The topic team for 'Variety release' completed two innovation pilots on tomato and maize and received approval from the Variety Release Committee, leading to the official release of three tomato varieties and one maize variety with strongly reduced duration of the release process. The pilots for the topics 'Seed quality assurance' and 'Institutional markets' have been delayed until 2023 and 2024 respectively.

Many workshops and trainings were implemented to strengthen the necessary capacities of key stakeholders for sustaining interventions. Key staff of the PVP office, NACGRAB, and private breeders of seed companies were trained on how the PVP system works, capacities were strengthened for effective implementation of PVP related activities, so that Nigeria can have a reliable, independent, and cost-efficient Plant Breeders' Rights system. A knowledge-sharing webinar on VCU/DUS testing was conducted for the PVP and Variety Release stakeholders. The first batch of Licenced Seed Inspectors were trained by NASC to support decentralization, with select NASC inspectors reappointed to serve as their mentors.

Digital innovations include the updated Seed Tracker for maize and rice for the topic 'Seed quality assurance', and the development of a digital platform for the topics 'Plant variety protection' and 'Variety

release'. The digital platform has been pre-filled with available data of priority crops and the functionality of the platform was presented for review during SeedConnect 2022 and the 31st National variety release meeting. The management of lead organizations has been regularly briefed on all CSP activities to ensure institutional buy-in.

Various parties in the seed sector have been given a voice through the diverse composition of the eight topic teams; the seed platform core group and the seed platform meetings ('Seed sector platform'), and the programme's steering committee. The CSP was able to establish strategic partnerships, which has improved the reach of certain interventions: the project team supported the development of PVP regulations for Nigeria in collaboration with AGRA, engaged with GIZ to develop the SOP for potato, and teamed up with ISSD Africa for a dialogue workshop on Effective emergency seed response and intervention. With the study on donor investment in the seed sector in Nigeria completed, published, shared, and discussed in one of the seed sector platform meetings, this topic is now closed. Donors will be engaged under the topics 'Seed sector platform' and 'Institutional markets'.

Nigerian CSP management and topic leads went on study tour to the Netherlands for engaging face-to-face with their Dutch counterparts, and engaged with seed sector peers in the conference "Advancing the transformation of Africa's seed sector: Emerging insights and perspectives" as organized by ISSD Africa in Kigali 17-19 October.

In conclusion, while the Nigeria-Ukraine conflict affected the price of inputs needed by farmers and seed companies for their operations, it had only limited impact on the programme. The CSP is well on track, even if some activities faced some delays in 2022. The progress has fostered enthusiastic actions amongst key stakeholders in the seed sector, open to test and take ownership of innovations, like e.g. in the 'Variety release' topic, and also support scaling of innovations, like e.g. the Seed Tracker in 'Seed quality assurance' topic.

b. Main steering implications for the next reporting period

The programme will focus on ensuring the successful implementation of the pilots and building the capacity of key partners while maintaining an integrated approach that considers multiple perspectives. We will:

- Support the commencement of field pilots for the topic 'Seed quality assurance' and complete and document all other ongoing pilots.
- Continue capacity building activities for key institutional partners, ensuring they have the knowledge and skills to implement/guide the pilots and subsequently support the process of institutionalization of new approaches and modalities.
- Secure the buy-in from the management of the lead organizations for the piloting phase and ensure that results achieved are institutionalized.
- Maintain the programme's integrated approach, which allows for multiple perspectives and gives voice to various parties.
- Whenever possible, collaborate with other seed projects, programmes and initiatives for alignment of efforts and increased efficiency and effectiveness.
- Finalize the development of the online application systems for the 'PVP' and 'Variety release' topics, ensuring proper linkage between the topics.
- Facilitate close involvement of Naktuinbouw and Plantum for technical backstopping.
- Monitor the impact of currency redesign, cashless policy, and other emerging regulations on program implementation.
- Keep monitoring the security situation and advise program partners on alternatives in case of problems.
- Engage the new leadership of NACGRAB, which has been placed under NABDA, to ensure that the partnership and implementation support from NACGRAB remains unchanged.
- Encourage the topic teams to reach 100% of the targets for women and youths, particularly the variety demonstrations, communication of action research results, and recruitment of third-party inspectors for seed quality assurance; develop new strategies where necessary.
- Support the wide dissemination of findings from action research to reach farmers, including more youths and women farmers.
- Increase the visibility of the CSP achievements through the CSP newsletter to provide periodic updates on progress to seed sector stakeholders, alerting them to CSP events and providing them access to CSP studies and publications.

4 Introduction

a. Description of project and intervention strategy

The CSP brings together Nigerian and Dutch seed sector stakeholders with the aim to enhance the performance of the Nigerian seed sector. The programme seeks to attain its overarching goal to "Improve farmers' access to and use of quality seed of improved varieties to sustainably increase agricultural productivity". The outcomes areas are addressing the four seed sector functions of: (1) service delivery, (2) market development, (3) governance and (4) regulation:

1. Enhanced capacity of the seed sector to provide high quality, inclusive and differentiated services to seed producers and seed value chain actors (seed services);
2. Enhanced efficiency, fairness and transparency of seed value chains and seed markets (seed markets);
3. Enhanced coordination, alignment and accountability among different seed stakeholders (sector coordination);
4. Enhanced rules and systems that govern seed markets, production systems, service delivery and coordination (sector regulation).

The programme takes a systemic approach for sustainably addressing key challenges in the seed sector and works in alignment with the [National Seed Road Map](#) (NSRM) of Nigeria. The CSP works on eight topics outlined as Strategic Innovation Pathways (SIPs) in the NSRM; these SIPs, including topic ambitions, guide the intervention strategies taken in the CSP. Find in Table 1 the eight topics, including a short description.

Table 1: CSP topics

Topic	Short description
1. Decentralisation of seed quality assurance (SQA)	The topic seeks to develop consolidated, effective, and sustainable seed quality assurance systems covering different crops and provide services to different types of seed entrepreneurs. In addition, the topic seeks to develop and implement specific seed quality assurance standards and protocols for RTBs and vegetables.
2. Extension on seed and cultivation practices	The topic focusses on action research looking into challenges related to the use of quality seed, improved varieties and advanced cultivation practices. Based on the research results it will develop extension messages to convince farmers that it is worthwhile to invest in quality seed. This topic focuses on vegetables specifically.
3. Seed company marketing and promotion	The topic seeks to increase structural investment by seed companies in the marketing and promotion of quality seed and improved varieties, resulting in increased awareness of farmers and enhanced willingness to pay for quality seed and improved varieties. It supports the establishment of varieties demonstrations for field and vegetable crops.
4. Institutional markets	This topic aims to create a market-driven, dynamic and functioning seed sector that operates sustainably with minimal government, NGO and project subsidies. If any interventions are made, they should promote accountability and sustainability without distortion of seed markets. Topic implementation is closely linked to alignment of donor interventions as donors are key actors in institutional markets.
5. Seed sector platform	The topic supports the development of a structured and functional National Seed Sector Platform, which brings together key seed sector stakeholders from government, civil society, knowledge institutes and industry to: convey seed sector insights; facilitate dialogue; clarify and consolidate roles and responsibilities; and support collaboration. The platform promotes a collaborative and sector-driven implementation of the NSRM.
6. Alignment of donor interventions	The topic seeks to increase coordination and alignment among donor and development organisations in the seed sector for strategies and activities within the framework of the NSRM.

