Recommendations and actions from the report entitled "Enhancing gender responsiveness in putting nitrogen to work for smallholder farmers in Africa (N2Africa)"

Judith de Wolf

From discussions after receiving the report "Enhancing gender responsiveness in putting nitrogen to work for smallholder farmers in Africa (N2Africa)", we have clarified that the N2Africa project is mainly operating in a gender accommodative mode – rather than a gender transformative one.[1] In general N2Africa aims for sustainable interventions and seriously paying attention to gender is therefore inevitable. Staff of both N2Africa and partnering organisations has sufficient experience and knowledge to be aware of the relevant issues around 'gender' and act upon those. Oftentimes the project needs to be more explicit in this to highlight its efforts and approaches. We want to make a positive, sustainable change in farmers' lives – men and women – but do not have the means nor objective to change society. Although it is not explicitly stated in the report, in many ways the gender report seems to suggest that N2Africa should be gender transformative in its actions (see for example gender indicator no. 23, 33, and 35).

Hereafter, there is an outline of the recommendations from the report we should/could follow and the action to be taken.

At the end of this document, there are copies of table 4.1 and table 5.1 from the report. In these tables we are providing more detailed feedback (in red) to the specific indicators suggested and recommendations made.

Table 4.1 (p.17 of the report) provides 39 additional gender indicators for the N2Africa project. While we do take gender extremely serious, as N2Africa project team, we have tried very hard to keep the number of indicators limited and we have ended up with 39 indicators that we believe will give us a comprehensive insight and understanding of the projects functioning and progress towards its goals. The report

[1] Gender accommodating: 1) Acknowledge the role of gender norms and inequalities and seek to develop action that adjust to and often compensate for them, 2) No active strategy to seek change the norms and inequalities and, 3) Focus on limiting any harmful impact on gender relations. Gender transformative: 1) Actively examine, question, and change rigid gender norms and imbalance of power; 2) Encourage critical awareness among men and women of gender roles and norms and 3) Challenge and address the distribution of resources and power relationships between women and others in the community. See also Figure in Annex.

recommends another 39 gender indicators. Although from the perspective of N2Africa this is too many, upon closer scrutiny, one can see a lot of overlap between the N2Africa indicators and the 'gender indicators'. Therefore, in the third column, I have indicated to what extent the proposed 'gender indicator' is already covered by the existing N2Africa indicators and tools developed, whether we may act upon a proposed 'new' indicator or should reject it. The tools and means of verification suggested in this table are not realistic, considering the N2Africa staffing and budget.

As the report follows the objectives of the N2Africa project, the same is done in this response. Although the table format of table 5.1 is used below, this first table summarizes all recommendations from text and tables in the report that we find appropriate and actionable for N2Africa. The tables there after just give more detail of out feedback.

Table 1: Gender & N2Africa: Action per Objective and Activities

Obj. 1: Establish a baseline of the current status of BNF, identify farm enterprises and niches for targeting N_2-fixing legumes in the impact zones, and establish mechanisms for Monitoring and Evaluation (M&E) and impact assessment		
Activities	**Gender issues**	**N2Africa action, responsible (Timeline & resources to be added if we agree on action)**
1.1 Establish project management structure	• Are there mechanisms developed to assure the incorporation of gender in the project activities.	Action: Stock taking/review of gender incorporation in project activities twice a year Responsible: M&E scientist (with D&D specialist and Leader of Capacity Building) will collect the information from Country coordinators and others as appropriate. (First collection in August 2011) Action: Integration of gender perspectives in background information, problem statement and justification, objectives, methods and approaches, results and discussions and conclusions and recommendation of reports and publications is being done. All project staff and MSc students will be alerted again to pay attention to gender issues. Responsible: Project Leader
1.2 Identify the project sites at different scales in the impact zones.	• What women farmer groups or mixed groups should be involved for effective gender interactions in legume value chain?	The 'gender issues' raised here should be dealt with under D&D. The project is doing this already.
1.3 Identify new opportunities for targeting legume & inoculant tech-nologies to increase BNF & enlarge area under priority legumes in impact zones	•What opportunities exist for women and men in the market demand for the 4 target legumes and BNF inoculants?	Action: Check if gender issues are included in value chain analysis by Rusike. If not, consult with Rusike on the need for additional study? Responsible: Project Leader to check with Rusike's study Action: Develop additional strategies to collect gender specific information on marketing/value chain analysis – if not yet done in previously mentioned value chain analysis. Responsible: Project leader to lead?
1.4 Quantify the current on-farm BNF in target farming systems and its impact on livelihoods, income, and household nutrition.	•What current on-farm BNF are being practiced by women and men in the target farming systems and what impacts do they have on women and men's livelihoods, income, and household nutrition.	Baseline already conducted, gender disaggregated data collected. At the time of an end-line survey, we could consider to accommodate some of the recommendations for baseline. In addition, in case the project has a student working on gender, the suggestions made in this section, might be of use. The second part of the 'gender issues' under this heading ('what impacts do they have on women's and men's livelihoods, income and household nutrition') requires major research Action: Reminder for endline & student engagement Responsible: M&E Scientist for end-line, Farming System Analyst for student engagement from Wageningen, for students from else where who should coordinate?
1.5 Monitor the effects of investments & uptake of	• What impacts do the uptake of legume and inoculants technologies have on	The M&E tools developed so far are definitely 'gender sensitive' and allow for recording different experiences of men and women. The tools will count eg male and female participation, but there is

