



## **Gender Master Plan**

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## **N2Africa**

**Putting nitrogen fixation to work  
for smallholder farmers in Africa**



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## Summary

N2Africa recognizes the critical importance of women in legume production. The fact that their access to appropriate technologies and necessary resources is often constrained by gender and institutional barriers a **Gender Master Plan** is developed to identify and incorporate gender research and analysis, and other gender-related issues at all levels of project planning. We seek to identify interventions that will be spread over the time frame of the N2Africa Project and steer the efforts towards achieving gender- equitable impacts at all levels.

The **Gender Master Plan** directly addresses **Objective 3: To empower women and increase their benefits from legume production**. As gender is integral to all the other components, the **Gender Master Plan** interacts actively with all the other Master Plans and serves as instrumental guide to interrogate their objectives to ensure that specific gender concerns are captured. In other words, this plan has a cross cutting role to ensure that the necessary 'best fit' technologies to close the gender gaps on yields, income, nutrition, labour allocation and enhance gender and NRM responsive R&D capacity in the NARS. This includes documentation of whether key technologies developed are (or are not) benefitting women to the degree expected, particularly in terms of drudgery reduction, nutrition, and income.

The **Gender Master Plan** will be translated into action by bringing on board gender-based partner organizations with experience in agriculture research & extension to take the lead in implementing Objective 3. Major focus will be on further gender capacity strengthening activities following a training of trainers (TOT) approach (a Training Manual on Gender and Legume Value Chain has been developed). This will enable N2Africa to go beyond the technical training needs, develop a culture of gender inclusiveness, and eventually steer the combined efforts towards achieving gender-equitable impacts at all levels.



## I. Introduction and justification

The N2Africa Master Plans are documents intended to foster a common approach across the five Core Countries. The plans are designed to achieve the N2Africa Vision of Success and the objectives set out in the Research Framework of the approved project proposal. This means all Master Plans need to ensure timely delivery of the outputs and outcomes.

This Master Plan directly addresses:

**Objective 3: Empower women to increase benefits from legume production** and through the Development to Research approach, engaging actively national partners to play a central role and enable the transition towards the institutionalization of gender and legume value chain capacity in the Five Core Countries.

## II. Underlying principles

N2Africa recognizes the critical importance of women in legume production. The fact that their access to appropriate technologies and necessary resources is often constrained by gender and intuitional barriers a gender master plan is developed for identifying and incorporating gender research and analysis, and other gender-related issues at all levels of project planning and interventions that will be spread over the time frame of N2Africa Project and steer the efforts towards achieving gender-equitable impacts at all levels.

The gender master plan directly addresses Objective 3 of the project. As gender is integral all the other components, it also indirectly serves to interrogate all the other objectives to ensure that specific gender concerns relevant to these objectives are captured. In other words, the gender master plan has a cross cutting role to ensure that the necessary 'best fit' technologies to close the gender gaps on yields, income, nutrition, labour allocation and enhance gender and NRM responsive R&D capacity in the NARS.

### Aim

- To understand how gender relations condition legume cultivation and processing
- An enhanced role of women to take advantage of new technologies in the production of grain legumes, access to production inputs, market opportunities and control over benefits derived from these crops
- Reduce women's drudgery in grain legume production and processing, including improved household food and nutritional security and income, and for men and women

### Approach

The approach is not only to implement and deliver Objective 3, but also to ensure that gender response approach is also integrated in all the other objectives. The following approaches are identified:

- Gender Research in the areas of gender-related constraints and opportunities faced by women along the value chain including technology access and adoption and, their preferences
- Gender mainstreaming in the various objectives and in capacity development initiatives using Training of Trainers programs to ensure increase in the direct participation of women in legume technology testing and validation
- Gender analysis of specific contributions of men and women to socio-economic processes of legume cultivation and processing, differential access to and control over resources, and the rewards they gain from these contributions in the target production contexts
- Case studies to generate a deeper understanding of the gender issues, and strategic gender interests for change in the division of labour, access and control of assets (resources and benefits), constraints, and opportunities for their full participation in the production pathways as well as post-harvest value addition processes



