



BURUNDI 2015 Annual Report

Immediate Outcome 1: Increased and gender equitable access to high yielding dry bean varieties and productive ICM technologies / information

Output 1.1. Competitive high yielding and stress tolerant varieties developed across various agro-ecologies and cropping systems in 20 countries

Target 2015-19: 40 bean varieties released

Target 2015: 8 bean varieties released

Activity set 1.1.1. Develop high yielding stress tolerant bush and climbing bean varieties adapted to climate change and variability including varieties with architecture conducive for mechanized systems for reduced drudgery at harvest stages

Activity 1.1.1.1: Introduce and evaluate new germoplasme for resistance to multiple stress (Root Rot, and excessive rainfall / cooking time

Activity 1.1.1.2 Collect local popular bean cultivars , clean and test and characterize and submit for release

A collect of local popular adopted bean cultivars were conducted in August. A total of 34 out of 50 cultivars collected from 5 provinces (Kirundo, Muyinga, Makamba, Gitega

	, Ngozi and Rutana) is being cleaning and characterized on research station.
<p>Activity 1.1.11. Continue evaluation of germoplasme in PYT and AYT for resistance /tolerant to multiple stresses regarding drought tolerant , MAC, BFS, MBC, MCA and diseases tolerances / Cooking time</p>	<p><u>Evaluation In PYT of different MCR germoplasme received from CIAT Kawanda</u></p> <p>Evaluation of four set of MRC lines received from CIAT Kawanda went on at research station of Moso , Gisozi and Murongwe.</p> <p>After seed increase and preliminary evaluation selected lines for further evaluation are the following</p> <ul style="list-style-type: none"> • MBC(tolerant to BCMNV) : 20 lines evaluated in PYT at Moso and Gisozi : the lines showed good performance while at Gisozi the result was not conclusive due to heavy precipitation during flowering period which highly affected their performance. The trial was repeated during 2016A cropping season. Harvesting is in process. • MCA (tolerant to ALS) : Good performance at Moso : AYT was conducted at Murongwe and Gisozi during 2016A. Harvesting is in process in both sites. • MAC : 9 lines selected for further evaluation at Murongwe. Harvesting is in process • BFS : 9 lines were selected out of 15. These selected lines were BFS30, BFS32, BFS23, BFS29, BFS62, BFS47, BFS24, BFS18 and BFS35. Since 2016A cropping season, they were evaluated at multilocation sites (Murongwe and Moso). Harvesting is in process.
<p>1.1.1.12: Conduct PVS for lines developed drought/cooking time /for selected 4 market classes (Red mottled, Red kidney, Sugar and yellow)</p>	<p>In order to associate farmers' considerations in bean varieties selection and accelerate adoption of selected varieties , PVS were conducted with different selected genotypes</p> <p>Those includes : (a) AYT Drought tolerant fast cooking and canning bean (bush)</p> <p>(b) Root rot lines</p> <p>(a) AYT Droughth tolerant fast cooking and canning bean (bush</p> <p>Drought tolerant, fast cooking materials (4 market class) were evaluated on farm Those lines are / BCB11-315, BCB11-404, DRM11-20, DRK11-10 and Kenya sugar Farmers preferences are: high yield, earliness, grain color and size for market. 5 lines were selected. The selected materials were tested in NPT since September 2015. Harvesting</p>