legume and inoculant technologies across impact zones.	women and men's livelihoods, income, and household nutrition. • Is gender well integrated in the project's M&E and reporting processes?	also space/opportunity to collect additional data that will enlighten the project on gender issues related to the promoted legumes.
1.6 Evaluate the impact of introduced legume and inoculant technologies on farmers' livelihoods and soil health across the impact zones.	• How is the project influencing women and men's livelihoods, income and nutrition?	M&E tools are gender responsive. Endline will give more info also. We will add this in the discussion on the need for additional studies to address these issues.
Objective 2: Select multi-purpose legumes (providing food, animal feed, structural materials and high quality residues) for enhanced BNF and integrate improved varieties into farming systems		
2.1 Select best varieties of soybean for high N_2-fixation capacity and adaptation to abiotic (low soil P, soil acidity) and biotic stresses (pests and diseases).	Which are the preferred legume varieties by men and women including the young and old in each of the study sites?	It should be (have been) noted that participatory evaluation of agronomy trials (including need-to-inoculate) and D&D demo's is already happening in many places, taking into account preferences of male and female farmers in all stages of production and post-harvest. Action: Ensure participatory evaluation is done in all eight N2Africa countries, (Proposal: Nigeria, Ghana & Kenya: 40 Malawi, Mozambique & Zimbabwe: 30 DRC & Rwanda: 20 Responsible: M&E Scientist (with Agronomist and D&D specialist) Action: Study of the preferred varieties may also be included in the endline survey. Responsibility: M&E Scientist
2.2 Select *Phaseolus vulgaris* varieties with higher N_2-fixation capacity and adaptation to abiotic (low soil P, soil acidity) and biotic stresses (pests and diseases)	----------do---------	----------do---------
2.3 Select other major grain legumes with high BNF potential but less known capacity to respond to inoculation (groundnut and cowpea).	---------do----------	----------do---------
2.4 Explore the N_2-fixing	Which are the preferred multi-purpose	----------do----------

potential of multi-purpose tree and forage legumes for intensive meat and milk production and additional environmental services such as erosion control and carbon sequestration.	trees and forage legumes by men and women including the young and old in each of the study sites?	Proposal for participatory evaluation: Nigeria, Ghana & Kenya: 20 Malawi, Mozambique & Zimbabwe: 15 DRC & Rwanda: 10
2.5 Identify best-fit agronomic practices (system design, need for amendments) for maximizing potential benefits of legume and inoculant technologies on increasing and stabilizing productivity.	What agronomic practices in legume production are preferred by men and women farmers including the young and old?	No additional action needed, several M&E tools follow-up on the preferred practices by men and women farmers.
2.6 Evaluate contributions of improved legume varieties to best-fit agronomic practices, system productivity and farm livelihood with specific attention to trade-off analysis between competing agricultural enterprises.	How will changing farming systems affect livelihoods of men and women farmers and other household members?	Some of the students engaged will deal with similar questions. Detailed farm characterization will also provide such kind of information. No additional action required.
Objective 3: Select superior rhizobia strains for enhanced BNF and develop inoculum production capacity in sub-Saharan Africa through collaboration with private sector partners		
3.1 Assess the need-to-inoculate for the target legumes and identify elite strains across the impact zones. Establish and characterize a rhizobium germplasm bank in the impact zones.	How can women and men including the young and old contribute to establishment of need to inoculate?	This will be covered with participatory evaluations in agronomy and D&D. The participatory nature of N2Africa's D&D and the changes to the agronomy trials to make those more participatory and closer to farmers will allow for sufficient farmer participation in any field testing the project is undertaking. Naturally there will be equal representation in these. The participatory nature of D&D and agronomy will enable men and women farmers to learn on all different aspect of legume production, including rhizobia and inoculation. The project believes there is no need for additional farmer participation in the selection of superior rhizobia strains. Action: See 2.1
3.2 Formulate improved inoculant products and	Do the formulated inoculants take care of needs of women and men?	Knowledge of size of packaging being preferred by women and men Action: Include preferred package size in use survey

develop cost-effective production and delivery methods, including standardized quality assurance procedures.		Responsible: Judith de Wolf
3.3 Expand and upgrade inoculant production capacity in sub-Saharan Africa and facilitate private sector involvement in its production and marketing.	----------	None
3.4 Conduct and advocate policy review on inoculant quality and cross-border movement.	How can the interest of all gender categories especially women and other stakeholders be incorporated in the policy review process	Policy review can and will be done in a way that ensures attention for interests of all gender categories, including review of implications of current policies on all gender categories. Action: to ensure those responsible for this review include gender issues in the review. Responsible: Abdullahi Bala and Nancy Karanja
Objective 4: Deliver legume and inoculant technologies to farmers in eight targeted countries within three impact zones		
4.1 Create strategic alliances for facilitating dissemination of legume and inoculant technologies in impact zones.	What is the level of men and women involvement in the alliance for dissemination of legume and inoculants technologies in the impact zone	N2Africa is currently sufficiently taking care of active involvement of male and female farmers in D&D. No additional action required. The recommendations given, do not adequately reflect the way in which N2Africa operates. N2Africa does not micro-manage all the D&D effort undertaken by partner organisations. Gender Indicator 22: Proportion of women in the leadership positions in the mixed farmer groups Action: Not sufficiently covered with current tools, possibly some case studies to get proportions and better understanding. Assess current tools, consider collecting additional data, keeping in mind that this might not be necessary since N2Africa is gender accommodative (and not gender transformative). Responsible: M&E scientist?
4.2 Produce specific dissemination tools, including inoculant packets, adapted to the needs of farmer groups, agro-dealers, and development partners.	Are the dissemination tools and messages gender friendly.	The dissemination N2Africa needs to increase gender awareness with regards to training materials. There is a need "… to ensure that content including examples address the needs, aspirations, interest, knowledge and challenges faced by men and women farmers" (p.12). Action: This will be done from now on, local experts or experts with CIAT and IITA will be asked to advice, review draft materials, etc. Responsible: Dissemination specialist (with leader of capacity building) to be tasked with ensuring this is done with all training materials.
4.3 Engage with other legume seed production and	Are the partners working on legume production, marketing, processing and	Having some gender awareness has been an implicit selection criterion for partner organisation. Quite often partner organisations have gender enhancing activities from before engagement with