<i>Topic</i>	<i>Short description</i>
7. Plant variety protection	The topic seeks to facilitate the implementation and wide adoption of the Plant Variety Protection Act, build country PVP capacity and develop an operational PVP system in accordance to the UPOV System that supports the growth of the seed sector.
8. Variety release	The topic seeks to increase efficiency and transparency in variety release procedures with a more realistic cost-benefit ratio, and enforce ECOWAS harmonisation on variety release to supports private sector investment.

The CSP is being implemented by a consortium of Wageningen University & Research (WUR)-Wageningen Centre for Development Innovation (WCDI), Sahel Consulting Agriculture & Nutrition Ltd (Sahel Consulting), Plantum and Naktuinbouw, in close collaboration with the key partners Wageningen Plant Research (WPR), National Agricultural Seeds Council (NASC), Seed Entrepreneurs Association of Nigeria (SEEDAN), National Centre for Genetic Resources and Biotechnology (NACGRAB) and Ahmadu Bello University-Institute for Agricultural Research (ABU-IAR). Partners have divided roles in leading topic teams, established for each of the eight topics; these teams involve many additional stakeholders. WCDI and Sahel are responsible for programme coordination and facilitation. The programme is funded by the Embassy of the Kingdom of the Netherlands (EKN) of Nigeria.

b. Review of follow-up measures taken since last reporting period

Find below the reflections and review of actions taken based on steering implications mentioned in the 2021 progress report:

- Starting field pilots: The CSP made significant progress with planned pilots for 2022; find details per topic in section 5. Some pilots have been delayed, like the pilots for Seed Tracker under the 'Seed quality assurance' topic, which will be implemented in 2023; and the pilots on "Seed business friendly procurement strategies", as proposed under the 'Institutional markets' topic; these pilots are only planned for 2024. These pilots will be designed based on the results of the study on current seed procurement practices, which will be implemented in 2023.
- Investing in capacity building: Many workshops and trainings have been implemented for the different CSP topics in 2022; find more details for each topic in section 5. These activities strengthen the necessary capacities of key stakeholders needed to ensure CSP interventions are sustainable.
- Ensuring buy-in of management of lead organizations: Management of lead organizations has been regularly briefed on all activities related to topics their organizations are involved in, and have been requested for feedback and advice. In August, WCDI and Sahel Consulting organized the annual face-to-face briefing meeting with NASC management, and met with SEEDAN management. Briefing of lead organizations' management is part of the adaptive management approach of CSP.
- Allowing for multiple perspectives and giving voice to various parties: This issue is addressed through CSP design by: (1) establishment of eight topic teams in which various organizations with a stake in the topic are represented; (2) the seed platform core group and seed platform meetings giving voice to various stakeholders on CSP topics but also other key topics important for the sector; and (3) the steering committee meetings, in which key seed sector stakeholders are represented.
- Investing in face-to-face team building with topic leads/teams: This investment has been made through organization of a study tour to the Netherlands in June, for Nigerian CSP management and topic leads to engage in a face-to-face meetings with their Dutch counterparts on the programme. During the visit, they had the opportunity to tour Naktuinbouw, WPR, HZPC and Enza Zaden, and also participated in a seminar held at the WUR campus.
- Allowing for linkage between topics: Many linkages have been established. Examples are: (1) between the topics 'Plant variety protection' and 'Variety release' through joint development of a seed portal; (2) between the topics 'Extension' and 'Seed marketing and promotion' through collaboration in training of seed companies on good agricultural practices for vegetable growing; (3) between the topics 'Seed sector platform' and 'Seed quality assurance' by jointly organizing a platform meeting on the Seedcodex; (4) between the topics 'Donor alignment' and 'Institutional markets', by the latter topic building upon the results of the first one. Topic leads meet bi-monthly

online to ensure useful linkages between topics are established, with the programme being more than the sum of its individual topics.

- Involving Naktuinbouw and Plantum: Naktuinbouw has been intensively involved in all activities related to the topic 'PVP'; next to the topic lead nine other staff have contributed to the various activities. Plantum has mainly been involved as a link to the individual international seed companies, supporting a transparent process of company selection and engagement in relation to the vegetable variety demos.
- Financial management of Nigerian topic leads: Sahel Consulting supports topic leads in financial management of the topics' activity budgets. NASC manages finance of the activity budget of the topics' Seed quality assurance', 'Seed sector platform' and 'Plant variety protection'. Sahel provides demand-based support to NASC.
- Considering elections in planning for 2023: Elections have been taken into consideration in activity planning; some activities slowed down or had to be postponed to 2023.
- Keep monitoring the security situation: Sahel Consulting continues to provide weekly updates on security, which provide guidelines for CSP staff and collaborators. In addition, international partners consult EKN Abuja on security before traveling. The trip as planned for November was postponed because of security issues in Abuja in October.

c. Relevant context changes and their potential impact

As anticipated in the last annual programme report, the build to the national elections of 2023 was marked by social disruptions and heightened insecurity. This climaxed in October when several western embassies shut down operations as a result of security threats; a trip of WCDI was postponed because of these threats. The security situation delayed the commencement of the demo plots establishment by one of the local vegetable seed distributors. However, security improved closer to the elections and all partners have committed to establishing the demo plot in the next planting seasons. The programme will keep monitoring the situation and engaging partners on safe implementation of activities and will continue using the security advisory services from a security consulting firm.

The Russia-Ukraine conflict also put some strain on the Nigeria economy and led to significant price inflation across all sectors. For the agriculture sector this affected the price of inputs needed by farmers and seed companies for their operations. However, this had only limited impact on the programme as this did not affect any planned programme implementation activity.

The Nigerian government implemented a currency redesign and cashless policy drive in the last quarter of 2022 which resulted in cash crunch especially in the rural communities. Due to the dearth of physical cash, farmers who only transact on cash basis are forced to sell their produce at a significant loss. If the situation does not improve, it may potentially lead to lower productivity in the planting season of 2023 as farmers would lack the ability to purchase the required inputs for production. We would encourage implementing partners, especially the seed companies, to consider digital transactions and also include some financial literacy topics on the farmer training.

There were recent changes in the agriculture policy landscape and of note to the programme was the National Biotechnology Development Agency (NABDA) establishment Act, 2022. This act effectively placed NACGRAB as part of NABDA and resulted in leadership change in the institution. NACGRAB is responsible for coordinating the National Variety Release Committee (NVRC) and is a key CSP implementing partner for the 'Variety release' topic. However the NVRC is an independent committee and was unaffected by this change. The programme has engaged the new leadership of NACGRAB and secured buy-in. Nothing has changed in the partnership and implementation support from NACGRAB.