	<p>is in process.</p> <p>(b) PVS of advanced Root Rot lines + RWR2154 (biofortified) ROOT Rot lines and RWR2154 (biofortified lines) were evaluated on farm in low land (Moso at 2 sites). The most appreciated genotypes were RWR1092, ECDHR and RWR2154, for yield diseases tolerances and market demand. The selected lines were submitted to NPT since September 2015 and actually, they are subjected to DUS test since February 2016.</p>
<p>1.1.1.13: Conduct demonstrations for best bet varieties</p>	<p>Demonstrations with best bet varieties were conducted at different locations with released and pre-released varieties. Therefore, a total of 14 varieties were used for demonstrations plots at different locations during 2015B and 2016A cropping seasons.</p> <p>Makamba and Karusi provinces : MAC44, Muhoro, MAC70, RWV1129, GSZ611, Nakaje, (MAC44 , RWV1129 and GSZ611 appreciated for high yield and market; 262 farmers participated (184 women + 78 men)</p> <p>Bujumbura rural area: Muhoro, GSZ611, IZO201543, Mukungungu (Muhoro and GSZ611 : highly appreciated for high yield, high price at the market) : 38 farmers (37 F and 1 men)</p> <p>Gisozi (3 sites) and Murongwe (2 sites) : MAC44, MAC70, Muhoro, RWV1129 and RWV2887 : 145 farmers (113 F and 32 M)</p> <p>According to farmers preferences: all improved varieties were appreciated for agronomics parameters (early maturing, grain color and size, high yield). MAC44, Muhoro and RWV1129 were the most appreciated by both women and men</p> <p>Rutana (Giharo and Bukemba) : RWR2245, IZO2015110, Msolé, CODMLB003, IZO201299, IZO201245, KATB1 , KATX69 : Four farmers' group and individual farmers' with a total of 128 farmers' (93 women and 35 men) participated in the implementing the demonstration plots</p> <p>Kirundo (Busoni) : KATB1, IZO201245, More88002. Five farmers' group with a</p>

	total of 299 (174 women + 125 men) participated in seed production.		
1.1.1.15: Produce and maintain nucleus seed	A total of 560 kg was produced with the selected and old varieties with a mean of 20 kg per variety (23 varieties). Also seed of promising genotypes were multiplied in order to facilitate further evaluation.		
Output 1.2. Effective and economically viable ICM options for increased dry bean productivity and resilience identified and promoted			
Target 2015 - 2019: 15			
Target 2015:			
Activity set 1.2.1. Evaluate the effectiveness and economic feasibility of ICM options (including cropping systems) for higher bush and climbing bean productivity and adaptability to climate change and variability			
Activity 1.2.1.4. Implement adaptive trials (G*E*M) with farmers of the selected 2-3 promising ICM technologies (including climate smart) for bean production in target sites (learning with farmers on best fit ICM technologies)			
Total = 10000 \$			
Act1.2.1.4.1 Continue participatory adaptive trials (G*E*M) with farmers using traditional methods against bean storage pest (Palm oil, ash, laterite)			
Act 1.2.1.4.2 Promoting the DMC (direct mulch cropping system) technology farmer's adoption to improve agro systems resilience , bean productivity and cost production efficiency.			
Act 1.2.1.4.3 Techniques of production of improved compost (organic manure) through training)			
Act 1.2.1.4.3 Intensifications of staking using strings	<p>Staking options for climbing bean intensification : Using cords in comparison to wood stakes</p> <p>Staking options through demonstrations plots were the main activities conducted during 2015B and 2016A cropping seasons. The activity was intensively conducted in different provinces: Bujumbura rural area (Mugongomanga), Mwaro (Gisozi, Kayokwe, Bisoro), Gitega (Mutaho, Bugendana) and Rutana (Giharo).</p> <p>In some sites, the demonstration plots were implemented in order to promote biofort varieties and the new climbing bean varieties while demonstrating staking option innovations.</p>		

	<p>Bioforts varieties used: were: Nakaja, MAC44, RWV1129, Gasirida and Muhoro. Staking technique with strings has been accepted to be a positive alternative solution against the lack of staking materials. The use of strings as staking materials provides several advantages such as higher yields than woody stakes, saving time during harvesting, protecting environment. On farm demonstration plots were used as Farm Field School.</p> <p>Field visit by different farmers coming from different locations were organized for sharing experiences. One of the field visit include in December 2015 where the ministry of Agriculture and Livestock visited farmers at Gisozi. He highly appreciated the new technology of staking beans with strings at farm level. From 2015B to 2016A cropping season, a total of 226 demonstrations plots conducted. On the other side, a total of 267 farmers participated from which 163 were women and 104 men.</p>
<p>Activity set 1.2.2. Develop and promote effective post harvests storage and handling practices/technologies</p>	
<p>Activity 1.2.2. Test effectiveness of post-harvest grain handling bean storage with small hermetic boxes) prototypes with farmers (eg, tripple bagging,</p>	<p><u>Test of Bean storage with Hermetic plastic bottles</u></p> <p>In 2013 CRS initiated bean Hermetic storage techniques, in response to the storage problems faced by small farmers showed positive effect.</p> <p>Hermetic jercans showed positive effect. More effective and affordable by small farmers with limited income. However, there was a lack of extension of this technology.</p> <p>Since July 2015, a test was conducted by ISABU bean program using hermetic plastic bottle on farm level by using participatory approach.</p> <p>2 locations on farm : Moso and Gisozi</p> <p>Control : ISABU laboratory test</p> <p>Treatments :</p> <ol style="list-style-type: none"> 1. Storage in small bags (in cotton material) : Chemical product, Traditional methods (ashes, Coated seed oil) and the check with no treatment 2. Storage in hermetic plastic bottle

