

The Drylands Development Programme (DRYDEV)



A Farmer-led Programme to Enhance Water Management, Food Security, and Rural Economic Development in the Drylands of Burkina Faso, Ethiopia, Kenya, Mali and Niger

***** Inception Year Narrative Report *****

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Submission date: 30th June 2015



EXECUTIVE SUMMARY

The Drylands Development Programme (DRYDEV) is a five-year initiative (August 2013 to July 2018) that aims to support smallholder farmers in selected dryland areas of Burkina Faso, Mali, Niger, Ethiopia, and Kenya with contextually appropriate interventions. The overall vision is for households residing in such areas to have transitioned from subsistence farming and emergency aid to sustainable livelihoods. The programme aims to provide quality and contextually relevant support to over 227,000 farmers across the five countries. The World Agroforestry Centre (ICRAF) is the overall implementing agency, and it leads a consortium of development partners selected on the basis of their competence, experience, and geographic presence. The consortium, which comprises five national lead organizations and 16 other implementing partners, is now fully established across the five countries. Considerable time was devoted to this process, particularly in selecting partners, finalizing contractual agreements, and disbursing funds.

This report is a detailed account of the Inception Year, where the programme's planning processes were developed and instituted. This included i) finalizing consortium organizational arrangements; ii) conducting baseline and diagnostic studies; iii) piloting interventions; and iv) planning for the programme's full implementation phase. The programme has been challenged by delays in finalizing contractual agreements and recruiting staff. However, issues of water and food security are of top priority for all the governments in the participating countries, and farmers in the programme's sites are enthusiastic and committed to participate and make substantial contributions to support the programme's implementation. Below is a summary of the major processes initiated and achievements of the programme in the Inception Year.

Site selection: The programme intervention areas were selected based on pre-set criteria focusing on rainfall, population density, and reliance on food aid. This was further refined by the intensive consultations and discussions with farmers and other stakeholders, as well as the characterization studies that followed.

Area characterization: In all countries, studies were commissioned to establish biophysical, socio-economic, and institutional characteristics of the selected areas. The studies included baseline and socio-economic surveys, value chain analysis, mapping using GIS and remote sensing, policy analysis, and assessment of extension systems. Most of the studies have been completed; the few remaining gaps will be filled during the initial months of the programme's full implementation phase.

Quick wins: The programme piloted numerous "quick-win" interventions, which were identified and planned through participatory processes. Most of the interventions were targeted at on-farm soil and water management practices, tree planting, and sub catchment water harvesting. Nearly 37,000 farmers were reached.

Planning: Planning was a main feature of the programme in the Inception Year. Initial country business plans were revised based on the new programme framework resulting in the production of the Programme Implementation Plan (2015-2018), 2015 Detailed Implementation Plans, and corresponding detailed budgets.

TABLE OF CONTENTS

EXECUTIVE SUMMARY	1
ACRONYMS	4
1. INTRODUCTION AND BACKGROUND	5
2. PROGRAMME PLANNING, COORDINATION & MANAGEMENT	5
2.1 Planning and monitoring	6
2.2 Site selection and characterization	6
3. PROGRESS TOWARD OUTCOMES	7
3.1 Outcome 1: Improvement of water and food security	7
3.1.1 Sub-outcome 1.1: Integrated on-farm water and soil management practiced	8
3.1.2 Sub-outcome 1.2: Securing water availability in the watershed	13
3.2 Outcome 2: Commercialization of the rural economy	16
3.2.1 Sub-Outcome 2.1: Increased participation of different categories of farmers in strengthened value chains	16
3.2.2 Sub-outcome 2.2: Access to credit and financial mechanisms by different categories of farmers improved	18
3.3 Outcome 3: Environment that enables increased water and food security and economic growth	20
3.3.1 Sub-Outcome 3.1: Policies adjusted to the interests of different categories of farmers ...	20
3.3.2 Sub-outcome 3.2: Institutional framework to upscale integrated water and soil management techniques and value chain development adapted to different categories of farmers	22
3.3.3 Sub-outcome 3.3: Inclusive and integrated approach developed and applied for different categories and target areas	23
4. KEY CHALLENGES AND OPPORTUNITIES	26
4.1 Key challenges and constraints during the inception phase	26
4.2 Opportunities identified during the inception phase	27
5. LESSONS LEARNED	28
Working with partners	28
Project/programme management	29
Functional involvement of stakeholders	29

Boxes

Box 1. Some of the identified challenges preventing rural farmers in drylands areas from accessing microfinance services	20
Box 2. Weaknesses and recommendations from the Mali institutional arrangement analysis	22
Box 3. DRYDEV outcome story from Burkina Faso.....	25

Tables and Figures

Table 1. DRYDEV programme national lead and implementing partners	5
Table 2. Sites selected for DRYDEV programme implementation	6
Table 3. Numbers of farmers reached by the quick win interventions.....	7
Table 4. Piloting of soil and water management techniques by farmers across the five countries	8
Table 5. Inputs distributed and farmers reached by the programme in the inception year	10
Table 6. Tree planting, management and processing training	12
Table 7. Tree seedlings distributed to farmers in the inception year	12
Table 8. Key product/value chains selected in each country	17
Table 9. National policy provisions and strategies relevant to the DRYDEV programme	21
Table 10. Key challenges in policy and strategy formation and implementation	21
Table 11. Farmer organization assessment and capacity building	23

Figure 1. Participatory and bottom-up processes were used to engage farmers during prioritization and validation of “quick wins” in Niger (left) and Kenya (right).	7
Figure 2. Some of the techniques promoted included half-moons, as demonstrated in Toyende, Passore Province Burkina Faso (top left); a farm pond by Uka Wiyonee group in Kenya (top right); demonstrations of composting using organic matter from the weed <i>Sida cordifolia</i> in Niger (bottom left); and fertilizer micro dosing of cowpeas in Zondoma, Burkina Faso (bottom right).	9
Figure 3 Dried up rice field in the district of Tominian, Mali.....	10

Figure 4. Some of the trees promoted included neem tree seedlings ready for transplanting in Waita, Kenya (left) and papaya seedlings planted out in Boset, Ethiopia (right).	11
Figure 5. Farmers were supported to establish water management structures at watershed level. Water-buffering structures were constructed in Tigray Ethiopia (top right and left) Repairs were made to a water retention point in Wori, Burkina Faso (bottom).....	14
Figure 6. Rehabilitated water structures were used to boost agricultural production; a vegetable production garden for the women of Konogola in Mali (top); onions produced by women in Kindibo, Zondoma (centre left); rehabilitated well in Ley, Yatenga province Burkina Faso (centre right); supplementary irrigation canal to supply water for irrigating vegetables and fruit trees in Ethiopia (bottom).	15

Figure 7. Crop thresher technology introduced to farmers in Boset	18
Figure 8. A number of processes were used to ensure that a wide range of categories of farmers participate: Mali Country Team discusses site selection with the leaders of the district (left); farmers discussion is held to help identify interventions in Tigray, Ethiopia right.	24
Figure 9. Programme interventions were promoted in an integrated manner. Rehabilitated wells provided water for vegetable gardening where various water and soil management techniques were applied (top left). One of the four wells was rehabilitated to supply water to gardens (top right). Vegetable garden and market gardening groups (bottom) were established in Sanguie province Burkina Faso	25