marketing activities, farm input, commodity marketing and processing initiatives, and household and children's nutrition programs operating throughout the impact zones.	utilization processes gender aware and prepared to be involved in gender transformations as need arises?	N2Africa. No action required.
4.4 Conduct collaborative legume and inoculant technology dissemination campaigns and create awareness in rural communities in all impact zones.	Are the dissemination campaigns designed and delivered in a way that they will reach men and women including the young and old?	Most of what is recommended is already being done.
4.5 Develop strategies for empowering women to benefit from the project products.	How much have women participated and benefited from the project	Note there is no 'project's gender expert'. Gender aspects are being monitored with the existing M&E tools. Recommendations are already being done or not feasible.
Objective 5: Develop and strengthen capacity for BNF research, technology development, and application		
5.1 Provide short-term, high level technical training for project scientific and technical staff in essential microbiological skills and BNF technologies	How can skills in gender in legume value chain be enhanced among project team members?	First assess need and interest in more training should have been done before recommending training. Considering costs and time, we think to organise such a training is not efficient use of resources.
5.2 Support advanced training to MSc & PhD level of an elite young cadre of African scientists focused on topics filling identified knowledge gaps that are identified through competitive calls.	How prepared will the MSc and PhD graduates to address gender in legume production?	Gender not necessarily relevant for all students' research subjects, eg rhyzobiology. In others, surely gender issues should be addressed as appropriate. Action: The supervisors of these students will be informed of the need to include gender issues. It should be noted that the recruited students are quite well gender balanced, assuming the two students from Ghana are male, the MSc students are 50-50% male and female. For the PhDs currently recruited, there are 3 men and 2 women.
5.3 Conduct ToT workshops on legume & inoculant	How prepared are the training of trainers in addressing gender issues in legume and	All recommendations here are being done already, except for the 'gender in legume value chain training' which the project does not commit itself to do.

technologies for agricultural extension workers & NGO staff.	inoculant technologies for agricultural extension	
5.4 Conduct training workshops on legume and inoculant technologies for agro-dealers and officers of farmer associations and community-based organizations.	How prepared are the agro-dealers and officers of farmer associations and community-based organizations in addressing gender issues in legume and inoculant technologies	----------do----------
5.5. Provide training, educational and extension resource materials to support 5.1 – 5.4.	Are the training, educational and resource materials gender responsive?	There is a need to make materials more gender responsive. See also 4.2. Action: Agreed, this will be done through individual consultations with people. Local experts or experts with CIAT and IITA will be asked to advice, review draft materials, etc. Responsible: Dissemination specialist (with leader of capacity building) to be tasked with ensuring this is done with all training materials.

Table 2: Gender indicators for N2Africa project (Table 4.1 from report) (Comments JdW in red)

Component	Gender indicators	Judith's comments	Tools and means of verification (MoV)
Baseline survey monitoring and evaluation processes (Performance and impact assessment will be carried out in all components of the project)	1. Increase in income for women and men from growing legumes and other farm and off-farm activities while indicating seasonality 2. Uses of income by women and men for example on purchasing household assets and/or food* 3. Influence of women and men in decision making on use of income, and inputs including land* 4. Labor time and cost changes in different legume production activities and seasonality for women and men and girls and boys 5. Percent of women and men in each legume market segment or types of market that farmers sell legumes 6. Opportunities and constraints for women and men in selling legume grains in each market segment* 7. Amounts of legume produce traded and amounts of money earned per certain time in different market types/segments by women and men 8. Amount of legume grains consumed at home 9. Preference for consumption of legume grains by women and men including girls and boys* 10. Benefits according to women and men from the legume technologies interventions* 11. Disaggregation of data by gender and household typologies in reports and publications 12. Integration of gender perspectives in background information, problem statement and justification, objectives, methods and approaches, results and discussions and conclusions and recommendation of reports and publications.	1. Will be covered in current and/or future M&E (incl. endline survey) 2. Same as above 3. Same as above 4. Possibly from student research 5. Covered for general marketing in later stage of project 6. Possibly from Rusike's study? 7. Not so relevant (i.e. for each market segment) 8. Endline survey 9. Endline 10. Endline and intermediate M&E 11. Is being done 12. Is and will be done, need to alert all project staff and MSc students to pay attention to gender issues.	**Tools** • Questionnaire • Checklist • Seasonal calendar* • Decision making matrix* • Focus group discussions* • Scoring, rating and ranking systems* • Problems and opportunities analysis chart* • Benefits chart* • Detailed farm characterization tool **MoV** • Farmers farm records • Baseline data reports • M&E data and reports • Project planning reports • Project reports and publications
Select multi-purpose legumes (providing food, animal feed, structural materials and high quality residues) for enhanced BNF and	13. Number of women and men that have adopted each variety of legume 14. Change in size of land being used by women and men in growing of each type of legume? 15. Attributes preferred by women and men for each variety of legumes in each site*	13. Covered in use survey & will be covered in endline survey 14. Same as above 15. From participatory evaluations by farmers of agronomic trials and D&D demo's	**Tools** • Questionnaire • Checklist • Farm/resource mapping* • Focus group discussions* • Scoring, rating and