	<p>Varieties used : MAC44 and RW1129 (300 gr of grain for each treatment)</p> <p>After 7 months i.e from July 2015 to January 2016; results indicated that storage in small bottle container showed to protect beans at 92% compared to storage in small bags. The activity still in process.</p>		
Output 1.3. Gender specific labour saving technologies developed in three countries, in each network (ECABREN and SABRN).			
Target 2015 - 2019: 4			
Target 2015:			
Activity set 1.3.1. Assess, quantify gender specific labour constraints and evaluate the effectiveness and market potential for labour saving technologies			
Output 1.4 Gender responsive delivery systems for seed of preferred dry bean varieties			
Target 2015 - 2019: 6			
Target 2015:			
Activity 1.4.1. Develop / deploy gender responsive delivery systems for dry bean varieties, pre and post-harvest ICM technologies (Linked with 2.1.6)			
Activity 1.4.1.1. Test various approaches for technology dissemination (Which approach do farmers find best for getting needed information?)			
Activity 1.4.1.2. Develop promotional materials (print and audio-visual) for the best-fit ICM technologies (link this to ongoing work with Clare/JC)	<p><u>Promotional materials</u></p> <p>Multiplication of promotion materials</p> <p>In order to create awareness and wide use of ICM technologies ISABU bean program developed various documents in the 2 last year (leaflets on staking options, use of tithonia and improved agronomic practices, Booklet on bean crop management).</p> <p>During this reporting period, those materials were again multiplied and distributed. A total of 1650 leaflets were printed and distributed. A total of 950 leaflets were distributed during agricultural shows, during field visit, training and open days where ISABU bean program participated. In addition 7 exhibition posters (varieties, ICM, beab based products and seed production by partners) were developed and used during PABRA-SDC launching meeting.</p>		

1.4.1.1 Produce Breeder (by NARS) and basic (NARS and Private) seed of newly released varieties (less than 10 years post release)	<p>Formal seed</p> <ul style="list-style-type: none"> Breeder and Pre-basic seed : A total of 6231 kg (from which 2911 kg is breeder seed) Basic seed by private seed producer : 25786 kg Basic seed by farmers' group : 4978 kg <p>Total formal seed : 36995kg Harvesting and processing are going on for 2016A cropping season</p>
1.4.1.2 Engage private seed producers (companies, entrepreneurs) to produce certified and/or quality declared seed (QDS)	<p>1. Certified seed Farmers' group : 4675 kg</p> <p>2. Quality declared seed (QDS)</p> <ul style="list-style-type: none"> Farmers' group of Muyinga working with WV Burundi : 83000 kg (MAC44 &RWR2245) Others farmers' groups (Rutana, Makamba, Mwaro) : 2450 kg <p>Total for QDS = 85450 kg produced Harvesting is going on for this cropping season 2016A</p>
1.4.1.3 Train small and large scale seed producers and extension staff (public, NGOs, farmers' Organisations) in pre and post-harvest seed management	A ToT of seed producers and extension staff from Kirundo and Muyinga in pre-post management was organised in November 2015. A total of 37 were trained from which 30 farmer's leaders and 7 extensionists.
1.4.1.4 Develop/adapt and share seed and ICM related information/resource manuals and tools (videos, radio messages, flyers, posters)	
1.4.1.5 Enhance local national and regional awareness of newly released varieties and complementary ICM technologies (Carry out demonstration, open and field days, agri- and seed fairs for promotion of new varieties and ICM options)	Since September 2015, The Ministry of Agriculture and Livestock in collaboration with CAPAD (local NGO) organized agr- seed fair. ISABU bean program participated to this agricultural show for promotion of new varieties and bean based products. Also, in November 2015 ISABU organized agronomic day where bean program participated actively by exhibiting new varieties, bean based snacks, bean based composite flour and