ACRONYMS

ADRA	Adventist Development and Relief Agency
ANR	Assisted Natural Regeneration
AMEPPE	Malian Association for Public Education and Protection of the Environment
AMEDD	Malian Association for Awareness Raising and Sustainable Development
AREN	Association for Livestock Revitalization in Niger
CRESA	Regional Centre of Special Teaching in Agriculture
DGIS	Directorate General International Cooperation
DIP	Detailed Implementation Plan
DRYDEV	Drylands Development Programme
EOC/DICAC	Ethiopian Orthodox Church's Development & Inter-Church Aid Committee
FO	Farmers Organization
FMNR	Farmer Managed Natural Regeneration
HIV/AIDS	Human immunodeficiency virus infection / acquired immune deficiency syndrome
IP	Implementing Partner
ICRAF	International Centre for Agroforestry Research (World Agroforestry Centre)
IWRM	Integrated Water Resources Management
KALRO	Kenya Agriculture & Livestock Research Institute
MA&D	Market Analysis and Development
MFI	Microfinance Institution
MoFA	Ministry of Foreign Affairs
NLO	National Lead Organization
NTFP	Non-timber Forest Products
OxC	Options-by-Context
PIP	Programme Implementation Plan
SCMP	Sub-Catchment Management Plan
SNV	Netherlands Development Organization
SoW	Statement of Works
SWOT	Strengths, Weaknesses, Opportunities and Threats
RAIL	Local Initiatives Support Network
REST	Relief Society of Tigray
WRMA	Water Resources Management Authority
WRUA	Water Resource User Association
VTE	Village Tree Enterprises

1. INTRODUCTION AND BACKGROUND

The Drylands Development Programme (DRYDEV) is a five-year initiative (August 2013 to July 2018) that aims to support smallholder farmers in selected dryland areas of Burkina Faso, Ethiopia, Kenya, Mali and Niger with contextually appropriate interventions. Farmers in the dryland areas of these countries suffer from chronically low agricultural productivity, low commoditization and commercialization of farming, inadequate water management, soil degradation, and poor soil fertility. Thus, food insecurity and poverty rates are inherently high in these areas. Farmers in most of these countries generally depend on rainfed agriculture, which makes them vulnerable to variations in rainfall and climate and increases their reliance on food aid. The DRYDEV programme is being implemented in semi-arid areas with rainfall of 400mm-800mm per year. Semi-arid areas account for 40%-50% of the land in Ethiopia and Kenya whereas in the three countries in the Sahel, which are generally drier, semi-arid areas make up only 7% – 27% of the land, the least being Niger.

The overall objective of the programme is to increase food and water security, enhance market access, and strengthen the local economy for different categories of farmers. All this is aimed at contributing to the realization of a **vision** where households residing in such areas have transitioned from subsistence farming and emergency aid to sustainable rural development.

The programme is funded by the Directorate General International Cooperation (DGIS) of the Ministry of Foreign Affairs (MoFA) of the Netherlands, with a substantial contribution from World Vision Australia for the Kenya and Ethiopia programmes. The World Agroforestry Centre (ICRAF) is the overall implementing agency working with the consortium of five national lead organizations and 16 other implementing partners.

The DRYDEV Inception Year began in January 2014. This report is a detailed account of the inception year activities, which broadly fell into four categories: i) finalizing organizational arrangements, ii) conducting baseline and diagnostic studies, iii) piloting some interventions, and iv) planning for the implementation phase. The first section of the report presents a summary of the programme management, coordination and planning. The second section, which is the main part of the report, presents progress towards achieving outcomes; the third section details challenges, opportunities and lessons learned.

2. PROGRAMME PLANNING, COORDINATION & MANAGEMENT

The programme is being implemented through a consortium of 22 organizations. At the country level, the programme is under the management and coordination of lead organizations that have been sub-contracted by ICRAF. These country-level lead organizations, in turn, sub-contracted other implementing partners (IPs) after assessing their expertise, geographical coverage, and technical competencies and capacities (Table 1).

Table 1. DRYDEV programme national lead and implementing partners

Country	National Lead Organization	Implementing Partners
Burkina Faso	Reseau Marp	SNV; Tree Aid
Ethiopia	World Vision	EOC/DICAC; REST
Kenya	World Vision	SNV; CARITAS; ADRA
Mali	Sahel Eco	OXFAM; AMEDD; AMEPPE
Niger	Care International	OXFAM; World Vision; KARKARA; AREN; RAIL; CRESA

2.1 Planning and monitoring

The success of any large-scale, cross-sector, multi-institution, multi-country programme is contingent on proper conceptualization, which requires a common understanding and implementation of planning and monitoring processes. In this vein, DRYDEV's Inception Year was dedicated to solidifying such processes. Besides the time spent finalizing the consortium itself, significant effort was invested in conceptualizing and planning for the programme at the country level, a process that resulted in the production of business plans.

Also, upon further reflection during the Inception Year, the programme framework was revisited and a new strategy developed that has a more robust theory of change and provides a more systematic approach to planning, co-learning, and monitoring and evaluation, as well as impact assessment. Based on the new framework the business plans were translated to implementation plans, which were completed in the extension period.

2.2 Site selection and characterization

The programme's intervention areas were selected based on pre-set criteria focusing on rainfall, population density, and the degree of reliance on food aid. These criteria were further refined by intensive consultations and discussions with farmers and other stakeholders. One of the guiding principles for the programme is to promote contextually appropriate options for different categories of farmers in the selected sites. To facilitate this, initial broad-based characterization studies and baseline surveys were undertaken. These included detailed analysis of biophysical characteristics, such as water resources (sub catchments/ watersheds), land resources and soils, as well as social and governance dynamics and interactions. These studies were undertaken in the selected programme sites in all of the countries with varying levels of scale and detail. The studies were used to further refine the process to ensure there are delineated sites for programmatic intervention (Table 2). In addition, the studies also informed the development of the programme implementation plans (PIPs) by identifying opportunities for the programme, potential interventions, and challenges.

Table 2. Sites selected for DRYDEV programme implementation

Country	Programme site location
Burkina Faso	Sourou, Zondoma, Yatenga, Bam, Passore, Sanguie provinces
Ethiopia	Tigray and Oromia regions
Kenya	Kitui, Machakos and Makueni counties
Mali	Sikasso, Segou, Mopti regions
Niger	Torodi, Dogon Kiria, Malbaza, Aguié, Droum municipalities

3. PROGRESS TOWARD OUTCOMES

The piloted quick win activities reached nearly 37,000 farmers of which women accounted for 53%. However, significantly fewer women were reached in Burkina Faso and Ethiopia, compared to the other three countries (Table 3). This is attributable to both the kind of activities piloted and the social structuring of these communities, rather than purposeful targeting.

Table 3. Numbers of farmers reached by the quick win interventions

Country	Female	Male	Total	% women
Burkina Faso	3,493	4,398	7,891	44
Ethiopia	4,334	6,780	11,114	39
Kenya	2,540	1,064	3,604	70
Mali	7,902	3,864	11,766	67
Niger	1,372	1,054	2,426	57
Total	19,641	17,160	36,801	53

What follows is a description of the programme's key achievements during its Inception Year by each of the three original outcomes and corresponding sub-outcomes.