integrate improved varieties into farming systems			ranking systems* • Detailed farm characterization tool **MoV** • Farmer field monitoring book • Baseline data & reports • M&E data and reports
Select superior rhizobia strains for enhanced BNF and develop inoculum production capacity in sub-Saharan Africa through collaboration with private sector partners	16. Types and amounts of inoculants being used by women and men 17. Size of packaging being preferred by women and men 18. Number of women and men purchasing different types of inoculants 19. Perception of women and men on use of inoculants*	16. Use survey 17. Project could consider to include this in use survey 18. Use survey 19. Use survey	**Tools** • Farmer field monitoring book • Focus group discussions* • Scoring, rating and ranking systems* **MoV** • Baseline data and reports • M&E data and reports
Delivery and dissemination of legume and inoculant technologies to farmers in eight targeted countries within three impact zones	20. Number of women and men in the farmer groups 21. Proportion of women in mixed farmer groups 22. Proportion of women in the leadership positions in the mixed farmer groups 23. Number and type of farmer groups with affirmative action's or women quotas to ensure women inclusion in leadership 24. Number of women and men farmers trained on what modules/topics community organizational development and institutional strengthening courses 25. What training in legume technologies have what number of women and men received? 26. Perception of women and men on what technology is working and is not working* 27. Number of women and men participated in trainings and demonstrations on the different legume technologies including cooking demonstrations 28. Women and men including boys and girls preferred meals prepared	20. Covered partly through input distribution, more with lead farmer survey 21. Derived from 20. 22. Not covered, could do some case studies to get more insight than just the proportion 23. Only if project seeks to be strongly gender transformative 24. Training data collected is gender disaggregated 25. Same 26. Use survey 27. Covered with current M&E	**Tools** • Focus group discussions* • Scoring, rating and ranking systems* • Decision making matrix* **MoV** • Group records • Farmer groups constitutions or by-laws • Training and demonstrations reports • Farmer field monitoring book • M&E data and reports

	during cooking demonstrations 29. Percent of women and men applying the legume technologies being promoted by the project 30. Number of women and men using fertilizer and rates of use 31. Level of participation of women and men during trainings, demonstrations measured using the following rating scale. Percent (>76%, 51-75%, 26-50%, <25) of men and women who are very active (76%), active (51-75%), average (26-50%) and passive (<25%) would be useful.* 32. Level of participation of women in mixed groups and women only groups* 33. Men's attitudes towards women's participation in the public domain?* 34. Changes in women and men's knowledge regarding legume technologies being promoted by the project* 35. Changes in self-esteem and self-worth among women*	tools 28. We can get that from evaluation of cooking demo's 29. Use and endline 30. Use and endline 31. Participation in training counted, level of involvement is too much detail 32. Too detailed for scale of project, could consider to collect anecdotal info 33. Beyond mandate of project 34. Endline 35. Beyond N2Africa's mandate	
Develop and strengthen capacity for BNF research, technology development, and application including within the project management structure	36. Proportion of women in the project implementation team including staff, extension team, local partners, local facilitators, training of trainers and master farmers. 37. Commitment of partners to enhance gender responsiveness in the project activities* 38. Proportion of women and men post-graduates trained. 39. Proportion of women and men in project team implementation who have received the gender in legume value chain training	36. Is being counted 37. Implicit criteria for partner selection 38. Covered 39. Only relevant if project would have chosen to undertake this training	**Tools** • Capacity building on legume value chain • Discussions **MoV** • Partners vision, mission and objectives statements • Training on gender in legume value chain report • Project reports • M&E data and reports

Table 3: Recommendations to enhance gender responsiveness in the N2Africa project (Table 5.1 gender report) (Comments JdW in red)

Objective 1: Establish a baseline of the current status of BNF, identify farm enterprises and niches for targeting N_2-fixing legumes in the impact zones, and establish mechanisms for Monitoring and Evaluation (M&E) and impact assessment		
Activities	**Gender issues**	**Recommendation for gender responsiveness**
1.1 Establish project management structure	• Are there mechanisms developed to assure the incorporation of gender in the project activities.	• Establish a Gender Working Group among component leaders to coordinate and oversee that gender is attended to at the project and organizational levels. NO • Assure that gender staff is on management or advisory team. There is no specific gender staff on N2Africa project nor is it envisaged to engage more project staff at management level. • The project implementing team should be comprised of both men and women to ensure that both men and women farmer issues are well addressed. Done already • Capacity building on gender in legume value chain among project implementers including scientific and technical team and local partners and facilitators. Crucial question is whether there is need and whether there are resources for such a training and if this is what the project chooses to spend its funds on. I would not be in favour: not the most efficient way to ensure N2Africa gender responsiveness • The training should equip the team with skills to identify gender issues, their implications on adoption and impact of the project and strategies to address them. Project wants to focus on **strategies** • This training could be made more participatory by asking participants to pre-prepare a one page brief on gender issues in legume value chain for use during practical/exercises. Redundant. • A training manual should be developed for use across all sites; however unique gender issues within each site should be addressed. – This is the sort of thing we would have expected from the consultancy. At this stage, the project will develop localized mechanisms to ensure training materials in general are gender sensitive. The project will not develop a training manual on gender in legume value chain specifically as suggested above. • Refresher sessions should be organized by the projects' gender working group as need arises. Not relevant Possible action: 2x per year stock taking/review of incorporation of gender in project activities by M&E specialist?
1.2 Identify the project sites (e.g., districts, communities, villages, farmer groups) at different scales in the impact zones.	• What women farmer groups or mixed groups should be involved for effective gender interactions in legume value chain?	• Identify farmer groups, both women only groups and mixed groups Has been and is being done • Cohesive groups comprising farmers with previous experience in legumes value chain and that embrace women empowerment through legumes production would be ideal. • Identification of these groups would effectively be done with the help of local contact persons. • Empowerment of women and men farmers to effectively participate in the project should be carried out as described in activity 4.1. The 'gender issues' raised here should be dealt with under D&D. The project has worked – through **partner organisations** – with farmer groups right from the beginning. D&D partners identify farmer groups, the project's guidelines encourage at least 50% women's participation. The points above refer to sustainable group management and dynamics in general which can only be achieved when paying sufficient attention to gender issues.