	<p>promotional materials such as leaflets, posters both scientific and exhibition posters. During launching meeting PRABRA-SDC initiative, bean program got opportunity to create awareness to exhibit its innovation technologies. A total of 950 leaflets were printed and distributed.</p>		
1.4.1.6 Engage seed producers to use innovative and smallholder-targeted seed marketing			
1.4.1.7 Strengthen M&E to capture seed and ICM delivery	<p>The channels of improved bean seeds dissemination depend on the main orientations of farmers. In Kirundo province (Bugesera), trading channel is the most utilized for improved seeds dissemination. The existing pilot bean platforms constitute the second channel of improved seeds dissemination. Indeed, yellow bean varieties are considered as cash crop and attract more men for producing more for trading. On the other hand, in Rutana province in Moso region, the most channel of seeds dissemination is exchange between individual farmers, followed by farmers' organizations channel.</p> <p>Some partners such NGOs and projects (CRS, WV, CAPAD, UCODE) are playing key roles in seed and ICM delivery system.</p>		
1.4.1.8 Assess the efficiency of seed and ICM delivery systems in reaching women and smallholder farmers (including cost/benefit analysis)			
1.4.1.9 Map seed enterprises within the corridors and their ability to service the corridors			
1.4.1.10 Develop business model of accessing appropriate gender specific farm machinery/implements for alleviating drudgery			
Immediate Outcome 2: Increased access to micronutrient rich bean products among the vulnerable groups in a gender equitable manner			
Output 2.1 Micronutrient rich bean varieties with superior agronomic traits developed			
Target 2015-19: 20 varieties released			

Target 2015: 4 varieties released			
Activity set 2.1.1. Evaluate and confirm grain nutrient (iron, zinc, proteins) content in introductions, landraces, released and pre-released varieties in relevant agro-ecological zones (GXE of trials).			
2.1.1.1: Assemble, introductions, landraces, released and pre-released varieties for evaluation for protein and Fe and Zn content in multi locational trials using standard protocols	No budget made available		
2.1.1.2. Assess nutrient composition of fresh beans, pods, dry seed and leaves of released and pre-released bean varieties	Not yet		
2.1.1.3. Assess cooking time and shelf life of released and pre-released dry bean varieties	Not yet		
2.1.1.4. Catalogue released and pre-released bean varieties			
2.1.1.5. Mapping the bean landscape and database			
2.1.1.6. Support partners to promote released and pre-released bean varieties	Improved bean varieties rich in Fe and Zn such as MAC44, RWR2245 were provided in Muyinga and Kirundo for multiplication and dissemination through bean platform members. Also bean program facilitated access to improved macronutrients rich varieties to our partners such as CRS and world vision. Actually MAC44 is widely disseminated and adopted.		
2.1.1.7 Conduct country audit for existing tools			
2.1.1.8. Conduct baseline assessments for nutrition priorities to be addressed by the tools			
2.1.1.9. Match country potential with best bet tool			