- Engagement of gender partner organizations in the innovation platforms actively to lead the gender capacity development, gather information on the different typologies and the gender divisions of labour and decision-making in these typologies, to improve targeting in a systematic way the different kinds of women and men and the gender relations that condition technology choice and adoption, and how benefits are shared
- A participatory gender-explicit monitoring and evaluation and integration of local- and gender-specific indicators for monitoring outcomes. Monitoring will focus not only on statistical representation or equal treatment of women and men, but also ensure that the intervention outcomes provide benefits for both men and women in an equal way
- Disaggregation and analysis of all data from intervention activities, and M&E processes to provide feedback lessons for better mainstreaming of gender into the activities of the objectives and components of the N2Africa as well as inform policy
- Other pro-active approaches such as conducting case studies to document change in gender relations to understand the impact pathways of legumes towards gender equitable decision making and outcomes

### III. Activity clusters within the Gender Master Plan and relation to other Master Plans

The Gender Master Plan directly addresses Objective 3 of the project. It also interacts with those Master Plans and indirectly serves as an instrument to interrogate their objectives to ensure that specific gender concerns are captured where relevant. In other words, the Gender Master Plan has a cross cutting role to ensure that the necessary ‘best fit’ technologies to close the gender gaps on yields, income, nutrition, labour allocation and enhance gender and NRM responsive R&D capacity in the NARS. This includes documentation of whether key technologies developed are (or are not) benefitting women to the degree expected, particularly in terms of drudgery reduction, nutrition, and income.

The Gender Master Plan Objective 3: To empower Women and increase their benefits from legume production consists of six interlinked activities with corresponding outputs and outcomes as given in the Result Framework:

- 3.1. Sensitize partners, farmer associations, and farming households and mainstream approaches to address gender inequity in farming and decision-making
- 3.2. Assess business opportunities for women in agro-input supply and legume marketing and value addition opportunities
- 3.3. Conduct dissemination campaigns targeting women farmers
- 3.4. Develop labour-saving pre- and post-harvest legume tools for female farmers
- 3.5. Evaluate the impact of environment (E) and management (M) on nutritional quality of legume grain
- 3.6. Develop legume product-enriched food baskets for smallholder families



<b>Objective 3: Empower women to increase benefits from legume production</b>		
3.1. Sensitize partners, farmer associations, and farming households and mainstream approaches to address gender inequity in farming and decision-making	3.1.1. By Q4 of years 1-4, all partners and households engaged in N2Africa activities that address gender inequity	3.1. Female farmers increasingly lead N2Africa promotion and dissemination activities
3.2. Assess business opportunities for women in agro-input supply and legume marketing and value addition opportunities	3.2.1. By Q4 of years 2-4, business opportunities for women identified  <b>3.2.2. By Q4 of years 4-5, at least 2 businesses led by women established per country</b>	<b>3.2. Women improved their income from legume production and have a greater say in the use of such income</b>
3.3. Conduct dissemination campaigns targeting women farmers	3.3.1. By Q4 of years 1-4, themes and models for women-specific dissemination campaigns identified  3.3.2. By Q4 of years 2-5, at least 25% of the female farmers participating in the overall N2Africa dissemination activities are also actively engaged in the women-specific dissemination campaigns	3.3. Better knowledge of and access to household-level legume processing tools improves the nutritional status of women and children in at least 2 target countries
3.4. Develop labour-saving pre- and post-harvest legume tools for female farmers	3.4.1. By Q4 of year 2, prototype labour-saving pre- and post-harvest tools for female farmers validated  3.4.2. By Q4 of years 2-4, labour-saving tools included in the various dissemination campaigns	<b>3.4. Women use pre- and post-harvest labour-saving tools, resulting in higher net profits from legume production and processing</b>
3.5. Evaluate the impact of environment (E) and management (M) on nutritional quality of legume grain	<b>3.5.1. By Q4 of year 3, relationships between grain nutritional quality and management / environmental conditions quantified</b>	
3.6. Develop legume product-enriched food baskets for smallholder families	3.6.1. By Q4 of year 1, food consumption and diversity scoped for at least 2 Core Countries  <b>3.6.2. By Q4 of years 2-4, validated legume processing technologies for improved household nutrition utilized by at least 5000 women</b>	