1.3 Identify new opportunities for targeting legume and inoculant technologies to increase BNF and enlarge the area under the priority legumes in the impact zones	•What opportunities exist for women and men in the market demand for the 4 target legumes and BNF inoculants?	• Conduct a gender responsive market analysis that illustrates local and international opportunities for legume trade; identifies key stakeholders in each market segment; outlines primary activities carried out by men and women including the youth Anything of this included in value chain analysis? If not, we can not do a separate study? • Examples of questions that should be addressed in this analysis include; ➢ Who among women and men including youth is involved in the village or urban, informal or formal, small-scale or large-scale marketing systems? ➢ Which systems yield better profits? • It is important to understand whether they are any financial and/or domestic/social-cultural limitations in women's involvement in marketing systems that yield better profits? If lack of adequate capital exists among women there is need for establishment of linkages to financial institutions that offer women empowerment credit facilities. If social-cultural limitations exist there is need to work with women and men beneficiaries to identify and implement strategies to address these limitations. This way the project will be transforming gender inequalities. Could this be done by/with partners (more) involved in marketing? • There is need to link the farmers to high-value markets through farmer groups for increased income. Could this be done by/with partners (more) involved in marketing? • Conduct a cost/benefit analysis on farmers demand for inputs including introduction of inoculants needs questions that address gender categories of members of the households involved in sourcing, making payments, and application of inputs, time and costs spent on these activities. • Assess existing knowledge on rates of application of fertilizer and benefits from the perspective of men and women including the youth. • After the project team introduces inoculants there is need to gather opinions on its use, to find out what financial and social-cultural factors may influence the demand. This would best be done through focus group discussions with men, women and youth separately, guided with a pre-prepared checklist. Similar questions should also be included in the household survey. In the same discussions and survey with farmers, information should be sought on farmer's interest in marketing inoculants locally. The market analysis should note the gender and age of farmers interested in selling inoculants and also financial and/or domestic/social-cultural limitations that may influence each genders trade in inoculants. Incase they are any challenges on selling inoculants locally, farmer's opinions on solutions should be sought.
1.4 Quantify the current on-farm Biological Nitrogen Fixation BNF in the target farming systems and its impact on livelihoods, income,	•What current on-farm BNF are being practiced by women and men in the target farming systems	• Baseline household surveys in addition to showing gender of household head, respondent and other members should include questions that gather gender disaggregated data on farming practices. ➢ For instance what are the levels of use of fertilizer among households? How are legume crop residuals used? ➢ If, for example crop residues are used as livestock feed whose livestock is it for among the household members as this will influence decision making on use residuals for farm fertilization? ➢ Participation of women and men including girls and boys in provision of labour in the legume value chain should

and household nutrition.	and what impacts do they have on women and men's livelihoods, income, and household nutrition.	be quantified. ➢ Women are the majority labour force in the production and local processing segments of legume value chain and commercialization of the crop should ensure their active participation and ability to access benefits in the marketing segment. Questions such as how land is used and how are decisions on its use made should be asked? Decision making on use of land will influence the size of the plots that women can put under legumes production and as such there is need to seek men's support (e.g. inviting husbands and other family members to attend demonstrations). ➢ The survey tool should also highlight issues on amount of income accrued from sale of legumes and savings made by household in producing own legumes for household consumption and how it is spent. Information on legumes consumption among different gender and age categories of household members and how it is processed is important to establish and monitor nutrition and health. Baseline has been implemented already. Making more detailed inventories of labour issues eg through labour calendar might be an option. Alternatively one or more students could be engaged to gain more in-depth insight into labour issues around legume cultivation. Although income and expenditure of additional income can be covered in the end-line survey, more detailed investigations will be inevitable if the project aims to gain a fuller understanding. • Shift to commercialization and formalization of payments for women crops mainly used for home consumption may leave women in worse economic situations. Measures should be taken to ensure that women receive income from sale of the legumes through the collective marketing system. • Details of the farmers producing the legumes should be taken and verified at the collection points. • Women should be involved in identifying the best modes of directly remitting the payment to them for their sales. One example would be paying through phone systems and bank accounts for those who have direct access and control of these systems. Arrangements with local banks to pay the women even if they do not have accounts are being made by some organizations such as SMARTLOGISTICS SOL in Kenya and the model could be applied in this project. This will expose women to savings and credit facilities which will encourage them to open bank accounts. The M&E tools should include income and how it is spent as part of evaluating the project's impacts on livelihoods. Income and expenditure of additional income can be covered in endline. See also comment above. • The household baseline survey should be complimented with focus group discussions (FGD) with men, women and youth farmers separately. Gender analysis tools used in the FGD should include scoring and ranking procedures to allow gathering of qualitative data. This participatory information gathering process will give farmers a chance to freely express their views as a group and the narratives and practical examples out of the process will help the project team better understand gender and socio-cultural issues around legume production. It is necessary to have a gender balanced team facilitating the FGD as many times women are freer when their sessions are facilitated by women. At this point in time in the N2Africa project, we will not engage in additional FGD in eight countries, there are insufficient funds and staff for such an exercise. Instead we are relying on vast experience of staff and other local contact, including the D&D partners.