2.1.1.11 Assess SBCC skills and knowledge needs of extension agents	
2.1.1.12. Conduct national level TOTs for the revised tools	
2.1.1.13. Facilitate nutrition platforms at community level	
2.1.1.14. Assess the level of satisfaction with various nutrition platform	
Activity set 2.1.2: Develop and select from new and existing segregating populations for iron and zinc grain content levels with a target of developing varieties with >90 ppm Fe and > 35 Zn for selected market classes	
2.1.2.9: Conduct PYT and AYT for lines developed for >90 ppm Fe and > 35 Zn lines /cooking time; (NUC and MNC lines)	<p><u>Evaluation of new nutritional germoplasme (MNC and NUC)</u></p> <p>After seed increase and preliminary evaluation on research station at Moso and Gisozi selected lines for further evaluation are the following</p> <ol style="list-style-type: none"> 1. MNC = 12 lines out of 19 were selected (MNC108 ,MNC167, MNC168, MNC 17, MNC280 , MNC 543, MNC 306, MNC351, MNC374, MNC, MNC 402 , MNC426, MNC544, MNC 2. NUC = 9 lines out 14 were selected for further evaluation in AYT (NUC186 NUC202 NUC267 NUC304 NUC371 NUC410 NUC246 NUC93
2.1.2.10: Conduct PVS for lines developed for >90 ppm Fe and > 35 Zn lines (NUV, NUA, and others promising varieties in pipeline	<p><u>PVS on farm with NUV lines at Mwaro and Murongwe</u></p> <p>In order to associate farmers' considerations in bean varieties selection and accelerate adoption of selected varieties, PVS were conducted with selected NUV lines.</p> <p>The lines were: NUV130, NUV 14, NUV 30, NUV 41, NUV 91 and NUV 160. Trials were conducted at two locations: Mwaro and Murongwe . Farmers criteria were mostly yield and earliness.</p> <p>According to farmers preferences, selected lines were NU91, NV130 and NUV30 for their high yield and early maturing. NUV91 was preferred because of red and huge pods like those for vuninkingi an old popular variety. The selected varieties were submitted to NPT since 2016A cropping season. Actually, NUV91 and NUV130 are submitted to</p>

	DUS test since 2016B cropping season.
2.1.2.11: Conduct demonstrations for best bet varieties developed for >90 ppm Fe and > 35 Zn lines	Newly selected varieties in released and pre-released were used in demonstration plots during 2015B and 2016A cropping seasons. They were conducted at three locations: Murongwe (Mutaho and Bugendana), Karusi (Buhiga) and Mwaro (Gisozi, Kayokwe and Bisoro). The following varieties were used: MAC44, MAC70, RWV1129, Muhoro, RWV2887, NUV91 and NUV130. Cross village visit was organized for sharing experiences and appreciation for the new micronutrient rich varieties.
2.1.2.12: Conduct NPT, DUS release micro nutrient rich varieties	Released varieties: MAC44, RWV1129 , Muhoro and MAC70 Since 2016B, RWR2245, NUV91, NUV130 and RWR2154 have been submitted to DUS at ONCCS (seed control and certification office).
2.1.2.13: Produce and maintain nucleus seed of micro nutrient rich bean varieties	A total of 230 kg of nucleus seed was produced in 2015B cropping season. Harvesting is going on for 2016A.
2.1.2.14: Train on sampling and evaluation protocols for micro nutrient rich bean development	No budget
Immediate Outcome 2: Increased access to biofortified bean varieties and bean based products among the vulnerable population	
Output 2.1: Micronutrient rich bean varieties with superior agronomic traits developed	
Act 2.1.5 Develop and strengthen the seed delivery system including the engagement of private sector and communities to produce quality seed and promote micro nutrient rich bean varieties considering the invisible traits/literacy levels	
2.1.5.1 Produce Breeder (by NARS) and basic (NARS and Private) seed of newly released varieties (less than 8 years post release)	In 2015B, breeder seed with biofortified varieties: 2001 Kg. In 2016A: Harvesting in process.

<p>2.1.5.2 Engage private seed producers (companies, entrepreneurs) to produce certified and/or quality declared seed (QDS)</p>	<p>Private seed basic producer : MAC44 =19 Tons (refers to 1.4.1.1) Quality declared seed by farmers of Muyinga working with NGO WV : 83 Tons (MAC44 &RWR2245) (1.4.1.2)</p>		
<p>2.1.5.4 Enhance local, national and regional awareness of released micronutrient rich varieties and complementary ICM technologies among policy makers, farmers, consumers, traders and other nutrition-sensitive stakeholders (Carry out demonstration, open and field days, agri- and seed fairs for promotion of new varieties and ICM options)</p>	<p>Since September 3 – 6 /2015 MoA and CAPAD (local NGO) organized agr- seed fair. ISABU bean program participated to this agricultural show for promotion of new varieties and bean based products. Also, in November 2015 ISABU organized agronomic day where bean program participated actively by exhibiting new varieties, bean based snacks, bean based composite flour and promotional materials such as leaflets, posters both scientific and exhibition posters. During launching meeting PRABRA-SDC initiative, bean program got opportunity to create awareness to exhibit its innovation technologies. A total of 950 leaflets were printed and distributed (refers to 1.4.1.5)</p>		
<p>Immediate Outcome 3: Increased access to profitable local and national markets in a gender equitable manner</p>			
<p>Output 3.1: Commercial and nutrient dense bean-based products promoted through value chains in 7 target countries (3 of the countries targeting nutrition and gender sensitive value chains)</p>			
<p>Activityset 3.1.1: Develop and promote value chains for processed and nutrient rich bean products</p>			
<p>Activity 3.1.1.1 Establish baselines for bean corridors for processed and nutrient dense bean products (corridors; available products-biofortified beans, bean flour, precooked beans, canned beans; key markets, key actors involved and bean varieties that contribute to the products)</p>			
<p>3.1.1.1.1 Map out and document the key bean corridors</p>			
<p>3.1.1.1.2 Prepare a catalogue of target products</p>			
<p>3.1.1.1.3 Identify and document key actors in the corridors as well as existing platforms with the focus</p>	<p>Two active women involved in Bean based flour commercialization for porridge or sauce have</p>		