All these activities in the Gender Master Plan are interacting with other activity clusters in the other Master Plans relevant to gender. As it is given in the Agronomy Master Plan the **Diagnosis** activity clusters aims at understanding the biophysical or abiotic (soil fertility, weather) and biotic (pests and diseases) constraints to enhanced legume productivity. It is also aiming to conduct situation analysis. These activities are not gender neutral in the sense that trait preferences related to biotic and abiotic stresses has gender dimension. Likewise situation analysis to characterize the household typologies and understand the diversity of women and men experiences of small scale farming households and



generate new opportunities for women to integrate grain legumes in intensive cropping systems. **The Researcher-managed Agronomy** activity cluster could be overarching and social inclusive, and aims to identify, understand and solve specific constraints for which there is not enough existing information to propose best-bet interventions that have a high chance of alleviating these constraints. The Demonstration activity cluster co-evaluates a portfolio of best-bet options together with women and men, including rural communities to tackle constraints to legume intensification (including improved varieties, nutrient management, or agronomic practices) within best cropping systems (including improved intercropping arrangement, legume-cereal rotations, or relay cropping systems).

The **Adaptation** activity cluster is gender-aware and evaluates how women and men in their separated and joint farming activities representing different household adapt selected best-bet options and how gender as well as environmental factors affects their farm management practices and performance. Improving the seed and grain quality of legume, enhance yield and resource use efficiency that can create market opportunities to benefit women, particularly ensuring the availability of nutritious varieties that makes legume cultivation more women-friendly and are amenable for processing, machine harvest and reduce drudgery and cost are activities that are strongly interacting in the Adaptation activity cluster.

The **Gender Master Plan** interacts with (i) the **Rhizobiology Master Plan**, through integration of the most effective rhizobium strains and their delivery mechanisms for women, (ii) the Communication Master Plan, through the development of gender responsive communication and awareness creation tools and approaches around the best N2Africa products, and (iii) the Partnership Platform Master Plan that allows gender based partners to play a central role in the implementation of the platform activities as well as engaging national and regional policy makers for supportive legume policies for easy access by women.

The **Gender Master Plan** urges not only collaboration with gender based national partner organization but also closer collaboration with the gender experts of CRPs such as Humidtropics led by IITA, Grain Legumes led by ICRISAT and Water Land and Ecosystems led by IWMI whose gender experts could serve as resource persons for capacity development, gender research data collection, analysis and feed-back to the project.

The **Gender Master Plan** is not an operational or implementation plan and cannot prescribe the type of gender research, capacity development, micro-financing of women-led enterprises, MSc and PhD level gender research that could be carried out at the project level or suggest what the value chain players could identify as their stake along the production and consumption continuum. It can however encourage the country projects to act innovatively using the master plan as a strategic document guiding their actions. It can also suggest some possible gender research hypothesis for the country level project implementation team and their research and development partners to consider and adopt to their situation.

#### **Gender research hypothesis:**

- What would be the gender-related constraints and opportunities faced by women along the value chain including technology access and adoption and, their preferences?
- Would the specific and complementary contributions of men and women to legume cultivation and processing lead to equitable gain of rewards and access to and control over resources?
- What would be the possible case studies that need to be carried out to generate a deeper understanding of labour saving technologies actually saves women's labour time and allows them to use their saved time to their own well-being and development?
- How and when change in the division of labour, access and control of assets (resources and benefits) occur in the way that the project could partially attribute to itself and the partners that legume production, post-harvest value addition and legume based enterprise actually empowers women?
- What could be the possible pro-active approaches such as conducting to document change in gender relations to understand the impact pathways of legumes towards gender equitable decision makings and outcomes or the unforeseen (positive and negative ) consequences of legume based technologies?



Table 1. Cumulative targets per country corresponding to the milestones under the Gender activity clusters.