5 Results and Outcomes

a. Description of activities, planned and results (outcomes and outputs) or progress towards achieving results, including indicators measured against baseline and target values

Below we summarise the achievements per topic, organised according to the above indicated outcome areas for sector development. For each topic we indicate the strategies and selected key outputs, as well as the two lead organisations and topic leads. Progress measured against indicators is given in Annex 1.

Enhanced capacity for quality service provision

Table 2: Topic update service provision

Topic name:	Decentralisation of seed quality assurance
Outcome:	Decentralised SQA systems for key food and nutrition security crops established and operational
Strategy 1:	Scaling Seed Tracker to maize and rice
Outputs:	<ul style="list-style-type: none"> Upgraded the Seed Tracker to maize and rice; held training session with users - seed companies and inspection officers - and included their feedback into the upgraded seed tracker. This was done in partnership with IITA and the BASICS-II Project. Completed a needs assessment for the use of a digital seed certification platform for seed quality assurance. The final validation workshop for the study was held and the document is undergoing desk reviews for publication.
Strategy 2:	Developing Standard Operating Protocols (SOPs) for tomato and potato
Outputs:	<ul style="list-style-type: none"> Developed quality assurance protocol for potato in collaboration with International Potato Centre (CIP) and GIZ. Held a validation workshop for the quality assurance protocol and published report following incorporation of the feedback from the validation workshop. Reviewed draft quality assurance protocols for tomatoes developed by a team of topic experts. Making use of the international training budget, with permission of EKN, eight professionals including seven CSP leads participated in the ISSD Africa conference in Kigali in October
Strategy 3:	Piloting Licensed Seed Inspectors (LSIs)
Outputs:	<ul style="list-style-type: none"> Selected and onboarded prospective LSI for pilot implementation. Trained the new LSIs for the crops- rice, maize, and potato inspection. Organized study visit to KEPHIS in Kenya for 5 team members to learn how best practice in Kenya may be tailored suiting the Nigerian context (NASC, IITA, Sahel, WCDI)
Lead organisations	Osho Bankole, NASC and Dr. Abishkar Subedi, WCDI

Enhanced efficiency and transparency of seed markets

Table 3: Topics update markets

Topic name:	Extension on seed and cultivation practices
Outcome:	Challenges related to the use of quality seed, improved varieties and advanced cultivation practices addressed
Strategy 1:	Formulation and implementation of action research projects on challenges related to the use of quality vegetable seed and advanced cultivation practices
Outputs:	<ul style="list-style-type: none"> Trained a team of 33 employees of ABU, IAR and NAERLS on sustainable vegetable production using Talentlms as an online platform; these staff can be used to support the extension component of the project. Conducted an action research study on "Factors influencing farmers adoption of advanced vegetable growing technologies, including quality seed of new varieties". Completed an on-station action research on the performance of quality seed of improved tomato and cabbage varieties grown in protected nurseries in comparison with farmers varieties grown in conventional nurseries. Findings showed that seedlings raised on trays performed better than seedlings raised on the seed beds. However, the yield of these varieties raised on seed beds also had satisfactory performance because good agricultural practices were adopted during the nursery establishment and for post-transplanting operations on the field. Explored collaboration with HortiNigeria on the action research agenda, searching for alignment of research activities (demonstrations, partners to work with) and division of work.
Strategy 2:	Dissemination of action research results to extension and farmer communities
Outputs:	<ul style="list-style-type: none"> Held two on-farm trainings in Q2 and Q4 of 2022 to raise awareness on vegetable production and the use of quality seed. Participants included:

extension agents, representatives from HortiNigeria and EWS-KT, Lead farmers from the eight LGAs, and traditional rulers of neighbouring communities. The varieties of quality seeds demonstrated outperformed farmers' varieties in terms of quality of fruits, resistance to diseases, fruit size, taste and overall yield.

Lead organisations	Prof. Aisha Abdulkadir, ABU-IAR and Flip van Koesveld, WPR
Topic name:	<i>Seed company marketing and promotion</i>
Outcome:	Capacity of Nigerian and Dutch seed companies to promote varieties increased
Strategy 1:	Design modality for strengthening Nigerian and Dutch companies promoting the use of quality seeds and improved varieties, combined with Good Agricultural Practices (GAP)
Outputs:	<ul style="list-style-type: none"> • Selected and contracted ten Nigerian seed companies and five Nigerian seed distributors collaborating with Dutch seed companies, to establish demo plots of field and vegetable crops respectively. • Conducted due diligence and evaluations of all seed companies as part of the selection and contracting process. • Designed subsidy model for the field crops and for vegetable crops partnering companies. • Designed modality for the pilot of demo plots establishment by the selected seed companies and distributors.
Strategy 2:	Support implementation of variety demos combined with GAP by Nigerian and Dutch companies
Outputs:	<ul style="list-style-type: none"> • Trained seed company staff on the establishment and management of variety demos. • Established over 40 demo fields of quality seeds of improved varieties of rice, maize, soybean in Kano and Kaduna states. • Established over 15 demo fields of onions, tomatoes, cabbage, pepper and sweet corn in communities in Kano and Kaduna. • Conducted farmers' green and brown field days, organized by nine Nigerian seed companies at the demo plot locations to demonstrate performance of fields to farmers and conduct practical training on good agronomic practices for farmers. • Held a workshop with seed companies in Kano in September for input on the demo establishment and management. • Set up of social media account for companies under the topic to showcase the performance of demo fields and follow. • Conducted training on social media marketing for partnering seed companies.
Strategy 3:	Disseminate results of the use of quality seeds, improved varieties and good agricultural practices
Outputs:	<ul style="list-style-type: none"> • No activity was planned for 2022.
Lead organizations	Stephen Adigun, SEEDAN and Flip van Koesveld, WPR
Topic name:	<i>Institutional markets</i>
Outcome:	Seed market distortion by institutional buyers reduced
Strategy 1:	Assess challenges and opportunities within existing seed procurement, dissemination and marketing practices and current business models and production capacity of seed companies that supply to institutional markets
Outputs:	<ul style="list-style-type: none"> • Developed concept note on topic approach and collaboration with identified seed sector stakeholders. Concept note detailing: <ul style="list-style-type: none"> ➢ the pathway to achieving the vision of the NSRM for the institutional market; ➢ the role of CSP in achieving the topic's ambition; ➢ the implementation steps; ➢ the required collaboration between the CSP and identified institutional market players; ➢ identified implementing partners and, ➢ expected delivery of the partnership. • Based on outcomes of the investment mapping study (topic' donor alignment'), commenced engagements for collaboration with the different categories of seed sector actors, including USAID, GIZ, EU, AGRA, OLAM, WACOT, Harvest Plus, FMARD and NASC
Strategy 2:	Pilot and scale, support and strengthen, assess the impact of and learn lessons from seed business-friendly procurement strategies in institutional markets

Outputs:	<ul style="list-style-type: none"> The pilot is planned for 2024.
Lead organisations	Chinedu Agbara, Sahel Consulting and Dr. Walter de Boef, WCDI