<p>on private sector</p>	<p>been identified (Ms Christella Ndayishimiye and Ms Francoise SOTA). Mrs Christella Ndayishimiye has been very active in commercializing bean flour for porridge during agricultural shows last September 2015. Since there, she received a high demand of bean based flour. On Request of NGO WV, she started training farmers of Muyinga how to prepare bean based flour for porridge and the bean based snacks (Mandazi).</p>		
<p>3.1.1.1.4 Screen and document bean varieties that will contribute to corridor activities in collaboration with marketers and breeders</p>	<p>MAC44 is a newly released variety and highly appreciated in Burundi. It is also released in Rwanda and probably in Tanzania.</p>		
<p>Act 3.1.1.2. Conduct consumer analyses and assess the market potential of processed and nutrient dense bean products</p>			
<p>3.1.1.2.1 Identify market segments and classify target markets</p>			
<p>Act 3.1.1.3. Test and facilitate business models in collaboration with the private sector (partnerships and platforms) that support uptake of processed and nutrient rich bean products</p>			
<p>3.1.1.3.1 Identify models that can be promoted or adapted for use</p>			
<p>Act 3.1.1.5. Monitor and evaluate the performance of the value chains for processed and nutrition sensitive value chains</p>			
<p>3.1.1.5.1 Characterize the bean based nutrition sensitive value chains in the major corridors</p>			
<p>3.1.1.6. Capacity building for key actors and facilitators within the corridors, platforms and</p>			

promotion of processed and micronutrient bean products		
3.1.1.6.1 Conduct workshop equip market researchers with value chain and markets research and analysis skills in the target countries		
Output 3.2 Business models and bean platforms for linking bean farmers to markets promoted in at least 4 of the target countries		
Activity 3.2.1.1 Establish baselines and characterize the bean corridors and innovation platforms for marketable dry beans		
3.2.1.1.1 Map and document the geographic coverage of the corridors in the target countries		
3.2.1.1.2 Prepare a catalogue of target bean products in each of the corridors		
3.2.1.1.3 Identify and document key actors within the bean corridors		
3.2.1.1.4 Conduct value chain analyses of selected bean products and bean corridors		
3.2.1.1.5 Screen and document bean varieties to be promoted in each bean corridor(with breeders)		
3.2.2. 1 Test and promote in collaboration with the private sector business models that support sustainable linkages to existing and new markets for dry beans in key bean corridors		
3.2.2.1.1 Identify market segments and target markets		
Activity 3.2.2.2 Test and facilitate business models in collaboration with the private sector that support uptake of dry and processed bean products		

3.2.2.2.1 identify and evaluate the mechanisms of promotion that can be adapted for use in promoting the value chains	
3.2.2.4 Build the capacity of key bean actors in the corridors to support implementation of market linkages in a gendered manner	
3.2.2.4.1 Conduct workshop equip market researchers with value chain and markets research and analysis skills in the target countries	
Immediate Outcome 4: Increased access to skills, information and knowledge providing enabling environment for bean research and development	
Output 4.1: 4.1. Women's participation in research and decision-making bodies of PABRA, and in bean platforms increased / enhanced	
4.1.1 Build capacity of NARS to mainstream gender and monitor outcomes at network and national levels	
4.1.1.1 Review, adapt and publish the PABRA gender mainstreaming strategy (Meeting to review and contribute to the draft)	
4.1.1.2 Analyse and publish gender perspectives and dynamics in bean value chains for targeted areas (survey based study)	
4.1.1.3 Train implementers along the bean value chain on potential interventions to enhance inclusiveness in research and decision making bodies (gender review and mainstreaming in workplan)	
4.1.1.4. Develop and enhance a monitoring & learning system of gender outcomes (about intended and unintended)	
4.1.2 Establish partnerships with national level NGOs focusing on gender to contribute to education for gender equity at household and community levels in 6 countries	
4.1.2 .1a. Identify and engage national level NGOS on	