3.1 Outcome 1: Improvement of water and food security

The programme aims to improve food security and water harvesting and management at both the farm and watershed levels. This will be achieved by promoting and supporting water buffering (for, crop, tree, and livestock production) and soil water capture and storage (in ponds, sand dams, and check dams). In addition, there is a deliberate effort to use integrated approaches to develop and disseminate techniques and practices in water management, soil fertility management, and agroforestry; all of these are intended to increase on-farm production.



Figure 1. Participatory and bottom-up processes were used to engage farmers during prioritization and validation of "quick wins" in Niger (left) and Kenya (right).

Promotion of on-farm water harvesting, soil fertility management, agro-processing, and the use of drought tolerant crops and multi-purpose trees were some of the key “quick-win” interventions that were implemented across the five countries. To increase farmer ownership and effectiveness, bottom-up processes were used in most cases to help identify and prioritize the interventions (Figure 1). In Niger, there was deliberate investment in building the capacity of the implementing staff, as opposed to disseminating and testing the techniques at the farm and watershed levels.

3.1.1 Sub-outcome 1.1: Integrated on-farm water and soil management practiced

3.1.1.1 Dissemination of water and soil management techniques

In most countries, intensive training of trainers preceded dissemination of techniques by the trainers themselves, who, in turn, facilitated group training using on-farm demonstration, field visits, and exchanges. These capacity-building activities reached 6,577 farmers, with highest numbers registered in Burkina Faso (2,358), Ethiopia (2,336), and Kenya (2,205) (Table 4). The training that was offered included general good agronomic practices (land preparation, planting, weeding, pests and diseases control, and post-harvest management), organic farming, conservation agriculture, and small-scale processing techniques. The training and subsequent extension activities generated interest among the farmers as more piloted the disseminated techniques than those who had initially been trained (169%). Thus, farmer-to-farmer interactions also played a key role and will remain an important extension method for the programme (Table 4).

Table 4. Piloting of soil and water management techniques by farmers across the five countries

Country	Farmers trained			Farmers adopting/practicing various soil and water harvesting techniques		
	Total	Men	Women	Total	Men	Women
Burkina Faso	2358	1399	959	2052	1144	908
Ethiopia	2336	1704	632	4784	3032	1752
Kenya	2205	543	1662	2250	756	1494
Mali	68	62	6	62	62	0
Niger	1968	1274	694	1968	1274	694
Total	6,577	3,583	3,953	11,116	6,268	4,848

Farmers exhibited preferences for specific techniques. For instance in Kenya, 73% of the 1,638 farmers (69% women) established 54,440 zai pits in their crop fields, whilst less than 10% tried other agronomic techniques such as sunken beds, fertility trenches, and lined ponds (Figure 2). Reasons given for the lower interest were that these techniques, though equally labour intensive, needed more time to establish. In Burkina Faso, 2,052 farmers practiced various techniques to improve soil and water management over 832.57 hectares. These were combinations of either i) improved seed, organic fertilizer, micro dosing, and zai pits; or ii) half-moon, earthen mound with geotextile bags or vegetated stone belts and Assisted Natural Regeneration (ANR). In Ethiopia, a total of 4,784 households started practicing on-farm soil and water management techniques, including establishing water harvesting structures and agroforestry. In Mali and Niger, farmers have mostly piloted organic fertilizer practices, including the use of *Sida cordifolia*, a naturally occurring weedy vegetation that produces a high nutrient compost (Figure 2).



Figure 2. Some of the techniques promoted included half-moons, as demonstrated in Toyende, Passore Province Burkina Faso (top left); a farm pond by Uka Wiyonee group in Kenya (top right); demonstrations of composting using organic matter from the weed *Sida cordifolia* in Niger (bottom left); and fertilizer micro dosing of cowpeas in Zondoma, Burkina Faso (bottom right).

3.1.1.2 Access to inputs and crop production

Availability of and access to quality seeds and seedlings is always a challenge for rural farmers who have experienced repeated crop failures and who live in marginal areas where there are no reliable seed and seedling suppliers. As such, improving access is always key to promoting food security and improving agricultural production. In this context, the dissemination of techniques for piloting agroforestry, as well as other soil and water management practices and techniques, was important in the Inception Year.

The inputs were quite varied across the countries and sites reaching more than 8,000 farmers (51% women). The farmers who received inputs make up 21% of the total farmers reached, most residing in Burkina Faso, Ethiopia, and Kenya. In Kenya, the focus was on improving access to seed for drought-tolerant crops, while in Ethiopia, the focus was on enhancing access to superior breeds and varieties. Farmers contributed cash and labour (tree planting, pit digging) and committed to participating in revolving and pass-on schemes (where the same amount or more of seed or livestock received is passed on to another farmer). In some cases, the farmers used credit facilities to access the inputs. Acquired seed was planted using various soil and water harvesting techniques. For instance, some farmers in Kenya used zai pits and intercropping of maize and cow-peas. In Burkina Faso the programme provided inputs to promote techniques that improve soil fertility and water harvesting covering a total of 198 hectares. The inputs provided to farmers included tools and seeds (Table 5). In Burkina Faso, farmers were also supported with storage facilities; 400 bags for cowpea storage; materials for rehabilitating and equipping ten warehouses; and a groundnut processing mill.

Table 5. Inputs distributed and farmers reached by the programme in the inception year

Country	Type	Input Quantity (ton)	Number of farmers benefiting		
			Total	Men	Women
Burkina Faso	Soybean, sesame, groundnut, cowpea	3.625	2,039	1,178	861
	Wheelbarrows, shovels, picks, gas picks, scarifiers, secateurs, slope triangles, 4000 linear meters of andropogon		2,426	1,372	1,054
	Mineral fertilizer	19.050	2,039	1,178	861
Ethiopia	Vegetable and crop seeds	17.6	1,216	1,048	168
	Agro processing		1,389	105	374
Kenya	Drought-tolerant crops green grams, cow peas, pigeon peas, Gaddam sorghum, and maize	67	3,368	1,193	2,175
Niger	None				
Mali	Vegetable seeds shallot onion potatoes	3.220	741	196	545
Total			7,751	3,809	3,942

Unfortunately, like most seasons in the recent past, the rains were unpredictable both in the Sahel and East Africa. In Kenya, yields were far lower than expected, with green grams, cow-peas, and maize averaging 36.2 kg, 48.5 kg, and 24 kg per acre, respectively, against expected averages of 270 kg, 270 kg, and 630 kg per acre, respectively, according to Kenya Agriculture & Livestock Research



Figure 3 Dried up rice field in the district of Tominian, Mali

Institute¹ (KALRO). The low yields were mainly attributed to water stress due to a long mid-season dry spell. Similar results were registered in Mali, where the rice crop was lost due to a shortened rainy season (Figure 3). While the harvest was higher than normal in Burkina Faso than previous years, a significant amount of crop was still lost due to the shortened rainy season as the rains ended before the crops reached maturity. It is hoped that with the adoption of contextually appropriate techniques such problems will be alleviated.