Milestones	2014	2015	2016	2017	2018
3.1. partners and households engaged in N2Africa activities that address gender inequity	Identify activities that address gender inequities, e.g. dissemination packages , capacity building of beneficiaries through training session, selection of lead farmers, study tours, literacy campaigns to teach women to read/write	At least half of the direct beneficiaries of the dissemination packages are women (2500)	5000	7500	10000
3.2.1. Business opportunities for women identified  3.2.2. Women led businesses agro-enterprise established per country	At least 2 businesses identified ( e.g. input selling stores, seed multiplication, grain legume trading, seed selling, legume grains processing into other products	2	4	6	8
3.3.1, Identification of themes and models for women-specific dissemination campaigns 3.3.2. Increased female farmers participation in the overall dissemination activities and active engagement in the women- specific dissemination campaigns	Use of legumes inoculants, improved varieties, agronomic practices, model to use: demonstration plots, radio/TV spots, written messages, local meetings with lead farmers or cooperative/association members, specific messages addressed to women at nutrition/ health centers, field days	2 dissemination campaigns per year	2	2	2
3.4.1. Validation of prototype labour- saving pre- and post-harvest tools by female farmers 3.4.2. Inclusion of labour-saving tools in the various dissemination campaigns	Identification of labour saving tools and technologies, conduct campaigns to sensitize women to use the tools and technologies, Promotional campaigns to use the tools	Large dissemination campaigns of the tools/ technologies, 2 per year			
3.5.1. Confirmation of relationships between grain nutritional quality and management / environmental conditions	Laboratory and culinary Tests to measure nutritional quality of produced grain from different management/environmental conditions	1 session per action site per season			
3.6.1. Scoping food consumption and diversity for at least 2 Core Countries 3.6.2. Validation of legume processing technologies for improved household nutrition utilized by at least 5000 women	Inventory of food diversity per action site, and test of the nutritional value of each recipe Suggestion of appropriate basket composition				5000 women in each core countries utilized legume processing technologies and validated improved household nutrition



## Gender Master Plan with gender-related activities embedded in other Master Plans and shown in the Result Framework

Activities	Outputs	Outcomes
1.3. Engage research, development, private sector, and other relevant partners in each of the target countries	1.3.1. By Q2 of year 1, potential partners operating within priority legume value chains mapped 1.3.2. By Q3 of year 2, MoUs with priority partners in each of the target countries signed	<b>1.3. Partners, including Gender based partners from the NARS, NGO and private sectors, along the legume input and output value chains cooperate actively towards achieving the overall N2Africa goals</b>
1.5. Develop country-specific research and dissemination implementation plans, including a sustainable exit strategy	<b>1.5.1. By Q4 of year 1, country-specific research and dissemination implementation plans formalized, including an exit strategy.</b> 1.5.2. By Q4 of each year, implementation plans are updated based on M&E feedback	1.5. Young African <b>women and men</b> professionals with increased expertise in biological N fixation advance the legume intensification research areas within their respective national programs
1.7. Develop and implement a degree (PhD and MSc)-related research plan	<b>1.7.1. By Q4 of year 1, a research plan, engaging at least 5 PhD (at least 2 women) and 10 MSc (at least 4 women) candidates, developed</b> 1.7.2. By Q4 of year 5, at least 5 PhD (at least 2 women) and 10 MSc candidates (at least 4 women) graduated	<b>Both PhD and MSc holder men and women scientists are engaged in research and published papers, and contributed to the capacity development of legume intensification research</b>
1.8. Develop and implement a non-degree-related capacity strengthening plan for relevant partners working within legume value chains	1.8.1. By Q4 of year 1, a non-degree-related capacity strengthening plan developed 1.8.2. By Q4 of each year, at least 4 relevant and demand-driven training materials developed in cooperation with the African Soil Health Consortium (ASHC)	
2.3. Create widespread awareness on N2Africa technologies and interventions	<b>2.3.1. By Q4 of years 1-4, at least 2 media events (e.g., radio, newspaper articles) per country implemented</b>	<b>2.3. Local agro-dealers marketing fertilizer, seed, and inoculants are aligned with grassroots producer groups and input wholesalers and manufacturers</b>
2.4. Facilitate <u>partner-led</u> dissemination campaigns with specific attention to gender	2.4.1. By Q4 of years 2-4, household targets (see Returns-on-Investment calculations), dissemination approaches, and content for partner-led dissemination activities agreed and implemented, <b>with specific attention to gender</b> 2.4.2. By Q4 of years 3-5, feedback on the performance of the dissemination models and the demonstrated content fed back to N2Africa	<b>2.4. A preset (see Returns-on-Investment calculations) number of male and female members of households engaged in the collective marketing and value addition of legume grains and value-added products</b>
<b>2.5. Sensitize partners, farmer associations, and farming households and mainstream</b>	2.5.1. <b>Male and Female lead farmers' training conducted to establish on-farm trials at 50 sites for each crop (Y2)</b> 2.5.2. <b>By Q4 of years 1-4, all partners and households engaged</b>	<b>2.5. Establish proportional male and female lead farmers' led on farm trials</b> <b>2.5. Female farmers increasingly lead N2Africa promotion and</b>





