

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

2015 NARRATIVE REPORT (Revised)

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TABLE OF CONTENTS

TABLE OF CONTENTS.....	1
List of Tables	3
List of Figures	3
List of Boxes	3
ACRONYMS.....	4
1.0 INTRODUCTION AND BACKGROUND	5
2.0 OVERVIEW OF PROGRESS AND ACHIEVEMENTS	6
2.1 Work Package 1: Sub-catchment Level Natural Resource Management	6
2.2 Work Package 2: On-farm Water and Soil Management	6
2.3 Work Package 3: Agricultural Commodity Production.....	7
2.4 Work Package 4: Enhancing Market Access.....	8
2.5 Work Package 5: Financial Services Linking.....	9
2.6 Work Package 6: Local Governance & Institutional Strengthening.....	10
2.7 Work Package 7: Planning, M&E, and Scaling of Learning	10
2.8 Work Package 8: Policy Analysis & Influencing.....	11
3.0 PROGRAMME GOVERNANCE COORDINATION AND TECHNICAL SUPPORT..	12
3.1 Governance and Coordination	12
3.2 Options-by-Context and Related Action Learning	12
3.3 Technical Support and Capacity Development.....	13
3.4 Monitoring and Evaluation	14
3.5 Communications and Visibility	14
3.6 Scaling of Evidence and Learning	14
3.7 Policy Analysis and Influencing	15
4.0 KEY CHALLENGES AND OPPORTUNITIES.....	16
4.1 Key Challenges and Constraints Encountered in 2015	16
4.2 Opportunities Identified in 2015.....	16
5.0 LESSONS LEARNED	17
5.1 Working with Partners	17
5.2 Functional Involvement of Stakeholders	17
5.3 Good Practice / Innovation	17
6.0 COUNTRY REPORTS.....	19
6.1 ETHIOPIA	19
6.1.1 Work Package 1: Sub Catchment Level Natural Resources Management	19
6.1.2 Work Package 2: On-farm Water and Soil Management	21
6.1.3 Work Package 3: Agricultural Commodity Production	22
6.1.4 Work Package 4: Enhancing Market Access	24
6.1.5 Work Package 5: Financial Services Linking.....	26
6.1.6 Work Package 6: Local Governance & Institutional Strengthening.....	26
6.1.7 Work Package 7: Planning, M&E and Scaling of Learning	27
6.1.8 Work Package 8: Policy Analysis & Influencing	28
6.2 KENYA.....	29
6.2.1 Work Package 1: Sub Catchment Level Natural Resources Management	29
6.2.2 Work Package 2: On-farm Water and Soil Management	31
6.2.4 Work Package 4: Enhancing Market Access	33

6.2.5	Work Package 5: Financial Services Linking.....	33
6.2.6	Work Package 6: Local Governance & Institutional Strengthening.....	34
6.2.7	Work Package 7: Planning, M&E and Scaling of Learning	35
6.2.8	Work Package 8: Policy Analysis & Influencing	35
6.3	NIGER.....	37
6.3.1	Work Package 1: Sub Catchment Level Natural Resources Management	37
6.3.2	Work Package 2: On-farm Water and Soil Management	39
6.3.3	Work Package 3: Agricultural Commodity Production	40
6.3.4	Work Package 4: Enhancing Market Access	41
6.3.5	Work Package 5: Financial Services Linking.....	41
6.3.6	Work Package 6: Local Governance & Institutional Strengthening.....	42
6.3.7	Work Package 7: Planning, M&E and Scaling of Learning	42
6.3.8	Work Package 8: Policy Analysis & Influencing	43
6.4	MALI	44
6.4.1	Work Package 1: Sub Catchment Level Natural Resources Management	44
6.4.2	Work Package 2: On-farm Water and Soil Management	44
6.4.3	Work Package 3: Agricultural Commodity Production	45
6.4.4	Work Package 4: Enhancing Market Access	45
6.4.5	Work Package 5: Financial Services Linking.....	45
6.4.6	Work Package 6: Local Governance & Institutional Strengthening.....	45
6.4.7	Work Package 7: Planning, M&E and Scaling of Learning	45
6.4.8	Work Package 8: Policy Analysis & Influencing	46
6.5	BURKINA FASO	47
6.5.1	Work Package 1: Sub Catchment Level Natural Resources Management	47
6.5.2	Work Package 2: On-farm Water and Soil Management	47
6.5.3	Work Package 3: Agricultural Commodity Production	47
6.5.4	Work Package 4: Enhancing Market Access	48
6.5.5	Work Package 5: Financial Services Linking.....	48
6.5.6	Work Package 6: Local Governance & Institutional Strengthening.....	48
6.5.7	Work Package 7: Planning, M&E and Scaling of Learning	48
6.5.8	Work Package 8: Policy Analysis & Influencing	49