3.1.1.3 Promotion of trees

The role of trees in the dry lands has been shown to be crucial, both on farms and in the rangelands where they contribute to soil and water management. Beyond that, they provide firewood, poles and fruit, which contribute to nutrition and income. In the Inception Year, attempts were made to promote tree planting with a special focus on fast-growing species. In total, 288,366 tree seedlings were planted by 9,543 farmers. Most of the beneficiaries of this intervention were women (72%), with Mali accounting for most (79%) of them (Table 6). In Ethiopia 843 farmers and 84 watershed committee members were trained in farmer managed natural regeneration techniques and

¹ Recommended High Value Traditional Crop, 2012

integrated watershed management approaches, respectively. As a result, the farmers, together with other members of the community, planted more than 250,000 trees of different species across the sub-watersheds on communal, as well as private (farm), lands covering 376 ha. In Kenya, the programme worked with farmer groups and organizations to encourage the use of multi-purpose trees in farming systems (Table 6, Table 7). A total of 52 farmer organizations were equipped with knowledge, skills, seeds and tools (shade nets, spades, poly tubes, wheelbarrows, forks, and wood frames). The groups went on to establish 11 nurseries, which supplied even more farmers with seedlings (Figure 4).

In the Sahel, the entry point was the promotion of Farmer Managed Natural Regeneration (FMNR). In Mali, two trainers' guides were developed to facilitate farmer training, and, in Niger, forest service staff members and 63 farmer trainers were trained in FMNR techniques, as well as management and protection of the community/district 'agroforestry parklands'. This training and the subsequent farmer-to-farmer extension activities resulted in the creation of 41 village management committees to oversee the protection of the agroforestry parklands. These committees include representatives from marginalized groups such as settled Fulani and Tuareg herders.



Figure 4. Some of the trees promoted included neem tree seedlings ready for transplanting in Waita, Kenya (left) and papaya seedlings planted out in Boset, Ethiopia (right).

In addition to the promotion of FMNR, 5,035 farmers across all three municipalities in Mali were trained in nursery management, tree planting, and processing of *Moringa*, which is of high nutritional value. This included members of cooperatives and women in the newly formed "*One woman, one Moringa*" initiative in Kifosso district. Through this initiative, as many as 4,971 women were trained and 49,318 trees planted in and around vegetable gardens, homes, and wells (Table 6, Table 7). Of these, 3,000 were Henna trees whose leaves are processed to a powder by women and used as a textile dye or a cosmetic product of high market value. In Burkina Faso, 4,000 tree seedlings of *Moringa*, *Bombax* and Baobab were distributed to farmers who had been trained on the technical aspects of planting and managing trees (Table 6).

Table 6. Tree planting, management and processing training

Country	Inputs provided		Farmers trained		
	Seeds (kg)	Seedlings	Total	Men	Women
Ethiopia	85	251,286	843	672	171
Burkina Faso		4,000	1,582	659	305
Kenya	65	21,647	1,104	283	821
Mali		11,533	5,605	88	5,517
Niger	None		409	307	102
Total		288,466	9,543	2,009	6,916

Table 7. Tree seedlings distributed to farmers in the inception year

Tree species	Common Name	Ethiopia	Kenya	Burkina Faso	Mali	Niger	Total
<i>Acacia melanoxylon</i>	Black wood acacia	24,300					24,300
<i>Malus domestica</i>	Apple	2,450					2,450
<i>Persea americana</i>	Avocado	3,877					3,877
<i>Adansonia digitata</i>	Baobab			1,125			1,125
<i>Bombax costatum</i>	Red-flowered silk, Cotton tree			600			600
<i>Coffea arabica</i>	Coffee	1,000					1,000
<i>Faidherbia albida</i>		45,800					45,800
<i>Vitis vinifera</i>	Grape	2,000					2,000
<i>Grevillea robusta</i>	silk oak	18,360					18,360
<i>Psidium guajava</i>	Guava	4,500					4,500
<i>Lawsonia inermis</i>	Henna, hina				3,000		3,000
<i>Casimiroa edulis</i>	Mexican apple	2,000					2,000
<i>Leucaena leucocephala</i>	Leucaena	35,890					35,890
<i>Mangifera indica</i>	Mango	1,497	6,700				8,197
<i>Melia azedarach</i>	white cedar, umbrella tree	34,213					34,213
<i>Melia volkensii</i>	melia (Eng), mukau	0	4,145				4,145
<i>Moringa oleifera</i>	Moringa, drumstick tree	1,000	4,145	2,275	8,533		15,953
<i>Azadirachta indica</i>	Neem		4,145				4,145
<i>Olea africana</i> <i>Olea europaea ssp. africana</i>	African/ Wild olive	3,400					3,400
<i>Carica papaya</i>	Pawpaw	1,699	2,512				4,211
<i>Schinus molle</i>	Pepper tree	23,900					23,900
<i>Sesbania sp.</i>	Sesbania	45,300					45,300
Total		251,186	21,647	4,000	11,533	0	288,366

3.1.2 Sub-outcome 1.2: Securing water availability in the watershed

Under sub-outcome 1.2, the programme aims to promote and support interventions to improve the availability of water for broader rural development through community-based sub-catchment management plans. Most countries have national sectoral frameworks and provisions for planning, developing, and managing water resources, which have since been expanded to encompass all natural resources. In Burkina Faso, this work is conducted by IWRM committees; in Ethiopia, it is the responsibility of sub-catchment management committees; in Kenya, the Water Resources Management Authority (WRMA) works through community-based Water Resource User Associations (WRUAs) to manage the country's water; and in Mali and Niger, Local Water Committees are mandated to facilitate these processes. During the inception year a number of activities were undertaken, including an assessment of the existence and capacity of these institutions.

Capacity development activities were initiated for stakeholders at different levels. In Ethiopia, 145 community members (15 female and 130 male) across three districts received training on how to improve the management of water resources and related equipment. In Kenya, the training focused on improving the capacity of the WRMA. In particular, 17 members from four WRUAs were trained in maintenance, management, and the use of water resources at the sub-catchment level. In Mali, 22 participants, 16 of whom were farmers, participated in an exchange visit to learn about rainwater harvesting using land contour techniques, such as erecting bunds along contour lines.

A number of water-buffering structures were promoted and piloted by farmers in Ethiopia, while in Mali and Burkina Faso nine boreholes were drilled or rehabilitated and 23 garden wells were rehabilitated and repaired. These water structures enabled farmers, especially women, to practice gardening with an aim of increasing their incomes (Figure 6). In Ethiopia, ten different water-buffering structures were promoted, including percolation ponds, deep trenches, sand dams, terraces, bunds, and half-moons. The total capacity of the water storage structures that were established is close to 73,000m³. In addition, 2.39 km of supplementary irrigation canals were repaired, increasing the area under small-scale irrigation by 162.15 ha. At a smaller scale, water-harvesting structures in the form of geotextile sandbags covered almost 0.2 hectares of a sub-watershed area in Burkina Faso. Farmers were also trained and supported to develop ponds and reservoirs among other various water-harvesting techniques, especially in Burkina Faso and Ethiopia (Figure 5). In all cases, farmers actively participated and contributed labour for excavation works, as well as construction materials such as sand and stones. Meanwhile, the local government, local administration, and government line ministries contributed technical expertise and materials in some areas.



Figure 5. Farmers were supported to establish water management structures at watershed level. Water-buffering structures were constructed in Tigray Ethiopia (top right and left) Repairs were made to a water retention point in Wori, Burkina Faso (bottom).



Figure 6. Rehabilitated water structures were used to boost agricultural production; a vegetable production garden for the women of Konogola in Mali (top); onions produced by women in Kindibo, Zondoma (centre left); rehabilitated well in Ley, Yatenga province Burkina Faso (centre right); supplementary irrigation canal to supply water for irrigating vegetables and fruit trees in Ethiopia (bottom).