approaches to address gender inequity in legume farming and decision-making	in N2Africa activities that address gender inequity	dissemination activities
2.6. Facilitate private-public partnerships towards the sustainable supply of inoculants and fertilizer	<b>2.6.1. By Q4 of years 1-4, inoculants available through public-private partnerships, through importation and/or local production, the latter facilitated by the inoculant production pilot plant</b> 2.5.2. By Q4 of years 1-4, legume-specific fertilizer made available to smallholder farmers by fertilizer companies/retailers	2.6. N2Africa research and development is institutionalized at the national level and integrated in country-level agricultural transformation agendas
2.6. Facilitate the establishment of private sector-led and/or community-based legume seed systems	2.6.1. By Q4 of years 1-4, sufficient legume foundation seed produced by private enterprises and/or government institutions 2.6.1. By Q4 of years 1-4, sufficient quality legume seed available to farming communities	
2.8. Establish agri-business clusters around legume marketing and value addition	2.8.1. By Q4 of years 1-4, opportunities for collective marketing and value addition for smallholder farmer associations identified	
Post- harvest , Storage, processing and value addition technologies for common bean, cowpea and soybean refined and disseminated (SC4)	At least two gender responsive post-harvest processing and value addition technologies for each crop(cow pea and soya bean) disseminated to users (Y3)	Gender participatory Inventory and Needs assessment of available postharvest, storage, processing and value addition technologies
3.6. Develop legume product-enriched food baskets for smallholder families	3.6.1. By Q4 of year 1, food consumption and diversity scoped for at least 2 Core Countries	
Assess business opportunities for women in agro-input supply and legume marketing and value addition opportunities	At least one gender responsive storage technology for cow pea disseminated. By Q4 of years 2-4, business opportunities for women identified	Test, Adapt and promote the postharvest, storage, processing and value addition technologies for women. Gender and end-user focused evaluation of cow pea and soya bean varieties for preferred end user characteristics. Women improved their income from legume production and have a greater say in the use of such income
4.1. Develop variety x inoculant x nutrient management recommendations for the target	4.1.1. By Q4 of years 1-4, seasonal research campaigns towards legume intensification and yield gap closure implemented	<b>4.1. Recommendations for the intensification of legume production result in at least 50% increase in legume productivity</b>



legumes and legume production areas based on yield gap analysis	<b>4.1.2. By Q4 of years 2-4, improved legume production recommendations integrated in the dissemination campaigns</b>	
4.8. Develop standard operating procedures for the production, quality control and application of rhizobium inoculants	<b>4.8.1. By Q4 of year 2, standard operating procedures of the production, quality control and application of inoculants used by inoculant producers and retailers</b>	
5.3. Conduct situation analysis, including the overall bio-physical, socio-cultural, and political environment and farming system and yield gap analysis for targeting legume interventions	5.3.1. By Q4 of year 1, information from the situation analysis available for the proper targeting of legume interventions	<b>5.3. Effective ICT tools provide information on legume production, management, and value addition beyond the project life</b>
5.5. Unravel $G_L \times G_R \times E \times M$ interactions for legume production towards the development of best-fit recommendations	<b>5.5.1. By Q4 of year 4, the relative important of <math>G_L</math>, <math>G_R</math>, <math>E</math>, and <math>M</math> understood for specific legumes and production environments and integrated in improved recommendations</b>	
5.7. Conduct impact assessment studies with a specific focus on the sustainability of interventions	<b>5.7.1. By Q4 of year 4, the sustainability of legume interventions for smallholder farmers evaluated through impact assessment studies</b>	