List of Tables

Table 1.1: DryDev programme consortium members	5
Table 2.1: Farmers reached by various activities on watershed management.....	6
Table 2.2: Farmers reached by on farm water and soil management intervention.....	7
Table 2.3: Number of farmers participating in watershed level interventions.....	7
Table 2.4: Farmers reached by agricultural production interventions.....	8
Table 2.5: Farmers producer groups engaged.....	8
Table 2.6: Farmers reached by interventions for facilitating market access-.....	8
Table 2.7: Farmer linkages with buyers in Ethiopia, Kenya and Niger.....	9
Table 2.8: Number of farmers involved in the identification of options and learning priorities.....	11
Table 3.1: Number of people trained in facilitating the CAP process –integrating options by context.....	13
Table 3.2: Action learning activities for Ethiopia and Kenya	13
Table 3.3: Training of Programme staff facilitated by DryDev in 2015.....	14
Table 6.1: Community representatives by district who participated in the CAP.....	19
Table 6.2: Farmers trained on FMNR and enrichment planting by district.....	21
Table 6.3: Participants from different districts trained in various irrigation methods.....	22
Table 6.4: Farmers reached with WP3 activities by district.....	23
Table 6.5: Commodity Producer groups established in 2015.....	24
Table 6.6: Participation of value chain actors in capacity development events.....	25
Table 6.7: Key stakeholders identified in each programme district.....	28
Table 6.8: Community representatives who participated in CAP processes.....	29
Table 6.9: Trainings provided to farmers on Agroforestry and FMNR in 2015.....	31
Table 6.10: Trainings provided to farmers on agricultural production in 2015.....	33
Table 6.11: Participants in multi-stakeholder financial linkage forum.....	34
Table 6.12: Stakeholders identified per project site.....	35
Table 6.13: Key opportunities and strategies in policy implementation in Machakos, Kitui and Mwingi Counties.....	36
Table 6.14: Sites identified for rehabilitation and/or restoration.....	38
Table 6.15: FMNR surveillance and adoption in Malbaza, Torodi, and Dogon Kiria.....	39
Table 6.16: Participation in improved composting activities: training and adoption.....	40
Table 6.17: Elaboration of Enterprise Development Plans in 3 municipalities, June 2015.....	41

List of Figures

Figure 3.1: Community Action planning and visioning: integrating options by context approach	12
Figure 6.1: Practical training on physical soil & water conservation, Gursum	20
Figure 6.2: Community constructing gabion check dam, Tseada Emba	20
Figure 6.3: Practical training on compost preparation, Jarso.....	21
Figure 6.4: Community members taking part in a feasibility study in Kitui County.....	31
Figure 6.5: A community mobilized for the destruction of Sida cordifolia in Aguié Municipality.....	38
Figure 6.6: Training pruning techniques to farmers in Malbaza	39
Figure 6.7: Peer to peer training organized and conducted by the Innovation Platform in Droum.....	40
Figure 6.8: Vegetable nursery of Boulounsi village, Yatenga Province.....	48
Figure 6.9: Facilitation of the CAP process in the village of Sakou.....	49

List of Boxes

Box 6.1: Benefits of growing high value vegetable crops under irrigation	32
Box 6.2: Weaknesses of and recommendations for improving agricultural extension systems.....	35