Enhanced sector coordination and accountability

Table 4: Topics update sector coordination

Topic name:	Seed sector platform
Outcome:	Coordination, alignment and accountability among seed sector stakeholders enhanced
Strategy 1:	Establishment of a functional national seed sector platform
Outputs:	<ul style="list-style-type: none"> Topic supported by operational secretariat at NASC. Held three quarterly Platform Core Group meetings with two online meetings and one face-to-face meeting in Abuja, Nigeria. Held three online and one face-to-face Seed Sector Platform Meetings in 2022: <ul style="list-style-type: none"> "Seedcodex- Seed quality assurance providing farmers value for money" (26 April) "Business models for early generation seed production" (14 July) "Prioritizing Investments in the Nigeria Seed Sector: Development Partners' Experience" (6 December) "The nexus between seed sector and food systems" and a panel on "Key seed tools and strategies to meet the Nation's food demand for seed, food and nutrition security" (Seed Connect Conference, 28 November) Advanced the development of a first version of the National Seed Road Map dashboard; including time series with TASAI, EBA, and other data sources; and using as many existing indicators as possible. In collaboration with ISSD AFRICA, organized a workshop & dialogue "Effective emergency seed response & intervention in Nigeria" (30 November)
Strategy 2:	Strengthen the professional capacity of SEEDAN
Outputs:	<ul style="list-style-type: none"> Planned beyond 2022
Strategy 3:	Organise studies on prioritised topics of the National Seed Road Map
Outputs:	<ul style="list-style-type: none"> Planned beyond 2022
Lead organisations	Ekum Ojogu, NASC and Dr. Marja Thijssen, WCDI
Topic name:	Alignment of donor interventions
Outcome:	Alignment and sharing of information contributing to NSRM implementation among development partners enhanced
Strategy 1:	Assess and map donor activities directly and indirectly impacting the seed sector within the framework of the NSRM
Outputs:	<ul style="list-style-type: none"> Completed the assessment and mapping of seed sector interventions using the NSRM framework. Presented the findings of the report on the quarterly seed platform meeting and published the final report on the CSP website.
Strategy 2:	Develop and operationalise a mechanism for coordination and alignment among development partners on seed sector issues, and to contribute to the NSRM
Outputs:	<ul style="list-style-type: none"> Engaged donors and development partners in the presentation of the mapping report during the quarterly seed platform meeting on the topic "Prioritizing Investments in the Nigeria Seed Sector: Development Partners' Experience". Agreement reached with EKN to integrate the topic outcome in the 'Seed sector platform' and the 'Institutional markets' topics.
Strategy 3:	Regularly monitor, document, share impact and lessons learned; provide inputs for continued alignment and scoping modalities for achieving NSRM ambitions
Outputs:	<ul style="list-style-type: none"> Donor alignment topic closed in 2022; this activity to be conducted under the 'Seed sector platform' and the 'Institutional market' topics.
Lead organisations	Chinedu Agbara, Sahel Consulting and Dr. Walter de Boef, WCDI

Enhanced seed regulatory systems

Table 5: Topics update regulation

Topic name:	Plant variety protection
Outcome:	System for plant variety protection in place and operational
Strategy 1:	Raising awareness of stakeholders on PVP
Outputs:	<ul style="list-style-type: none"> Developed 50,000 pamphlets, 400 PVP promotional t-shirts & caps, three short videos, two blogs, a Facebook page dedicated for PVP awareness and shared with key stakeholders. Organised four workshops (two at national and another two at regional levels) to create awareness on the PVP. Coordinated 3 three Advocacy events with the Federal Ministry of Justice, Ministry of Industry, Trade and Investment, Ministry of Science and Technology and Civil Society Organizations to canvass more buy-in for the PVP System.
Strategy 2:	Setting up the Plant Variety Protection (PVP) office
Outputs:	<ul style="list-style-type: none"> Commenced the development of a PVP web portal developed to provide a one-stop service for PVP system implementation in Nigeria. Organised two meetings to discuss the functionality of the PVP portal. The portal to be combined with the variety release portal to enable applicants access variety release and PBR information from one platform. Conducted training for key staff of PVP office, NACGRAB, and private breeders of seed companies to strengthen their efficiency in implementing PVP office duties and learn how the system works so that Nigeria can have a reliable, independent, high-quality, and cost-efficient PBR system. In addition, in collaboration with AGRA, the topic team supported the development of PVP regulations for Nigeria.
Strategy 3:	Develop capacity on Distinctiveness, Uniformity and Stability (DUS) testing
Outputs:	<ul style="list-style-type: none"> Conducted online training on DUS focusing on maize and tomatoes for 28 officers drawn from relevant Nigerian institutions. Training focused on basic/general principles and practical aspects of DUS examination, testing and administration. Training group included: DUS testing centres staff and variety registration staff (NARI, NASC, NACGRAB), and breeders.
Lead organisations	Dr. Folarin Okelola, NASC and Laura Piñán González, Naktuinbouw
Topic name:	Variety release
Outcome:	Efficiency and effectiveness of variety release system improved
Strategy 1:	Conduct baseline study and hold validation workshops
Outputs:	<ul style="list-style-type: none"> Completed two studies; the first was a baseline assessment of the Variety Release process in Nigeria, the second focused on System improvement scenarios including digitization of processes of variety release. Based on the findings of the studies eight innovations including digitalization of the process were proposed to enhance and increase the efficiency of the system.
Strategy 2:	Conduct Variety Release Innovation Pilots
Outputs:	<ul style="list-style-type: none"> Engaged NARIs and seed companies for the conduct of innovation pilots for maize, rice, tomato and cassava. Held progress workshop in June and discussed progress of each innovation pilot and identified areas for improvement. Three of the seven pilot innovations were conducted for maize, tomato and rice. Completed two of the innovations piloted and presented to the Variety Release Committee: <ul style="list-style-type: none"> Three tomato varieties were released and registered using guidelines of innovation on vegetables by CSP. One maize variety was released and registered using the guidelines of innovation on ECOWAS varieties piloted by CSP. Facilitated knowledge sharing webinar on VCU/DUS testing with active participation of representatives from Variety release Nigeria, and Naktuinbouw, Netherlands
Strategy 3:	Implement Digital Solution to Variety Release
Outputs:	<ul style="list-style-type: none"> Developed the Variety Release Portal. Database has been pre-filled with available data of priority crops.

- Presented the functionality of the portal for review during Seed Connect and the 31st National variety release meeting.

Lead organisations

Dr. Ibidun Adetiloye, NACGRAB and Dr. Walter de Boef, WCDI

b. Unintended positive and negative effects of the intervention

Unintended Positive Effects

- The progress of the CSP has fostered enthusiastic action amongst key stakeholders in the seed sector, open to test and take ownership of innovations, like those in the 'Variety release' topic, and support scaling of innovations, like the Seed Tracker in 'Seed quality assurance' topic. Even if expected, it is worthwhile to mention this.
- The CSP was able to establish strategic partnerships, which has improved the reach of certain interventions. For instance, the number of Licensed Seed Inspectors proposed under the 'Seed quality assurance' topic was scaled up to reach Jigawa to cover BT Cowpea. Additionally, WRP provided training of ABU, IAR and NAERLS staff in the 'Extension' topic, which was not initially planned; this was supported through the SDG project of EWS-KT. Also worthwhile to mention is engagement with GIZ on the SOP for potato; and engagement with ISSD Africa for a dialogue and workshop on "Effective emergency seed response and intervention".