		• Information sharing such as through reports, presentations, publications and other media articles and programmes should be gender sensitive in content, delivery and target group. Noted and agreed. Action is to make everyone involved aware of this requirement. Partly taken care of in the data collection through the M&E tools that are all gender disaggregated. • To ensure that gender aspects are well taken care of in the baseline survey, the M&E and gender working group in the project should participate in the development of the survey tools. See further comments under 4.5. Redundant, baseline has already taken place.
1.5 Monitor the effects of investments and uptake of legume and inoculant technologies across the impact zones.	• What impacts do the uptake of legume and inoculants technologies have on women and men's livelihoods, income, and household nutrition. • Is gender well integrated in the project's M&E and reporting processes?	• Baseline data as described in the above activities 1.3 and 1.4 will used in order to assess the impacts of projects activities on women and women • Adopting a participatory performance measuring process that uses gender responsive indicators, tools and methods will allow analysis and assessment of the projects performance while engaging project implementers, beneficiaries and funding organization in discussions and reflections on progress towards understanding gender dimensions and bringing the desired gender equity in legume production. • Gender guidelines and gender indicators to support implementation of gender responsive initiatives suggested in this document have been developed in consultation with project implementers and farmers and other beneficiaries (See sections 3.0 and 4.0). • The consultant together and the M&E team have enhanced gender integration in the current projects M&E process (See section 5.1). • Reporting processes for example progress reports, technical reports, presentations and publications should integrate gender in the content and implementation strategies. • The reports should be shared among project implementers, and farmers and other beneficiaries and the funding organization.
1.6 Evaluate the impact of introduced legume and inoculant technologies on farmers' livelihoods and soil health across the impact zones.	• How is the project influencing women and men's livelihoods, income and nutrition?	• Use baseline survey and gender analysis to determine gender indicators for M & E • M&E tools should be made gender responsive to show impacts of legume and inoculants technologies on women and men's livelihoods, income and nutrition. M&E tools are gender responsive. • Gender should be integrated in every component of the project activities. • Project team members should update each other regularly e.g. on monthly basis • Gender responsive M&E easy to use tools should also be developed for use on the ground by farmer groups to frequently monitor group members activities (e.g. agronomic practices including use of fertilizer and inoculants, consumption and sales of legumes, trainings received, participation in group activities)(CIP, 2010). • The project's gender and M&E experts should work very closely with project implementers to ensure that gender is integrated in this activity.
Objective 2: Select multi-purpose legumes (providing food, animal feed, structural materials and high quality residues) for enhanced BNF and integrate improved		

varieties into farming systems		
2.1 Select best varieties of soybean for high N_2-fixation capacity and adaptation to abiotic (low soil P, soil acidity) and biotic stresses (pests and diseases).	Which are the preferred legume varieties by men and women including the young and old in each of the study sites?	• It is important to collect data on the preferred varieties of legumes by different gender categories of farmers to compare notes with what researchers propose as best bets for each site. • Selection of preferred varieties and evaluation of their performance should include both agronomic, social-economic and health and nutrition parameters (e.g. colour of the skin and flesh, taste, cooking time, nutrition value, consumption and by whom, time to maturity). Inclusion of nutrition, food quality, processing and taste parameters will enhance gender responsiveness as these parameters might appeal more to women. Gendered opinions on the target varieties and potential for adoption should be sought from the farmers. This will be effectively carried out through interactions between the agronomy and social-economic components of the project. This information in addition to enlightening the team on the preference status of the varieties it will also be important in designing delivery strategies of the N2Africa packages and establishment of indicators to measure project impacts on health and nutrition. • This exercise should be included in the household baseline survey including focus group discussions. • Members of the project team facilitating this process should be gender sensitized so that they encourage active participation of men, women and the youth. Participatory evaluation of agronomy trials (including need-to-inoculate) and D&D demo's is already happening in many places, taking into account preferences of male and female farmers in all stages of production and post-harvest. Action: Ensure participatory evaluation is done in all eight N2Africa countries. Study of the preferred varieties may also be included in the endline survey.
2.2 Select *Phaseolus vulgaris* varieties with higher N_2-fixation capacity and adaptation to abiotic (low soil P, soil acidity) and biotic stresses (pests and diseases)	----------do---------	----------do---------
2.3 Select other major grain legumes with high BNF potential but less known capacity to respond to inoculation (groundnut and cowpea).	---------do----------	----------do---------
2.4 Explore the N_2-fixing	Which are the	----------do----------

potential of multi-purpose tree and forage legumes for intensive meat and milk production and additional environmental services such as erosion control and carbon sequestration.	preferred multi-purpose trees and forage legumes by men and women including the young and old in each of the study sites?	
2.5 Identify best-fit agronomic practices (system design, need for amendments) for maximizing potential benefits of legume and inoculant technologies on increasing and stabilizing productivity.	What agronomic practices in legume production are preferred by men and women farmers including the young and old?	• The baseline survey should generate data on agronomic practices applied by different gender categories, reasons behind their use and constraints and areas of interventions. • The importance of this exercise and approaches used is similar to that of activity 2.1 above. Baseline already implemented. Several M&E tools follow-up on the preferred practices by men and women farmers.
2.6 Evaluate contributions of improved legume varieties to best-fit agronomic practices, system productivity and farm livelihood with specific attention to trade-off analysis between competing agricultural enterprises.	How will changing farming systems affect livelihoods of men and women farmers and other household members?	• Men and women farmers should be involved in identifying likely effects of changing farming systems. • This should answer questions such as; ➢ Who in the households will be affected and how? ➢ Will there be any implications on gender relations? ➢ What opportunity costs will be there if the new technologies were adopted? ➢ If the effects are positive how could they be enhanced to empower women and if they are negative how could they be minimized? To collect these data a tool like this could be adopted [incomplete sentence] MSc in Zimbabwe will deal with similar questions. Detailed farm characterization will also provide such kind of information.
Objective 3: Select superior rhizobia strains for enhanced BNF and develop inoculum production capacity in sub-Saharan Africa through collaboration with private sector partners		
3.1 Assess the need-to-inoculate for the target legumes and identify	How can women and men including the young and old	• There is need to involve men and women farmers in field testing on need to inoculate. • Gendered information on farmer's observations on inoculated versus non inoculated plots, will enhance the uptake of the technology and revisions of strategies where need be.