gender equity concerns within bean value chains (check list of NGOs with gender focus and make with them and even invite for meeting to discuss collaboration)			
4.1.2 .1b Train national level NGOS on gender equity concerns			
Output 4.4. Strategies to influence policy makers in the bean sector developed and implemented (J.C Mercy)			
4.4.1 identify seed systems policy gaps : use of integrated and plurastic – impact oriented seed systems in beans and other legumes, varieties in six countries of ECABREN			
4.4.2 Organize an international workshop in collaboration with FAO, CGIAR, NARS Management and scientists, National government agricultural policy makers, private sector and development and funding partners			
4.1.3 Develop policy briefs related to gaps identified			
4.1.4 Engage policy makers to implement the agreed seed policies			
4.1.5 Digital cataloguing of released varieties.			
Output 4.2. Skills and knowledge of bean valuechain actors (NARS scientists / private sector/ farmers traders, processors and consumers) enhanced (RM)			
Target 2015 – 2019: in PMF			
Target 2015:			
Activity set 4.2.1 Strengthen network and national institutional capacity through degree and non-degree training and mentorship programs (NARS scientists / private sector/ farmers traders, processors and consumers (50% women)			

4.2.1.1 Facilitate knowledge sharing forums to disseminate findings from capacity building studies, derive lessons learnt, and co-creation of good practices (target thematic working groups – select:breeding, gender, seedsystems & markets, M&E)			
4.2.1.1.1 Knowledge sharing across thematic groups _nutrition , breeding seed system markets , Mx,E,			
4.2.1.1.2 Exchange visit for experience sharing in breeding			
4.2.1.3 Assess capacity to learn and transfer skills (pre-training) target training participants identified in a thematic area			
4.3. Information products responding to emerging communication needs enhanced (NO, SM)			
Target 2015 – 2019: in PMF			
Target 2015:			
Activity set 4.3.1 Develop tools and disseminate communication materials in and out of PABRA to address information and knowledge gaps			
4.3.1.1 Development and printing of communication materials (exhibition posters, brochures, magazine) on bean			
4.4. Strategies to influence policy makers in the bean sector developed and implemented (JC, RC)			
Target 2015 - 2019: in PMF			
Target 2015:			
Activity set 4.4.1 Promote innovative strategies to influence policy that may have impact on the bean sector (e.g. policy briefs for seed systems, nutrition, markets, gender mainstreaming) into national			

development agenda			
4.5. NARS capacity for ICT enabled gender sensitive monitoring and evaluation systems developed (RM)			
Target 2015 - 2019: in PMF			
Target 2015:			
Activity set 4.5.1 Develop test and promote ICT enabled gender sensitive monitoring and evaluation systems for PABRA and partners			
4.5.1.1 Conduct a baseline for ICT enabled M&E			
4.5.1.3 Training in country teams on skills and knowledge for ICT and M&E			
4.5.1.4 Support in country teams to implement ICT enabled M&E ,collect data and input the PABRA database			
4.5.1.5 Support for Equipment acquisition – Mobile phone(Smartphone) - for lead country programs , airtime and transportation frees			
<i>Activity set 4.5.2 Maintain the PABRA databases (both data and map)</i>			
Output 4.6. Impact assessment of interventions conducted in 2 flagship countries (Burundi and Zimbabwe) and the results disseminated (EK)			
Target 2015 - 2019: in PMF			
Target 2015:			
Output 4.7. PABRA networks institutional capacity strengthened			
Target 2015 - 2019: in PMF			
Target 2015:			
Activity set 4.7.1 Inter and intra network activities			