Unintended Negative Effects

- N/A

c. Progress of the implementation of cross cutting themes, gender, youth and nutrition

- As indicated in the last report, some topics do not directly work with farmers, like the topic 'Seed sector platform', and the topic 'Donor alignment'. However, with improved sector performance, the seed sector will contribute to improving farmers' crop productivity, improving household food security and nutrition, and increasing farm-derived income. For a seed regulatory topic like 'Variety release' it will take some time before farmers, including women and youth, can benefit through access to a more differentiated portfolio of varieties fitting their specific needs.
- For the variety demonstrations, as organized under the 'Seed company marketing and promotion' topic, the number of female and youth farmers reached is currently at 43% and 46% of recommended targets. The agriculture sector is dominated by men. The CSP will continue to push for women and youth inclusion in this topic.
- The 'Extension' topic reached 18% and 17% of the recommended targets for reaching youth and gender respectively. These figures are expected to increase significantly once the topic commences the large scale dissemination of findings from action research, slated to start in Q2 2023.
- For the topic 'Seed quality assurance' we agreed that not less than 30% of LSIs will be allocated to females, while 90% of the LSIs are to be youths. 100% of the new LSIs are youths; only 5% are females. The low levels of inclusion for female LSIs can be attributed to the cultural norms in Kano and Kaduna, which make it difficult for women to do field work. New strategies need to be developed.

d. Overall project and visibility

The CSP uses the programme's website (<https://csp-nigeria.org/>) to publish information and articles on the programme, the CSP topics, the partners, CSP and seed related activities, exciting events and publications, etc.

The programme continues to leverage the social media presence of the programme management office to share information on and promote online visibility of the CSP. CSP events were publicised by posting fliers across social media platforms to increase awareness for the events. In 2022, the CSP also explored the use of MailChimp for bulk emails notifying stakeholders of events. So far, this has recorded some success. The CSP team is now working on developing a CSP newsletter to provide periodic updates on progress to seed sector stakeholders.

In 2022, the CSP attended/hosted a number of events:

- The SeedConnect event, which was held on the 28 and 29 November. The CSP had a stand in the exhibition and a presentation at the conference programme. The CSP raised awareness on its progress, partner companies and key collaborations.
- In collaboration with ISSD Africa and Mercy Corps, CSP organized a workshop “Effective emergency seed response & intervention in Nigeria” on 30 November (<https://issdafrica.org/2023/01/19/workshop-dialogue-effective-emergency-seed-response-intervention-nigeria/>); this event was organized back-to-back with Seed Connect.
- The launch of the HortiNigeria Programme on 3 March, where the CSP had an exhibition stand (<https://ifdc.org/2022/03/05/ifdc-and-partners-launch-hortinigeria-program/>). EKN Abuja is funding this programme.
- The CSP team participated in a study visit to the Kenya Plant Health Inspectorate Service (KEPHIS), 7-11 November.
- The CSP participated in the conference “Advancing the transformation of Africa’s seed sector: Emerging insights and perspectives” as organized by ISSD Africa in Kigali 17-19 October (<https://issdafrica.org/2022/11/03/conference-2022-advancing-the-transformation-of-africas-seed-sector-emerging-insights-and-perspectives/>).
- The CSP held Seed Sector Platform meetings in every quarter of 2022 (find more details at: <https://csp-nigeria.org/>).

6 Sustainability

a. Measures identified to enhance project sustainability and proposed exit strategy

The issue of sustainability is integrated in the design of the CSP. Programme topics are selected from the National Seed Road Map (NSRM). These topics have been prioritised by stakeholders for improving the performance of the Nigerian seed sector. Topic strategies build upon the strategic innovations pathways as presented in the NSRM. Nigerian topic leads are representatives of a key stakeholder responsible for the topic in the Nigeria; topic teams unite various organisations with a stake in the topic. In this way we create ownership within the sector for the proposed change pathways.

Topic partnerships have been carefully established to support sustainability of topic results. For example, NASC is highly motivated to scale the Seed Tracker to maize and rice as a step up for making it a national tool for seed certification. NASC also hosts the National Seed Platform, for which we also created a link with Seed Connect; and hosts the PVP office, which will continue its work after closing of the programme. NACGRAB is very motivated to support efforts to increase the efficiency and effectiveness of the variety release system. In the extension topic ABU-IAR works closely with NAERLS ABU Zaria, with its strong extension unit and extension mandate. For seed company promotion, SEEDAN is the logical partner.

The CSP aims to create an evidence base for scaling of innovations. Most topics follow a pathway consisting of the following steps: (i) study the current situation; (ii) evaluate opportunities for innovation based on experiences in-country or elsewhere; (iii) share study results and innovation opportunities with stakeholders and jointly prioritise innovations for piloting; (iv) develop pilots, to be implemented in collaboration with the organisations already responsible for the topic; (v) develop capacity for implementation; (vi) evaluate pilots and develop pathways for scaling. This approach allows to learn from each step, and adapt where necessary to reach the envisaged results.

b. Description of exit strategy (if applicable)

Project exit needs to consider sustainability, which needs to be integrated in project design and implementation; see section 6a above.

7 Risks

During CSP design we assessed implementation risks and developed risk mitigation strategies; further refinement of the mitigation strategies was presented in the 2021 progress report. Find the risks and strategies in Annex 2. Find in Table 6 key observations on implementation of the risk mitigation measures.

In general we see that the situation of insecurity in Kaduna State is getting worse. We envisage that this will not much improve towards the upcoming elections in 2023. We keep on monitoring risks and with a weekly security brief inform partners on risks, and advise how to deal with them. Currently, international programme management is not allowed to travel in Kaduna and Kano State (red area), and only allowed to travel to Kano by plane and stay within the city boundaries (orange area).

Table 6: Risks and summary on implementation of mitigation strategies ⁽¹⁾

No.	Risk	Implementation of mitigation measures
1.	Situation of high insecurity in Kaduna State disrupts field-based activities	Measures implemented; the project only works in LGA's in Kaduna and Kano State that are relatively safe; the security situation is expected to worsen towards the 2023 elections
2.	Fraud and corruption undermine project implementation	Measures implemented; no cases of fraud and corruption encountered in 2022
3.	Non-performance of partners who do not prioritise the project-supported interventions	Measures implemented; even if some activities face slight delays, all programme partners are committed to activity implementation
4.	Political economy of the seed sector interferes with project implementation	Measures implemented; no challenges faced yet in this area
5.	Not sufficiently involving female and young professionals; and not reaching women and youth farmers	Measures implemented; however, challenging to engage with women farmers; this need continuous attention and support
6.	Farmers are not interested in using quality seed of improved varieties	Measures implemented; specific study implemented looking at factors influencing quality seed and variety adoption
7.	Unclear relationship between SeedNL, the NNSP and the Collaborative Seed Project	Measures implemented; CSP, NNSP and SeedNL are well established and collaborate in a fruitful way
8.	Disruption of field activities due to climatic disruptions	Measures implemented; looking how climatic issues may be further addressed in action research
9.	Lock down and reduced domestic and international mobility due to COVID-19	Measures implemented; CSP partners now used to 'new after-COVID reality' with increased use of online communication tools, reduced international travel, and therefore also change in roles in implementation

1) Find all mitigation strategies in Annex 2.