ACRONYMS

ADRA	Adventist Development and Relief Agency
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
MFI	Microfinance Institution
MoFA	Ministry of Foreign Affairs (of the Netherlands)
NLO	National Lead Organization
NTFP	Non-timber Forest Products
OxC	Options-by-Context
PIP	Programme Implementation Plan
RUSACCO	Rural Savings and Credit Cooperatives
SCMP	Sub-Catchment Management Plan
SNV	Netherlands Development Organization
SoW	Statement of Works
SWOT	Strengths, Weaknesses, Opportunities and Threats
SCAP	Sub-Catchment Action Plan
RAIL	Local Initiatives Support Network
REST	Relief Society of Tigray
WRMA	Water Resources Management Authority
WRUA	Water Resource User Association
WVA	World Vision Australia
WVE	World Vision Ethiopia
WVK	World Vision Kenya
VTE	Village Tree Enterprises

1.0 INTRODUCTION AND BACKGROUND

The Drylands Development Programme (DryDev) is a five-year initiative (August 2013 to July 2018) funded by the Ministry of Foreign Affairs (MoFA) of the Netherlands, with a substantial contribution from World Vision Australia (WVA). The World Agroforestry Centre (ICRAF) is the overall implementing agency. DryDev is designed to provide relevant, contextually appropriate support to smallholder farmers in selected dryland areas of Burkina Faso, Mali, Niger, Ethiopia, and Kenya. It is seeking to meaningfully contribute to the realization of a **vision** where households residing in such areas have transitioned from subsistence farming and emergency aid to sustainable rural development. This is to be achieved by increasing food and water security, enhancing market access, and strengthening the local economy for different categories of farmers.

The DryDev programme aims to reach over 227,000 farmers across five countries in Eastern Africa (Ethiopia and Kenya) and the Sahel (Burkina Faso, Mali and Niger). The programme is implemented by a consortium of 22 organizations. Working with ICRAF to implement DryDev in its targeted countries are five National Lead Organizations (NLOs) and sixteen Implementation Partners (IPs), shown in Table 1.1.

Table 1.1: DryDev programme consortium members

Country	National Lead Organizations (NLOs)	Implementing Partners (IPs)
Burkina Faso	Réseau 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

This report is a detailed account of the first year in the Implementation Phase of the programme – 2015. The report describes activities carried out and outputs realized in each country with respect to DryDev's eight Work Packages (WP) presented in the [Consolidated Programme Implementation Plan \(PIP\)](#) and the [2015 Detailed Implementation Plan \(DIP\)](#). The report is presented in four sections:

1. Overview of progress in the five countries
2. Programme governance, coordination and technical support
3. Challenges, opportunities and lessons learned
4. Country specific reports

2.0 OVERVIEW OF PROGRESS AND ACHIEVEMENTS

The year started at a slow pace, with delays in approval of the Implementation Phase, signing of agreements between parties, and disbursement of funds to the National Lead Organizations (NLOs) and down to Implementing Partners (IPs). These delays impacted negatively on the general performance of the programme in the year under review, with some countries being affected more than others. In fact, the bulk of the outputs and results presented in this report were realized from activities carried out during the last quarter of 2015. In general, however, a good start was made and some significant outputs were realized. Below is a summary of the major activities and achievements realized in 2015, where more than 20,603 farmers participated in various programme interventions, 47% of whom were women. Key highlights include:

- Natural resource management (NRM) initiatives were initiated on 5,088 ha of degraded land in Ethiopia, and 60 ha of communal grazing land in Niger
- 5,225 farmers participated in on-farm soil and water conservation initiatives covering 121.1 ha, with a larger contribution in Ethiopia and Niger
- 2,368 farmers participated in capacity building events, resulting in 908 ha under improved agricultural production
- 3,471 people participated in production, marketing and capacity development related activities
- 3,835 people accessed business development training and advice
- 938 farmers accessed loans in Ethiopia and Niger through linkages with microfinance institutions
- 190 local level leaders were trained in leadership and governance Ethiopia and Niger

2.1 Work Package 1: Sub-catchment Level Natural Resource Management

The overall objective of this work package is to facilitate catchment level planning and NRM, including establishment of community-based NRM/watershed management organisations, land rehabilitation, and the establishment and maintenance of water buffering structures. A total of 10,197 community members (3,116 women) participated in these activities. Although significant effort was undertaken across the five countries to initiate these activities, the main achievements took place in Ethiopia and Niger, where 4,615 and 2,506 community members were engaged to rehabilitate 3,878 ha and more than 962 ha of land, respectively. Major works included the construction of gabions, trenches, terracing, and stone bunds for soil and water management, as well as the raising of and planting of tree seedlings.