elite strains across the impact zones. Establish and characterize a rhizobium germplasm bank in the impact zones.	contribute to establishment of need to inoculate?	• Farmer's will also be able to give opinions on need to inoculate based on the lessons they learn. This will be covered with participatory evaluations in agronomy and D&D.
3.2 Formulate improved inoculant products and develop cost-effective production and delivery methods, including standardized quality assurance procedures.	Doe the formulated inoculants take care of needs of women and men?	Use gendered opinions gathered in 3.1 above
3.3 Expand and upgrade inoculant production capacity in sub-Saharan Africa and facilitate private sector involvement in its production and marketing.	----------	None
3.4 Conduct and advocate policy review on inoculant quality and cross-border movement.	How can the interest of all gender categories especially women and other stakeholders be incorporated in the policy review process	• There should be equal representation of men and women farmers participating in the workshops and meetings on policy review. • The participation of both men and women should not only be on numbers but active contribution. Active contribution of farmers at this level will depend on the capacity building done in other components of the project as advised earlier. Policy review can and will be done in a way that ensures attention for interests of all gender categories, including review of implications of current policies on all gender categories. Action: to ensure those responsible for this review include gender issues in the review.
Objective 4: Deliver legume and inoculant technologies to farmers in eight targeted countries within three impact zones		
4.1 Create strategic alliances for facilitating dissemination of	What is the level of men and women involvement in the	• There is need to develop a strategy that ensures farmers participation in designing and implementation of the dissemination processes. DONE • Participation in designing and implementation of the dissemination processes should be included by farmer groups as

legume and inoculant technologies in the impact zones.	alliance for dissemination of legume and inoculants technologies in the impact zone	one of their activities. Partly done, it is sufficient as it is. • The farmer groups should elect those to participate in this alliance and should have 50:50 representation of women and men. In case women are not volunteering to be involved in joining the implementation team it should be made a requirement. This way the process will promote farmer-to-farmer learning. • The capability of the farmers joining in leading this process should be build through a course on community organizational development and institutional strengthening (CODIS) with topics such as group dynamics, leadership, communication, networking and advocacy, financial management and record keeping (FCI, 2010). • The CODIS training materials and training methods should be gender responsive (FCI, 2010). This is micro-management of partners, N2Africa does not do this at this level – not possible considering the number of farmers and farmer groups that are engaged with N2Africa. The only requirement to partners is to include at least 50% women in N2Africa activities. In addition, generally partner organisations of N2Africa are much aware of gender issues and have their own strategies of dealing with that. • These trainings should also be included as part of technical capacity being offered to all farmer groups and included in the M&E process under the advice of the project's gender expert. • These training materials and capacity to deliver them exist among NGO's who have been involved in community development work and incase no manuals exist among the NGO's already onboard, the project should consider including one in every country. • Some farmer groups have women as majority with very few men who are also in leadership. The project should contribute in transforming women participation in decision making through empowering them to take leadership positions in these groups. Women leadership in the mixed farmer groups should be enhanced through quota system where 50% of senior leadership to be by women. This process of farmer groups and women empowerment to take up leadership worked well in a traditional vegetable and orange fleshed sweet potato project in East Africa by International Potato Centre and partners (CIP, 2010). For effective women leadership the farmer groups should receive the above mentioned CODIS training. • Active participation of men and women including the youth in farmer groups' activities and discussion processes is important and should be monitored and evaluated by local facilitators. The following tool could be useful: [incomplete sentence] • Use of female extension staff especially where culture does not allow men-women interactions and sensitization of men on women's needs, opportunities and challenges. N2Africa is currently sufficiently taking care of active involvement of male and female farmers in D&D.
4.2 Produce specific dissemination tools, including inoculant packets, adapted to the needs of farmer groups,	Are the dissemination tools and messages gender friendly.	• Use of diverse disseminations tools to reach women and men such as media, video, field days, demonstrations • The dissemination tools and messages in addition to taking care of different stakeholders interest and best languages to use, should also target all members of the household? • The dissemination channel for example media should be selected in a way that it reaches different gender categories and household types