8 Institutional/Organizational Development and Human Resources

The programme is managed by WCDI and Sahel Consulting, in close collaboration with NASC. Sahel Consulting and WCDI provided support to all the programme topics, directly as well as indirectly by supporting programme partners in the topic activities.

CSP management and topic leads have all expertise and experience to implement the topic activity plans. In 2022 we invested in team building through the study tour to the Netherlands of Nigerian CSP management and topic leads, allowing for intensive engagement with the Dutch counterparts of WCDI, WPR, Naktuinbouw and Pantum. Nigerian CSP management and topic leads also benefited from participation in the international ISSD Africa conference, where they met with a wide range of international and African seed experts, working on similar topics as CSP.

At the end of 2022 Flip van Koesveld handed over leadership of the topic 'Extension' to his colleague Herman de Putter; and leadership of the topic 'Seed company marketing and promotion' to his colleague Johann Bonnand. Flip will stay engaged with CSP at a more strategic level.

Sahel faced problems with recruitment of a seed systems advisor, and vacancies for analysts and a communication advisor. With two new analysts and a communication advisor on board the team is now fully established.

CSP also invested in building the capacity of the organisations responsible for the eight programme topics. An example is the establishment of the PVP office at NASC; strengthening the capacity of staff of the office was part of last year's CSP activities.

9 Finance

Presented in a separate document.

10 Lessons Learned

- Collaboration with other seed programmes with similar objectives leads to cost-effective implementation of innovations and avoids duplication of efforts. It also enhances opportunities for knowledge sharing, capacity building, and scaling of successful interventions. (Examples: SOP for potato with CIP, and Seed Tracker with IITA)
- Exposing teams to best practices and innovations from other countries, providing opportunity to learn from other experts and practitioners, stimulates creativity to find new solutions and drives seed sector innovation. (Examples: study tour to Kephis, and ISSD Africa conference)
- Face-to-face engagement is essential for building connections and improving project delivery. While digital communication tools have become increasingly popular, there is still value in face-to-face conversations. These interactions help build trust, establish rapport, and foster better collaboration between team members.
- Careful consideration should be given to the challenges of including women in certain seed system functions. Because women have historically been underrepresented in these functions, it is important to consider the specific challenges and barriers that women face, such as the requirement for years of experience, and to develop strategies to address them. It is important to encourage topics teams to celebrate successes achieved by the female participants to promote interest. (Example: Female LSI as champion)
- Demonstration fields and seed markets incentivize the adoption of quality seed and good agronomic practices. Nearness to seed demonstration fields and access to seed markets are positively correlated to adoption. This supports the programme's hypothesis and was one of the key findings from the action research study on adoption.
- Local partners are crucial for programme implementation, especially in insecure areas. We worked with the local distributors of international seed companies for demonstration establishments in communities in Kaduna and Kano. Local partners often better understand the local context and are better able to deal with emerging security risks.
- While quality seed is important, effective field management is also critical for achieving better yields. This showed clearly in the demonstration fields established by lead farmers as some of them achieved yields better and others worse than expected; correlation with management practices was visible.
- 'Institutional markets' is a sensitive topic which requires lots of partner engagement before partners are willing to allow study of their practices.
- The seed sector platform webinars attract high interest from other programmes and interventions seeking to share knowledge, best practices, and solutions with sector stakeholders to create awareness and engagement of their activities through the platform. The CSP fosters collaboration and partnerships with other interventions of interest by providing the platform for their engagements.
- Alignment of donor interests in the seed sector is challenging. Donors often have different mandates and priorities, which makes alignment difficult. It is important not to create new platforms for alignment but to work to maximize the benefit of existing platforms, structures and engagement modalities.
- Technical experts are supportive of Plant Variety Protection (PVP), however, this is not necessarily the same with non-technical actors. More advocacy is required to improve understanding and buy-in of all key stakeholders.
- Investment in digital platforms for seed sector regulations improves efficiency, but requires stakeholder buy-in across the board; alignment of systems for different regulations further supports efficiency. (Example: portal for PVP and variety release)
- Driving innovation in any area of the seed sector requires engagement of both field teams and the leadership to secure complete buy-in. It is important to ensure that both the implementing teams of the institutions and the leadership and management are aligned and committed. This requires

effective communication and engagement, so everyone is aware of what needs to be done, why it needs to be done, and how it will be done.

Annex 1: Indicators and targets

Indicator number	Indicator description	2021	2022	Baseline	Target	Cumulative reach	% reached	Notes
	OUTCOME level							
1	Number of small-scale food producers (SSFP) that progressively decrease the yield gap in Kaduna State	0	25,336	0	291,800	25,336	9%	Variety demos field crops; extension events
	female		7,916		58,360	7,916	14%	
	male		17,420		233,440	17,420	7%	
	<35		13,036		90,460	13,036	14%	
2	Number of small-scale food producers with increased productivity in Kaduna State	0	25,336	0	291,800	25,336	9%	Similar to indicator 1
	female		7,916		58,360	7,916	14%	
	male		17,420		233,440	17,420	7%	
	<35		13,036		90,460	13,036	14%	
3	Number of small-scale food producers using quality seed in Kaduna State	0	2,956	0	146,190	2,956	2%	Variety demos field crops; extension events
	female		924	0	29,240	924	3%	
	male		2,032		116,950	2,032	2%	
	<35		1,521		45,320	1,521	3%	
4	Number of small-scale food producers using improved varieties in Kaduna State	0	2,956	0	146,190	2,956	2%	Similar to indicator 3
	female		924		29,240	924	3%	
	male		2,032		116,950	2,032	2%	
	<35		1,521		45,320	1,521	3%	
5	Number of crop specific seed quality assurance protocols in place and used	1	2	1	3	3	100%	Potato; rice & maize through Seed Tracker
6	Number of NASC inspectors, third party inspectors and accredited seed quality assurance professionals	133	19	133	177	152	86%	First batch LSI's trained
7	Number of action research projects on challenges related to the use of quality seed, improved varieties and advanced cultivation practices	1	3	0	8	4	50%	3 new projects started in 2022
8	Number of organisations in Kaduna State using recommendations on challenges related to the use of quality seed, improved varieties and advanced	0	15	0	20	15	75%	IAR, NAERLS, 3 agrodealers, Extension agents + community-based