3.2 Outcome 2: Commercialization of the rural economy

The second original outcome of the programme aimed to increase farmers' incomes by facilitating market-oriented production and marketing. The programme will further support the development and upgrading of selected value chains. Strengthening the ability of farmer organizations to engage in production and processing will be of critical importance in this process, as well as improving their access to credit facilities and other business services.

3.2.1 Sub-Outcome 2.1: Increased participation of different categories of farmers in strengthened value chains

3.2.1.1 Selection of potential value chains

Value chain analysis studies were carried out to identify promising value chains and key value chain actors, as well as to assess key constraints, challenges, and opportunities. Action plans were also developed to strengthen the value chains for different categories of farmers. Farmers and other value chain actors participated in this process. In some countries, such as Burkina Faso, the value chain analysis focused on the market potential, production potential, and socio-economic impact. In Kenya, the analysis went further to consider requirements of product markets, the legal regulatory and policy environment, vertical and horizontal integration, as well as the existence, level, and quality of support services. The list of possible products and values chains for each country are listed in Table 8. Generally, the selected products are very similar across the five countries, thereby creating an opportunity for cross-regional learning.

The studies suggest that farmers in the target countries are experiencing broadly similar constraints and challenges. These include the following:

- Poor farmer organization and lack of collective action, which erodes farmers' bargaining power;
- Inadequate entrepreneurship: farmers are used to subsistence production and lack business skills to start enterprises and facilitate market linkages;
- Geographical marginalization/isolation: farmers have no access to proper transport and communication infrastructure and therefore have limited access to markets and market information;
- Access to capital is key, yet bank interest rates make capital loans beyond farmers' reach;
- Most of farmers' produce is lost due to poor post-harvest handling, given their limited access to proper processing and storage facilities;
- Most often farmers have no access to quality inputs, due to limited coverage by business and extension services;
- Women in particular are constrained by issues of land tenure and traditional domestic roles that prevent them from taking leadership roles, accessing and participating in marketing activities, especially in the Sahel.

Table 8. Key product/value chains selected in each country

Country	Selected/ Potential Value chains for development			
	Crops	Vegetables	NTFPs/Fruits	Livestock
Burkina Faso	Beans Peanut	Marrow squash	Shea butter	Poultry
Ethiopia	Wheat Teff Haricot bean Groundnuts Potatoes Coffee	Tomato Onion	Honey	Goat fattening Poultry Cattle fattening
Kenya	Green grams Cow peas Pigeon peas		Mango	
Mali	Maize Fonio Sorghum Millet Rice Sesame Groundnuts	Shallots Onions Tomatoes Pepper Cabbage Okra	Shea nut Néré <i>Saba senegalensis</i> African locust bean Ziziphus mauritiana honey	Small livestock fattening and poultry farming
Niger	Millet Sorghum Potatoes Sweet potatoes Sugar cane Rice Sesame Peanut Cowpea	Onions, tomatoes, peppers, cassava, cabbage, lettuce	Moringa Fresh and dried leaves, nuts fruit and derivative products	Small ruminants Poultry Cattle and milk Hides and skins

3.2.1.2 Improving farmers' capacities to participate in markets

Two main challenges identified were (i) a lack of appropriate production and processing techniques; and (ii) a lack of skills and knowledge. To address these challenges, farmers in Ethiopia and Burkina Faso were supported with processing and storage techniques for their products. In Ethiopia, farmers accessed inputs for apiculture and firewood, as well as market-sheds. In addition, 238 farmers benefited from the introduction of maize and multi-crop thresher techniques, which reduce processing time and crop losses compared to traditional threshing mechanisms (Figure 7). Farmers from Bam and Passore in Burkina Faso were supported with ripple-layer bags for protecting cow-peas against storage pests. In addition, ten warehouses were rehabilitated and equipped and a groundnut-processing mill was established in Sanguie province, all based on warrantage (loan guarantee) agreements.

Likewise five existing groups of women in Mali's Kani-Bonzon district were equipped with kits for producing raisin syrup and juice from Tamarind and equipment for extracting the oil from nuts of *Balanites aegyptiaca* for the production of soap. These groups also benefited from packaging materials to facilitate the commercialization of their products. Furthermore, eight vegetable gardens covering 8 ha were established for women groups in Kani-Bonzon. Subsequently, 80 people were trained in market vegetable production, harvesting, and processing.

In Kenya and Niger the programme focused on building the farmers' business and marketing skills. Twenty five (15 women and 10 men) mango-growing farmers in Kenya were selected and trained in mango production and marketing, including pre-harvest management and linkages with experienced market actors, such as processors and exporters. As part of the training, three trade fairs were conducted in each of the three counties in Kenya to facilitate linkages with different value chain actors (input suppliers, agro-suppliers, financial service providers, traders, extension service providers and farmers) and a total of 1,850 farmers (55% women) participated. A more elaborate process was adopted in Niger. Using a Market Analysis and Development (MA&D) approach, farmers in the three target municipalities were supported to develop Village Tree Enterprises (VTE) based on non-timber forest products (NTFPs). In particular, 2,460 village entrepreneurs (1,316 women) established 133 enterprises groups that will process and trade in eight different NTFPs (fresh and dried leaves, nuts, fruits, and derivative products from processing).



Figure 7. Crop thresher technology introduced to farmers in Boset

3.2.2 Sub-outcome 2.2: Access to credit and financial mechanisms by different categories of farmers improved

Characterization studies were carried out in all countries to review and analyze existing financial mechanisms and institutions, as well as to identify key constraints and develop strategies to strengthen farmers' abilities to meet capital requirements. The studies found that formal and informal financing mechanisms and institutions coexist and are used by farmers in all of the five target countries. Formal financial mechanisms and institutions include banks and microfinance institutions (MFIs), some of which have decentralized branches in rural areas. In Kenya, for instance, the study indicated that relatively fewer farmers access financial services, particularly credit (49%) compared to traders (71%), and more men (68%) access commercial bank credit services than women.

Informal mechanisms are common in all countries, including village saving associations and multi-purpose cooperatives. In Mali, women groups organised in saving groups mobilize internal financing that is redistributed among the members of these groups for income generation. The studies also indicated that farmers preferred informal mechanisms and institutions to finance their businesses.

For instance in Mali, only 15% of women in the study areas rely on credit from the MFI to finance their businesses.

It is important to note that in the Sahel, the programme promoted the system of *warrantage* (loan guarantee) in Mali, Niger, and Burkina Faso as a financial mechanism to cope with issues of access to capital. In Niger, for instance, warranted loans (using harvested crops as a guarantee) were introduced or promoted in four of the five target municipalities at the end of the 2014 growing season (October). About 350 tons of crops were used as loan guarantees, including millet, sorghum, cowpea, souchet, peanut, hibiscus, and wandsou. Over 1,000 farmers benefited from warranted loans from Asusu an MFI and strategic project partner experienced in warranted loans), with an aggregated value of nearly US\$60,000. Results indicate a fivefold increase in warranted loans in one municipality, as a result of DRYDEV's efforts. About one third of the beneficiaries were women.