agro-dealers, and development partners.		• For example use of photos of women, men and children and messages that target improving women's participation in the areas where research findings show their absence would be important. For instance would be good to have messages that encourage women participation in marketing of legumes and inoculants. • The packaging quantities and costs should ensure that the products are accessibility to male and female headed households of different income levels. N2Africa needs to increase gender awareness with regards to training materials. Action: This will be done from now on, local experts or experts with CIAT and IITA will be asked to advice, review draft materials, etc. M&E specialist and/or dissemination specialist and/or leader of capacity building to be tasked with ensuring this is done with all training materials.
4.3 Engage with other legume seed production and marketing activities, farm input, commodity marketing and processing initiatives, and household and children's nutrition programs operating throughout the impact zones.	Are the partners working on legume production, marketing, processing and utilization processes gender aware and prepared to be involved in gender transformations as need arises?	• Partners collaborating with the project implementers and farmers in N2Africa project should be sensitized on the projects aim of enhancing gender responsiveness in the activities. • The partners should participate in the capacity building courses on gender in legume value chain described under activity 1.1. • Partners should be committed to enhancing gender responsiveness in legume value chain Having some gender awareness has been an implicit selection criterion for partner organisation. Quite often partner organisations have gender enhancing activities from before engagement with N2Africa. No additional action from side of N2Africa.
4.4 Conduct collaborative legume and inoculant technology dissemination campaigns and create awareness in rural communities in all impact zones.	Are the dissemination campaigns designed and delivered in a way that they will reach men and women including the young and old?	• Using the gender responsive dissemination materials, the designing and implementation of the demonstrations should be as described in 4.1 and 4.2. • Men and women including the young and old views should be taken into consideration when selecting best fits legumes in each site (country) and sub sites (local units e.g. villages). • Farmer's facilitators should be gender sensitized to encourage active participation of women in demonstration and presenting their cases. They should control hijacking by men the explaining of situations happening in women's plots allowing women to talk on their behalf. Family focused demonstration where family members are invited to participate in demonstration and trainings [incomplete…] • This activity should be included in the M&E tools used by the farmer groups to monitor the activities on the ground using questions such as; ➢ How many demonstrations have women and men including the young and old attended? ➢ How active is their participation. Tool in table ii under activity 4.1 will be useful. • There is need to monitor how the technology is being adopted and adapted to local situations using questions such as; ➢ What agronomic, processing and marketing practices have been adopted by men and women including the

		young and old? ➢ How are they being adapted to the local situations? ➢ What are the views of men and women including the young and old on the agronomic, processing and marketing practices that the project is disseminating? • The cooking demonstrations should take care of cooking processes for food meant for men, women, youth and children. • The cooking demonstration should be designed in a way that they meet the interest of different gender categories. Most of this is being done already.
4.5 Develop strategies for empowering women to benefit from the project products.	How much have women participated and benefited from the project	• Strategies for women empowerment should be integrated in every activity • Will be useful for the project implementing team including local facilitator to receive the course on gender in legume value chain mentioned in activity 1.1. • Integrating gender in all activities should be ensured by the projects gender expert who should work closely with the project implementation team. • Monitoring gender aspects in each activity should be inbuilt in the project's M&E tools while using gender sensitive indicators. • Similar M&E tools should be applied in all the eight countries for comparison purposes. However the M&E tools should be designed in such a way that they gather information on socio-cultural factors influencing gender relations in the project activities in each site. Note there is no 'project's gender expert'. Gender aspects are being monitored with the existing M&E tools. The suggestion to design M&E tools in 'such a way that they gather information on socio-cultural factors influencing gender relations in the project activities in each site' is difficult to combine with the call for comparability across the eight countries. Possibility would be a once off overview of gender situation with regards to legume cultivation in the eight N2Africa countries – possibly by a student.
Objective 5: Develop and strengthen capacity for BNF research, technology development, and application		
5.1 Provide short-term, high level technical training for project scientific and technical staff in essential microbiological skills and BNF technologies	How can skills in gender in legume value chain be enhanced among project team members?	• The project scientific and technical staff should receive the gender in legume production training described in 1.1.and 4.5. This course will be useful for the scientific and technical staff to enhance their skills in integrating gender in their respective components of the project. First assess need and interest in more training before it is decided that more training is needed. Elsewhere it has been suggested to include staff of partner organisations in such a training; considering the number of countries and number of partners, this is not feasible.
5.2 Support advanced training to MSc and PhD level of an elite young	How prepared will the MSc and PhD graduates to	• As part of their capacity building, the MSc and PhD students should be prepared to address gender issues in legume production. They should receive the gender in legume value chain training described in 1.1.and 4.5. and also integrate gender in their research projects

cadre of African scientists focused on topics filling identified knowledge gaps that are identified through competitive calls.	address gender in legume production?	Gender not necessarily relevant for all students' research subjects, eg rhyzobiology. In others, surely gender issues should be addressed as appropriate. Action: The supervisors of these students will be informed of the need to include gender issues. It should be noted that the recruited students are quite well gender balanced, assuming the two students from Ghana are male, the MSc students are 50-50% male and female. For the PhDs currently recruited, there are 3 men and 2 women.
5.3 Conduct training-of-trainers workshops on legume and inoculant technologies for agricultural extension workers and NGO staff.	How prepared are the training of trainers in addressing gender issues in legume and inoculant technologies for agricultural extension	• The trainings should be adapted to women needs and priorities • The ToT should receive the gender in legume value chain training described in 1.1.and 4.5. • The ToT's should integrate gender in the contents and delivery approaches of their extension processes. • They should be gender sensitive to encourage active participation of men and women and youth in the extension processes. • The composition of the ToT should include both women and men and youth and ensure gender balance. This is being done already, except for the 'gender in legume value chain training' which the project does not commit itself to do.
5.4 Conduct training workshops on legume and inoculant technologies for agro-dealers, officers of farmer associations and community-based organizations.	How prepared are agro-dealers, officers of farmer associations & community-based organizations in addressing gender issues in legume & inoculant technologies	----------do----------
5.5. Provide training, educational and extension resource materials to support 5.1 – 5.4.	Are the training, educational and resource materials gender responsive?	• Gender should be incorporated in the training, educational and resource materials and the projects gender expert should work with other project team members to ensure that this is done. • The materials should ensure that content addresses the needs, aspirations, knowledge and challenges faced by men and women including the young and old. • The materials should be easy to understand by low literacy level community members so as not to disadvantage women. For example use of simple, visual methodologies that do not require a lot of reading and writing Agreed, this will be done through individual consultations with people. Action: overseeing and ensuring this happens should be the responsibility of one person (who? Leader of capacity building, dissemination specialist, M&E scientist?)