Indicator number	Indicator description	2021	2022	Baseline	Target	Cumulative reach	% reached	Notes
	cultivation practices resulting from action research projects							advisors from 8 LGAs, 2 farmer cooperatives
9	Number of Nigerian and Dutch seed companies operating in Kaduna and Kano States with improved capacity to promote varieties	11	13	11	16	13	81%	9 Nigerian companies for field crops; 4 Nigerian-NL partnerships for vegetables
10	Number of small-scale food producers reached in Kaduna and Kano States through variety promotion by seed companies	0	5,876	0	29,000	5,876	20%	Restricted to field crops since vegetable demos only started in Q4
	female		1,740	0	5,800	1,740	30%	
	male		4,136	0	23,200	4,136	18%	
	<35		2,880	0	8,990	2,880	32%	
11	Number of improved varieties included in seed company operated variety demos in Kaduna and Kano State	0	23		55	23	42%	Restricted to field crops since vegetable demos only started in Q4
	Field crops		23	0	25	23	92%	
	Horticultural crops		0	0	30	0	0%	
12	Number of seed market interventions by institutional seed buyers in accordance with the good practice guidelines for institutional markets	0	0	0	10	0	0%	
13	Number of dialogues and consultations contributing to NSRM implementation engaging at least 3 different types of stakeholders	12	19	0	34	31	91%	Dialogues in context of topic 1 (3), topic 2 (2), topic 3 (2), topic 5 (7), topic 7 (2), topic 8 (2), general (1)
14	Number of collaborative projects contributing to NSRM implementation agreed upon in the seed sector platform and involving at least 3 types of seed sector stakeholders	5	18	0	55	23	42%	3 research projects; 9 demos; 2 variety release pilots; PVP legislation-AGRA; SOP potato-GIZ; LSIs-IITA; seed policy-AGRA
15	Number of seed sector interventions by different development partners contributing to the NSRM	50	3	50	70	53	76%	HortiNigeria; 2 seed related projects GIZ
16	Number of organisations capable of and implementing tests for Distinctiveness, Uniformity and Stability (DUS)	0	2	0	4	2	50%	NASC & NACGRAB; NARIs trained but not implemented yet
17	Number of varieties granted plant breeders rights	0	0	0	10	0	0%	
18	Duration of the process for variety release	43	12	43	36		100%	12 months for tomato; VCU no longer required
19	Average cost to conclude variety release (in US\$)							
	Maize	15,000 \$		15,000 \$	12,000 \$		0%	

Indicator number	Indicator description	2021	2022	Baseline	Target	Cumulative reach	% reached	Notes
	Rice	27,000 \$		27,000 \$	21,600 \$		0%	
	Tomato	12,500 \$	10,000 \$	12,500 \$	10,000 \$		100%	VCU no longer required
20	Number of varieties released per crop contributing to food and nutrition security per year							
	Maize	9	6	9	12	15	125%	
	Rice	1	1	1	3	2	67%	
	Tomato	2	5	0	2	7	350%	
	OUTPUT level							
21	Number of small-scale food producers directly reached in Kaduna state disaggregated for male/female and age (% <35 yrs)	0	6,334	0	109.900	6,334	6%	Variety demos field crops; extension events
	female		1,979	0	21,980	1,979	9%	
	male		4,355	0	87.920	4,355	5%	
	<35		3,259	0	34.070	3,259	10%	
22	Number of small-scale food producers indirectly reached in Kaduna State disaggregated for male/female and age (% <35)	0	25,336	0	291,800	25,336	9%	Variety demos field crops; extension events
	female		7,916	0	58,360	7,916	14%	
	male		17,420	0	233,440	17,420	7%	
	<35		13,036	0	90,460	13,036	14%	
23	Number of Dutch supported interventions in seed sector transformation in Nigeria	11	1	0	13	12	92%	HortiNigeria
24	Number of strengthened seed sector stakeholders within the process of seed sector transformation in Nigeria	0	31	0	60	31	52%	IAR, NAERLS, NASC, NACGRAB, VRC, 3 agrodealers, 13 seed companies/distributors, Extension agents + community-based advisors from 8 LGAs, 2 farmer cooperatives
25	Number of reforms/ improvements in seed policies/laws/regulations benefitting at least tens of thousands of small scale food producers	0	6	0	25	6	24%	3 for SQA; 2 for variety release; new seed policy

Annex 2: Risks and mitigation strategies

In the tables below the risks and mitigation strategies are elaborated, which are also part of the approved CSP proposal. Included are the adaptations as proposed in the 2021 annual progress report. Additional explanations are provided below the table if relevant.

Risk	1 Situation of high insecurity in Kaduna State disrupts field-based activities
Mitigation	<ul style="list-style-type: none"> This risk only concerns topic 1, 2 and 3 which include field-based activities in Kaduna State ⁽¹⁾ Work with staff of local partners who understand the local languages and are fully familiar with the local situation Through local partners enlist the buy-in and support of the local community leaders (e.g. traditional leaders) to facilitate the implementation process of project activities Confer with existing projects in the various locations to establish critical high-risk security areas within each community to inform decision making on the area of intervention Restrict the work to those LGA's in Kaduna, which are considered relatively safe ⁽²⁾ Follow safety instructions of EKN Abuja in relation to traveling and working in Kaduna State; and inform EKN on travel plans of international staff Host the project field staff in Zaria, which is a generally safe environment; Zaria has good accessibility to both Kaduna and Kano State and therefore creates some flexibility in planning and operating activities in both states Plan for field-based activities based on continuous security assessments in Kaduna State, and shift activities to Kano State in case of high security risks in Kaduna State; consult EKN in this process Sahel Consulting works with a company which develops weekly security briefs which are shared with all key CSP partners; we work according to the advice in these briefs
Likelihood	Likely (topic 1, 2 & 3)
Impact	Moderate (topic 1, 2 & 3)

1) Topic 1: Seed quality assurance; topic 2: Extension; topic 3: Seed company promotion

2) Also consider LGA's in Kano State

Risk	2 Fraud and corruption undermine project implementation
Mitigation	<ul style="list-style-type: none"> Each implementing partner must establish or demonstrate functioning of an anti-fraud and corruption policy; such policies are an integral part of the code of conduct of the project Establish and agree upon the code of conduct together with all project partners, including clauses on issues like absence of sitting allowances, use of project equipment and project incentives; the code of conduct will become an attachment to partner contracts as well as sub-contracts Note that in line with government directives, partners like NASC have functional anti-corruption and transparency units, guiding against corruption in public institutes Establish clear reporting and accounting systems and structures for the project to ensure limited room for fraudulent activities Annual audit of Dutch lead partner WCDI and Nigerian lead partner Sahel Consulting Establish an agile and lean contracting structure, where Sahel Consulting will be responsible for subcontracting partners in Nigeria, based on agreed terms of reference Provide partners with additional funds only after use of earlier provided funds has been appropriately reported and approved, and transfer funds for activities in smaller and more frequent disbursements Zero tolerance on corruption with blacklisting and exclusion of partners if such practices occur Set up a whistle-blower system to enable the team and impacted stakeholders to report any fraudulent activities

Risk	2 Fraud and corruption undermine project implementation
	<ul style="list-style-type: none"> Based on the in-depth stakeholder analysis as conducted in the inception phase, invite the appropriate stakeholders to participate in the project's activities Ask for monthly progress reports and organise monthly progress meetings with topic leads to keep track of performance for the different topics ⁽³⁾ Organise weekly programme management meetings of WCDI, Sahel and NASC; and monthly meetings of WCDI, Sahel and EKN to keep track on progress of the programme ⁽⁴⁾
Likelihood	Possible
Impact	Moderate