However, a feasibility study on the *warrantage* model in Mali identified several conditions that must be met in order for the system to work and benefit farmers:

- i) There must be a well-functioning farmer's group/association;
- ii) A local bank or other financial institution must be interested in participating;
- iii) There must be proper and secured storage for the produce;
- iv) The agricultural products or crops used as the loan guarantee must be non-perishable;
- v) Prices must have a proven record of rising in the months following harvest; and
- vi) The agricultural products/crops used as loan guarantees must be recognized by the banking legislation.

A number of activities have been lined up in the target countries to strengthen farmer access to finance during the implementation phase, as detailed in the 2015 DIP and PIP.

In all of the programme's participating counties, youth participation in DRYDEV's value chain activities was low, pointing to the need to identify appropriate interventions and enterprises that suit this category of farmers. Some of the limiting factors for both the farmers and MFIs are listed in the Box 1 below. Clearly, both the farmers and MFIs have issues, thereby leading to low uptake of loans by the former. Farmers struggle to access appropriate products from MFIs, while the MFIs do not seem to understand the needs of the potential group of clients (see Box 1).

Box 1. Some of the identified challenges preventing rural farmers in drylands areas from accessing microfinance services

Challenges at the farmer level

- Financial illiteracy among the farmers
- Lack of collateral (e.g., women who do not own properties)
- Insufficient information about various products from financial institutions
- Limited understanding of the credit conditions and payment deadlines
- Lack of preparation and/or low capacity of producers to develop bankable records and provide minimum guarantees against risks
- Farmers have not embraced farming as a business
- Farmers are reluctant to take loans due to previous experiences of losing assets after default hence suffering social humiliation

Challenges at the MFI level

- Limited pro-poor products/options for low-income customers
- Limited understanding of client needs by various financial service providers
- Low representation in rural areas
- Provision of inadequate financial offers
- Lack of innovative products that attract producers especially those with limited capabilities
- Lack of financial services offered on the medium and long term

3.3 Outcome 3: Environment that enables increased water and food security and economic growth

The success of programme interventions at the community level is highly dependent on the existence and implementation of enabling policies, the political will to focus on rural development, and the presence of institutional frameworks to facilitate and own such interventions. Strong and effective partnerships with strategic organizations and farmers groups are equally essential in facilitating effective implementation of the programmes' interventions. Thus, much of DRYDEV's work will focus on facilitating the creation of an enabling framework, as well as developing the capacity of and facilitating links between farmer organizations and service providers.

3.3.1 Sub-Outcome 3.1: Policies adjusted to the interests of different categories of farmers

In each of the five countries, a policy review and analysis study was completed during the Inception Year. These studies are an important first step to identifying policies, policy constraints, strategies, and programmes that could influence programme implementation and the subsequent achievement of outcomes and the scaling of evidence. The key finding of these studies is that relevant policies and legal frameworks exist in all of the countries (Table 9), though there are significant implementation gaps due a wide range of challenges (Table 10). These challenges are often related to the centralized nature of policy formulation, which has limited community consultation coupled with poor communication and dissemination mechanisms.

In all of the countries, inadequate coordination and implementation of these policies and legal provisions means that rural communities and farmers in particular do not benefit and are often constrained by the lack of enabling conditions. Some of the specific issues identified during the policy studies pertaining to these challenges include inadequate resources and capacities to disseminate information and implement policies at the local level (Table). In addition, legal and policy frameworks deal with some issues of gender and inclusiveness, which are pertinent to this programme. These were specifically highlighted in the studies, for

instance, in terms of access to finance among marginalized groups (Kenya) and land tenure (Niger and Burkina Faso).

Table 9. National policy provisions and strategies relevant to the DRYDEV programme

Strategy, policy, programme area	Kenya	Ethiopia	Niger	Mali	Burkina Faso
National vision / guiding strategy for growth	✓	✓	✓	✓?	✓?
National land acts and policies including tenure	✓	✓	✓	✓?	✓?
Agricultural sector (development and regulation)	✓	✓	✓	✓?	✓?
Food security - aid		✓			✓?
Livestock or fish specific	✓	✓	✓?	✓	✓?
Agricultural extension	✓	✓			✓?
Nutrition		✓		✓	✓?
Climate change (adaptation and/or mitigation)	✓	✓		✓	
Agribusiness and marketing	✓	✓	✓		
Inputs (fertilizer, seed)	✓	✓			✓?
Sustainable land management soil and water conservation, agroforestry techniques for food security		✓		✓	
Arid lands sustainable development	✓	✓			✓?
Water sector (including irrigation)	✓	✓	✓	✓	✓?
Environment / Forest	✓	✓	✓	✓	✓?
Finance (microfinance)	✓	✓	✓		✓?
Cooperatives / organizations (agriculture)		✓	✓		✓?
Import / export regulations			✓		✓?

Table 10. Key challenges in policy and strategy formation and implementation

Country	Centralization	Limited consultation or dissemination	Coordination and implementation
Burkina Faso		-Low knowledge and capacity for implementation -Low ownership at many levels, lack of communication	-Lack of synergies between texts, weak coordination of interventions -Some policies lack action plans and funding for implementation
Niger	High concentration of public decision-making structures at the national level, limited private structures throughout	-Policies too theoretical, unknown, and ambiguous -Lack of ownership of process by community, consultation needed	- Skills and resources not transferred from state to local government -Limited implementation -Local plans not adapted to context
Mali		-Knowledge limited -Need integration of local practices and customary laws with formal legal perspectives	-Limited technical support -Need to harmonize public policies -Incomplete legal frameworks
Kenya	Low level of domestication of national policies at county level	-Limited community participation in policymaking -Information gap between policy makers and farmers	-Confusion on mandates between the national and county governments, uncoordinated - Low capacity, resources – limited implementation
Ethiopia	-Centralized -Regional governments not domesticating and contextualizing policies	Limited dissemination to experts at federal level, regions, districts and community	-Sector offices not coordinated -Weak accountability -Inefficient implementation process for some policies

3.3.2 Sub-outcome 3.2: Institutional framework to upscale integrated water and soil management techniques and value chain development adapted to different categories of farmers

Local institutional arrangements are key to facilitating community-level interventions. The programme will work with the local governance structures, strategic and operational stakeholders, and farmer organizations. The latter will facilitate relationships and links between individual farmers and other stakeholders. The process of generating information and building knowledge about these institutions and institutional arrangements that facilitate their relationships was initiated in all countries during the Inception Year. While some countries focused on the identification of strategic and operational partners (Burkina Faso, Kenya, Mali), others placed more emphasis on farmers' organizations and/or establishing innovation platforms (Niger). In Mali, in addition to the identification process, an abridged analysis of strengths, weaknesses, opportunities, and threats (SWOT) was conducted for the identified stakeholders. This work will continue in all countries as part of the process of stakeholder mapping, engagement and management in the implementation phase. Some of the weaknesses and recommendations identified in Mali, which resonate in the other countries, are presented in the Box 2 below.