Table 2.1. Farmers reached by various activities on watershed management

Country	Burkina	Kenya		Ethiopia		Mali	Niger		Overall	
	Total	Total	Women	Total	Women	Total	Total	Women	Total	Women
Farmers reached	0	45	10	5,529	1,936	0	2,766	nd	8,340	1,946

nd – no data

2.2 Work Package 2: On-farm Water and Soil Management

The programme aims to facilitate management of soil fertility, soil and water conservation and the integration of trees on farm. Activities carried out in 2015 included soil fertility and water management practices, such as composting, water ponds, trenching (in Ethiopia, Kenya, and Niger), agroforestry and farmer managed natural regeneration (Ethiopia, Kenya, and Niger) and small-scale irrigation and rain water harvesting (Burkina Faso, Ethiopia, Kenya and Niger). A total of 6,842 farmers (1,139 women) were reached through these technologies (Table 2.2).

Table 2.2. Farmers reached by on farm water and soil management interventions

Country	Burkina		Kenya		Ethiopia		Mali	Niger		Overall	
	Total	Women	Total	Women	Total	Women	Total	Total	Women	Total	Women
Farmers reached	322	267	621	428	4,694	872	nd	1,826	nd	6,842	1,139

nd – no data

Farmers were trained in various tree planting and Farmer Managed Natural Regeneration (FMNR) techniques in Ethiopia, Kenya and Niger. In Ethiopia, tree planting and FMNR activities were initiated in Gursum where 48,000 tree seedlings were planted. In addition, a total of 3,200 grafted fruit tree seedlings (apple and mango) were planted by 300 households in other districts. In Kenya, tree planting was promoted in Machakos County where 25 volunteer farmers were identified and assisted to undertake agroforestry and FMNR, and 15 farmers (three women) planted 12,124 tree seedlings of multi-purpose trees, with an average of 808 tree seedlings per farmer. In Niger, Innovation Platform leaders initiated FMNR activities in Torodi, Malbaza and Dogon Kiria municipalities. A total of 447 farmers (114 women) were trained in FMNR techniques.

Rainwater harvesting was another key activity in the three countries. In Ethiopia, the programme assisted farmers to access water harvesting structures through cost sharing arrangements. This enabled 67 farmers (20 women) to develop ponds, access water-lifting devices and build roof water harvesting structures. In Kenya, 26 farmer groups were supported with drip irrigation kits for small scale irrigation. A mapping exercise of farm ponds was conducted in Miindu sub-catchment in Machakos County, with technical assistance from ICRAF. The exercise culminated in the establishment of appropriate and standard designs for farmers to increase water utilization efficiency in crop production. In Niger, a total of 1,170 farmers (161 women and eight youths) were trained in composting in Malbaza, Aguié and Droum municipalities. Overall, a total of 3,600 farmers (1,025 women) in Ethiopia, Kenya and Niger participated in watershed management activities (Table 2.3).

Table 2.3: Number of farmers participating in watershed level interventions

Countries	Ethiopia		Kenya		Niger		Total	
	Total	Women	Total	Women	Total	Women	Total	Women
SWC and fertility management	666	141	0	0	935	161	1,601	302
Rain water harvesting and irrigation	70	34	0	0	0	0	70	34
Community sensitization meetings	66	34	0	0	0	0	66	34
Agroforestry FMNR and enrichment planting	805	113	621	428	447	114	1,873	655
Total	1,607	322	621	428	1,382	275	3,610	1,025

2.3 Work Package 3: Agricultural Commodity Production

Critical to achieving food security are the elements of production and access to food. Thus, the programme is investing in increasing agricultural productivity and income generation for further food purchases. In 2015, due to the late start of the programme, the agricultural season was partially or wholly lost. In this regard, activities under this work package focused on increasing access to inputs and training on technologies that promote increased agricultural production. A total of 8,300 farmers (3,145 women) were reached with information on technologies that support production and facilitate access to agricultural inputs (Table 2.4).