3) Monthly topic reports, however, bi-monthly topic lead meetings

4) Weekly meetings with WCDI, Sahel and NASC, however, bi-monthly meetings with EKN, Sahel and WCDI

Risk	3 Non-performance of partners who do not prioritise the project-supported interventions
Mitigation	<ul style="list-style-type: none"> The seed sector review process (2019-2020) has illustrated high competence and interests of key partners Carefully select non-government project partners with a keen interest in the topic, based on consultation of NASC and Sahel and the in-depth stakeholder analysis conducted in the inception phase Work with leadership of government service providers to ensure that we have continuity of staff in the implementation of the project Develop performance-based contracts outlining clear activities and deliverables, and complete payments only after completion of the activities Develop and implement a project planning, monitoring and evaluation system that keeps track of activities including a warning system in the case of non-performance Discuss non-performance with partners and replace partners in the case of lack of improvement
Likelihood	Unlikely
Impact	Minor

Risk	4 Political economy of the seed sector interferes with project implementation
Mitigation	<ul style="list-style-type: none"> Implement an in-depth stakeholder analysis during the inception phase, mapping the power and interests, including potential resistance towards change, of Nigerian seed sector stakeholders in general as well as in relation to the different CSP topics Track and keep key stakeholders and partners informed about the political and economic challenges of the agriculture sector in Nigeria to avert potential economic and political challenges Enlist the support of the government agencies for the execution of the project Work according to the National Seed Road Map (NSRM), which has been adopted by government agencies and private sector actors, limiting the impact of political issues on the project Avoid any political party involvement and entanglement by the project and its implementing partners Create transparent governance and management structures for the implementation of the project and its sub-projects Ensure that documentation on project and project topic activities and organisations involved are available within the public domain Ensure regular reporting to a governing or coordination body for the NNSP in which both Nigerian and Dutch stakeholders are represented ⁽⁵⁾
Likelihood	Unlikely
Impact	Moderate

5) Change 'NNSP' into 'CSP'; this is given shape through the CSP steering committee.

Risk	5 Not sufficiently involving female and young professionals; and not reaching women and youth farmers
Mitigation	<ul style="list-style-type: none"> • Include a gender and generational analysis in the baseline • Agree with CSP partners to establish mixed teams for project implementation in terms of gender and generation; report and review team composition annually • In the context of topics 2 and 3, include a clear gender and youth focus in the planning and monitoring of activities such as studies, pilots and meetings, for improving women and youth farmer access to quality seed of improved varieties • Annually report and review achievements of topic 2 in effectively addressing interests of, and topic 3 in reaching women and youth farmers; and in case of non-performance take appropriate actions • Note that impact indicators 1 to 4 are measured at the household level, and cannot be separated by gender and generation; indicators 10, 21 and 22 are disaggregated by gender and generation • Agree with partners to ensure that activities as implemented by the project will not negatively impact the access of women and youth to quality seed of improved varieties (do no harm) • Include a Civil Society Organisation in the project's steering committee
Likelihood	Possible
Impact	Minor

Risk	6 Farmers are not interested in using quality seed of improved varieties
Mitigation	<ul style="list-style-type: none"> • Study in topic 2 how to best implement seed and variety promotion within the current cultural setting • Take a non-judgemental approach on where and how farmers source their seed • Focus on those farmers and crops, where the use of quality seed of improved varieties pays off in terms of increased productivity, income and resilience • Work in line with the production system of farmers, for example, also include OPVs for maize or tomato if these continue to be preferred over hybrids • Combine introduction of quality seed of improved varieties with appropriate cultivation practices • Provide farmers with simple economic models to analyse the profitability of using quality seed of improved and if relevant hybrid varieties • Work with local seed companies who know the seed market • Accept that seed markets fluctuate in relation to crop and food markets, and farmers respond to that in their options for purchase of quality seed
Likelihood	Rare
Impact	Moderate

Risk	7 Unclear relationship between SeedNL, the NNSP and the Collaborative Seed Project
Mitigation	<ul style="list-style-type: none"> • During the project's inception phase, discuss with EKN the governing and coordination structure for both the NNSP (EKN and FMARD in the lead) and the CSP (consortium partners in the lead), and clearly define the relationship ⁽⁶⁾ • Whereas WCDI and partners are responsible for the CSP, EKN will lead the NNSP • During the project's inception phase, elaborate a clear communication and reporting structure among the CSP, the NNSP and SeedNL ⁽⁷⁾ • SeedNL is currently in the process of employing a director; work with the director in the establishment of working relationships ⁽⁷⁾ • WCDI is leading the CSP as well as the Ethio-Netherlands Seed Partnership; these two pilot projects are high on the agenda of the SeedNL partnership
Likelihood	Rare
Impact	Minor

- 6) Note that NNSP does not involve FMARD, but brings together Nigerian and Dutch lead organizations of Dutch supported seed and horticulture interventions in Nigeria.
- 7) Note that CSP, NNSP and SeedNL are now all well established, including a fruitful working relationship between them.

Risk	8 Disruption of field activities due to climatic disruptions
Mitigation	<ul style="list-style-type: none"> This risk only concerns topic 1, 2 and 3, which include field-based activities in Kaduna State and Kano State ⁽⁸⁾ Most activities in the project are targeting system changes in the sector, and thereby the potential impact of climatic disruptions on the performance of the project remains limited For the activities in topic 1, 2 and 3, give major consideration to varieties that are more drought tolerant and have other traits that improve climate resilience Promote crop cultivation practices that fit with the current climatic conditions Accept that climatic disruptions, like too much or too little rain may occur and are beyond our control
Likelihood	Possible (CSP 1, CSP 2 and CSP 3)
Impact	Major (CSP1, CSP 2 and CSP 3)

- 8) Note that Kano State has been added; see also Risk no. 1

Risk	9 Lock down and reduced domestic and international mobility due to COVID-19 ⁽⁹⁾
Mitigation	<ul style="list-style-type: none"> Leverage technology for activities that do not require field visits and in-person meetings, using digital conferencing, zoom meetings, web-based planning, monitoring, evaluation and reporting, etc. Thus, limit local, national and international travel Follow the travel guidelines of the Ministry of Foreign Affairs and WUR for international travel In case of limitations in international travel, discuss with the project team how local partners can take over responsibility for certain activities Ensure all team members (especially field teams) carry the Federal Government issued letter to enable the free movement of stakeholders in the food and agriculture sector Advocate for and obtain similar letters from the Kaduna government to enable the free movement of project teams Engage with stakeholders during the pandemic through online surveys and discussions Adapt project plan if needed based on online surveys and discussions; inform EKN Abuja accordingly
Likelihood	Likely
Impact	Major

- 9) The COVID-pandemic no longer hampers project implementation; still COVID-19 created new ways of working and new division of responsibilities in programme management and implementation, that have become common practice. This includes use of online engagement tools and reduced international travel.

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