Box 2. Weaknesses and recommendations from the Mali institutional arrangement analysis

Weakness

- Limited human resource and materials for provision of extension services to rural farmers
- Food security, Land Commissions, Municipal Agriculture Chambers, Conflicts Prevention and Mediation Committees are not functioning at municipality level
- Weak collaboration between traditional institutions and modern institutions of central government
- Community-led and community-managed water committees unable to secure resources to repair the water infrastructures

Recommendations

- Capacity building for rural producers relating to the policy and institutional framework
- Renewal and capacity building for the members of Local Water Committees
- Strengthening the capacities of the members of the community-based NRM organizations
- Public awareness campaigns
- Supporting functioning of existing dialogue frameworks at municipalities and village levels around issues of food security, access to credit and natural resources management

3.3.2.1 Supporting farmers' organizations and platforms

Farmer organizations (FOs) are key actors in the institutional framework for delivering the programme. A process of identifying existing and creating new FOs, assessing their capacities, and providing needs-based training was undertaken during the inception year, though to varying degrees across the countries. A number of FOs were identified and or formed and also underwent a detailed capacity assessment and training. As many as 7,000 farmers received training, especially in Mali and Kenya (Table). In Kenya, FOs that were already registered with the government and undertaking activities similar to those promoted through DRYDEV were assessed. In Ethiopia, a similar process was used to identify existing FOs and mobilize them to participate in capacity development. In Niger, Innovation Platforms were formed at the district level comprising farmers already engaged in activities aligned to the programme. The farmers in Niger were further supported to form lower-level structures at the cluster/village level. However, it is important to note that organically formed groups are not necessarily inclusive. In the characterization studies in Kenya, for example, it was found that almost 50% of the farmers did not belong to any group. The programme will try to

facilitate inclusion of all categories of farmers by developing and adopting appropriate and inclusive targeting and selection methods.

Table 11. Farmer organization assessment and capacity building

Country	Number of farmer groups identified	Number of groups formed	Type of training offered	Number trained		
				Total	Men	Women
Burkina Faso	15 Wikifmenga committees	15	Roles and responsibilities	30	15	15
Ethiopia	11	9		2917		1122
Kenya	183 FOs	0	<ul style="list-style-type: none"> • Visioning and planning, procedures • Groups dynamics • Monitoring Evaluation • Financial management • Resources mobilization 	3501	1795	2459
	6 WRUAs		<ul style="list-style-type: none"> • Developing catchment plans 	40		
Mali	1 WUYEYA	1	<ul style="list-style-type: none"> • strengthen capacity in speedy nursing technique, draft business plan for the production and marketing of plants 	50	44	6
	9 Women Vegetable groups	9	<ul style="list-style-type: none"> • Training on nursing, planting and maintenance of Moringa plants, • Training on the nutritional value of Moringa by-products. • Training in market vegetable production, harvesting and processing 	1023	88	935
	15 Saving for change groups	15	<ul style="list-style-type: none"> • Strengthening credits management for income generation activities 	170	125	45
	5 Women processing non forest timber products (NFTP)	5	<ul style="list-style-type: none"> • Five groups trained in the use and maintenance of equipment for the processing of products 	327	160	167
Niger	Information not compiled	5 innovation platforms	-Visioning and outcome mapping	~300		

3.3.3 Sub-outcome 3.3: Inclusive and integrated approach developed and applied for different categories and target areas

During the Inception Year, a wide range of stakeholders were consulted, including different categories of farmers. Initial discussions with stakeholders and the communities focused on identifying programme sites, potential interventions, and various farmer categories, so that views of a wide range of people would be considered (Figure 9). This process was used especially during the characterization and baseline studies. The findings of these studies were presented to the community for validation, to ensure all views were included and the data presented was accurate and represented the local conditions. Equally, in the prioritization and implementation of quick-win interventions, a wide range of community members contributed and participated, including

vulnerable groups. In Kenya, for example, FOs included men, women, those with disabilities, youth and people living with HIV/AIDS.

In some cases interventions and techniques were specifically targeted to respond to the needs of those most marginalized in the community. In Ethiopia, for example, landless youth and women were trained on business development skills, income generation, and off-farm activities, such as cook-stove production. In Burkina Faso, a union of five market-gardening groups was supported for dry-season market gardening (Figure 8). Thus, community-based organizations provide an opportunity to include the marginalized and vulnerable. The Innovation Platforms in Niger could also be considered a novel multi-actor forum for promoting inclusion.



Figure 8. A number of processes were used to ensure that a wide range of categories of farmers participate: Mali Country Team discusses site selection with the leaders of the district (left); farmers discussion is held to help identify interventions in Tigray, Ethiopia right.

During the Inception Year, the programme had three major outcome areas that work in a complementary way to facilitate the achievement of the programme goals. Programme activities for water and food security have to be supported by those from commercialization and sustained by an enabling environment. Packages of complementary techniques were used to enhance the use of on-farm water and soil management by the community. Farmers were given the opportunity to select combinations of options that best suit them in terms of costs, risks, and a broad set of benefits. During the implementation, process integration and inclusiveness could not be separated and the story of producer groups of Sanguié from Burkina Faso sums it all (Box 3; Figure 9)



Figure 9. Programme interventions were promoted in an integrated manner. Rehabilitated wells provided water for vegetable gardening where various water and soil management techniques were applied (top left). One of the four wells was rehabilitated to supply water to gardens (top right). Vegetable garden and market gardening groups (bottom)

Box 3. DRYDEV success story from Burkina Faso

"One of the benefits of this gardening activity to us is also the improvement of the nutritional quality of our food. On the one hand, women collect vegetables for their own consumption and also use the income to buy meat or fish to enrich the sauce. Beyond these benefits, the teamwork atmosphere promotes and strengthens cohesion between the members of the union. This group includes all categories of people, even people with disabilities. The least we can say is that inclusion is a reality in our union.

"Market-gardening is a profitable business and many young people are interested in it. It reduces the exodus of young people to other countries and women also no longer go to gold mines, thus escaping the risks they might encounter.

"Students help their parents in the market-gardens over the weekend because they know that the continuation of their education depends on successful market-gardening. The money from the sales of products is used mainly to support children's education. We also work a lot with the technical services. They work on the design of seed beds." Noted the producer groups of Sanguié in Bukina Faso

4. KEY CHALLENGES AND OPPORTUNITIES

4.1 Key challenges and constraints during the Inception Phase

- Setting up the consortium was a demanding process that delayed the start of activities more than initially envisaged. This included the selection and engagement of national lead organisations NLOs and IPs, development of Statements of Work (SoW), transfers of funds, and recruitment of personnel. While this created the clarity that a programme like this requires, it also meant that one growing season was missed, work plans were exactly adhered to, and some activities were undertaken hurriedly. However, a number of activities were contracted out to consultants to make up for the lost time and build a base for planning and implementation. It also important to note that the quality of some of the outputs was not up to expected standard. As such some of the activities will have to be revisited
- Staffing arrangements at ICRAF also took time finalized, which resulted in suboptimal coordination and management of the programme. ICRAF has since established a new delivery structure that allows it to take a more involved role in the planning and implementation of the programme.
- Although the Sahel countries agreed to produce reports in English, this has led to both delays and miscommunication in some cases and a better way to communicate is being explored.
- Harmonization of processes and approaches, as well as understanding of concepts, were and still are issues to be resolved. Concepts and processes like the bottom-up approach, targeting, inclusiveness, and inputs supply modalities were interpreted differently by different partners and country teams. Consequently, most of these approaches were not fully or uniformly applied across countries during the implementation of the quick-win interventions. However, towards the end of the Inception Year, a number of joint planning meetings were convened and guidelines were developed and shared as part of the mutual learning process. This will continue, thereby building a common understanding and ensure that the guidelines are respected in future planning and implementation.
- The planning, monitoring, evaluation and learning (PMEL) framework was not finalized by the end of the Inception Year, which means guidance on planning and reporting of various activities including baselines and progress reports was inadequate. However, a draft framework and tools were later developed and fine-tuned by all the partners. This will be a priority activity at the start of the implementation phase.
- Some of the quick-win activities were not completed and/or not initiated as they were dependent on the outcomes of characterization studies, which, in turn, were delayed due to the considerable time required to harmonize and approve the Terms of Reference across the five countries.
- The mismatch between the programme focus and immediate community needs in some cases made it more difficult to mobilize farmers to participate in programme activities. In Ethiopia, for example, access to clean drinking water is a priority that the programme cannot address directly. The partners will continue engaging with water and sanitation programmes that might leverage resources to try to address the issue.
- Some of the areas were inaccessible during the rainy season, thereby preventing the delivery of some of the inputs and training to the farmers residing in those areas.

- Having many implementing partners and diverse qualified programme staff assists with the implementation of a range of activities. However, this also drives up the operational costs. Operational costs are further increased because staff time is needed for demanding activities, such as capacity building.

4.2 Opportunities identified during the Inception Phase

- In all countries there are supportive policies, programmes, and legal frameworks at both the national and local levels that favour the programme objectives and that will facilitate the quick start up and integration of the programme, as well as scaling up of evidence. However, there are still numerous implementation challenges, especially at the local level. This in itself provides an opportunity to engage with policy makers, contribute to reforms, and operationalize supportive policies at the local level.
- Across all countries, institutional arrangements to facilitate local level planning and engagement of farmer groups and communities in general exist. Besides the district development forums and committees, there are organizations mandated with planning and managing sub catchments and watersheds. Human and financial resources can be leveraged from these organizations, which include WRUAs in Kenya, community watersheds committees in Ethiopia, and IWRM committees in Mali. This aligns well with the programme's objectives.
- Environmental management, food security, and rural economic development are priority policy agendas for all governments, which makes the programme very relevant and poised to enjoy government support.
- There is apparent excitement and interest in the rural communities that have been engaged to take part in this initiative, as evidenced by the residents' willingness to contribute labour, time, and material and financial resources to various development initiatives, including DRYDEV quick-win activities.
- Farmers and local stakeholders appreciated the participatory and multi-stakeholder processes used during the inception phase to define the programme intervention areas. This provides an excellent entry point for the introduction of the Options-by-Context (OxC) approach during the full implementation phase of the programme, as well as maintaining and strengthening farmer engagement while customizing intervention options.
- The existence of learning centres and institutions with proven experience in soil and water management techniques will contribute to the promotion, dissemination, accessibility, and capacity developing of some of the required techniques.
- Many farmers have basic information on various techniques in regard to water harvesting, agriculture, and agroforestry. However, they are at different levels of adoption, partly due to the varying extent of access to extension services, technical capacity, and economic status. Therefore, various groups need to be reached with different interventions, a scenario that provides a good opportunity to apply the OxC approach.
- In all of the countries, a number of strategic partners have been identified that the programme will endeavour to partner with in order to leverage resources, facilitate implementation, scale up evidence, and engage in further resource mobilization initiatives.

- The programme can build on and learn from a number of existing donor-funded initiatives on water and food security, the development of value chains and markets, as well as more inclusive processes to engage the farmers as already indicated in the PIPs.

5. LESSONS LEARNED

Working with partners

- The consortium approach – which brings together a nearly two dozen implementing partners – has provided a number of lessons during the inception phase. Each partner organization has its own way of operating and its own processes for planning, implementing, and reporting. There are also diverse approaches to farmer engagement and development in general. For example, in Kenya, one partner has a business approach, while other partners use a community development approach. These approaches have complementarities from which the programme could benefit, but the divergence in views sometimes resulted in disagreements.
- The involvement of many implementing partners in the Country Teams increases the complexity of managing the programme, but this is offset by the wide range of skills, experiences, and tools that the programme may call on for its operations. The lead organization will be required to make strategic choices that do not frustrate the participation of the partners, while maintaining the quality of processes and outcomes.
- Given that partners have different organizational cultures and agendas, it has taken time to agree on a common implementation approach. Furthermore, as the programme implementation strategy involves multiple stakeholders at various levels, the need for a communication and coordination strategy was identified as critical. Subsequently, ICRAF and partners have taken various actions to address this including the review of the coordination mechanism
- A clear communications strategy is needed between the lead organization and all implementing partners. Without this, communication can be misdirected, resulting in conflict and an erosion of trust. Clear communication guidelines are under development to ensure that communication processes are clear during the implementation phase.
- Due to the high number of organizations in the consortium, clear guidelines for planning, monitoring, reporting, and financial management are required. ICRAF and the national lead organizations must provide leadership to allow the programme to function with limited conflict. This improved during the course of the inception year.
- ICRAF and the national lead organizations in each country learned that more effective discussions, and joint planning and monitoring were necessary to reconcile differences; this will be a priority during the full implementation phase. There is need to agree on a common implementation strategy and modalities to ensure synergy between the work packages and between the implementing partners in the different geographic areas.
- Multiple partners implementing similar activities in the same locations can lead to competition and conflict. Instead, it is more effective to have only one partner implementing certain activities in an area or partners working in the same area but implementing different activities.

- Effective implementation and nurturing of farmer capacities happens effectively when the partners work closely and directly with the farmers on the ground. In Kenya, for instance, the partners have reconstituted their teams for the implementation phase by bringing in full-time as well as part-time staff, so as to provide adequate support to the programme.
- Regular joint monitoring and review meetings to share lessons and feedback were very helpful to facilitate co-learning. These gatherings also facilitated the development of strategies that led to smooth implementation of the inception phase.

Programme management

- Building on the existing initiatives of the government, local partners, and the communities was found to be advantageous in terms of avoiding duplication of efforts. The challenge will be in the attribution of the impacts to programme interventions.
- Bottom-up approaches that led to the development and/or engagement of farmer organizations increased the participation of farmers in the programme activities. For instance, the Innovators Platform approach used in Niger strengthened the programme's legitimacy and facilitated the involvement of diverse stakeholders at the municipal level. It also provided an opportunity to further strengthen relations between the farmers and municipal authorities.
- Trade fairs, on-farm trainings, and exchange visits, field days, and the use of resource/champion farmers were effective avenues for facilitating farmer-to-farmer and expert-to-farmer information and experience sharing. It is important that the programme continues to promote the use and up-scaling of such approaches for wider adoption of appropriate techniques.
- Engagement of the public/government extension field staff proved to be key. In some countries, such as Burkina Faso, this might need to be formalized to clarify roles and responsibilities. In others, such as Ethiopia, this might not be necessary.

Functional involvement of stakeholders

- Introduction of new techniques should be combined with awareness raising, training, and facilitation to increase access. Innovative extension approaches, such as farmer field schools and field days, should be encouraged.
- The timing of activities (trainings, supply of inputs, etc.) was found to be critical. For example, certain villages in Burkina Faso were not accessible during the rainy season. For the remaining implementation period, it is important to have both long- and short-term planning if the programme is to reach such farmers.
- The benefit of targeting activities was evident during the inception phase. For example in Kenya, low participation of youth in value chains is attributed to poor access to land and finance. By targeting trainings on access to finance and value addition for the youth, the programme is likely to have greater success in that area.