Table 2.4. Farmers reached by agricultural production interventions

Country	Burkina		Kenya		Ethiopia		Mali		Niger		Overall	
	Total	Women	Total	Women	Total	Women	Total	Women	Total	Women	Total	Women
Farmers reached	322	267	1,435	992	6,330	1,715	213	171	nd	nd	8,300	3,145

nd – no data

In Ethiopia, 720 farmers were trained on improved commodity production options and the formation of cooperatives. Farmers were assisted to access inputs, such as crop and vegetable seeds and small livestock. In Kenya, training was provided to 1,435 farmers on good agricultural practices and post-harvest management. Similar work in Burkina Faso and Mali focused more on vegetable production, where a total of 322 and 132 farmers, respectively, were reached and provided with inputs. In Niger, 73 local experts were trained in the use of plant biopesticide in pest control. Those who received training would, in turn, train farmers in vegetable pest management. Other activities carried out included the formation and strengthening of producer groups (Table 2.5).

Table 2.5: Farmers producer groups engaged

Interventions	Ethiopia	Kenya	Niger	Burkina	Mali
Farmers trained	720 (186 women)		72		
Producer groups formed/engaged	7 producer groups, 341 (134 women)	27 CBOs 1,435 (992 women)	11 vegetable garden groups 213 farmers	4 vegetable garden groups; 322 farmers (267 women)	11 groups, 213 farmers (171 women)

2.4 Work Package 4: Enhancing Market Access

Improving access to markets was approached using four key interventions, namely, training, group formation, facilitating of linkages to markets, and increasing access to improved technologies. A total of 3,501 farmers were reached with these capacity development interventions (Table 2.6).

Table 2.6. Farmers reached by interventions for facilitating market access

Country	Burkina	Kenya		Ethiopia		Mali	Niger		Overall	
	Total	Total	Women	Total	Women	Total	Total	Women	Total	Women
Farmers reached	0	2,643	1,770	749	183	nd	109	nd	3,501	1,953

nd – no data

In Ethiopia, the training provided covered agronomic practices, post-harvest management, packaging, financial literacy and marketing, bee-hive construction, and colony multiplication targeted at producers, development agents, cooperative leaders, and small/micro-enterprise staff. There was also a specific training on business development, organization and management provided to 316 people (82 women) in Ethiopia. In Niger, 125 farmers participated in Market Analysis & Development (MA&D) process in order to acquire knowledge on establishing tree-based enterprises.

One major challenge in strengthening rural economies is poor commodity supply. The programme is, therefore, facilitating the formation of groups at the community level to increase economies of scale and bargaining power of the producers. During the year, farmers were linked to various markets in Ethiopia (for goats and sheep), Kenya (for pulses) and Niger (for dried baobab). In Kenya, 13 buyers were identified and five engaged specifically for pulses. To facilitate this, groups were formed and efforts were made to link them to markets through various fora and meetings. In Ethiopia, two platforms were facilitated, aimed at enhancing the interaction of farmers with other value chain actors for their specific commodities, and linking the former to foreign markets. Forty-four people

(six women) participated, representing producers, cooperatives, buyers and the Ethiopian Commodity Exchange (ECE). The DryDev team in Samre district (Ethiopia) went further to improve access to market information through collaboration with the Tigray Agricultural Promotion Agency (TAPA) to promote and share market information on bee products and goat and sheep rearing and fattening. In Niger, 18 representatives from all five Innovation Platforms attended the AgriProFocus organised *Week of Agricultural Entrepreneurship* (SEMEA) and showcased their products such as seed varieties, food supplements, oils and soaps. Also in attendance were other value chain actors, including entrepreneurs, business persons, financial institutions and policy makers.

Table 2.7: Farmer linkages with buyers in Ethiopia, Kenya and Niger

Country	Product	Farmers reached			Linkage		Name of Company
		Total	Men	Women	Type	Size	
Ethiopia	Goats/Sheep	35	31	4	Producer -Buyer	-	-
Kenya	Pulses (green grams, pigeon peas and cowpeas)	2643	873	1770	Producer -Buyer		(Betta Grains, Capwell Industries, Pisu & Co. Ltd, Kamili Packers Ltd and Spice World Ltd).
Niger	Dried baobab leaves	109	85	24	Farmer-entrepreneurs - Buyer	USD12,170	-

2.5 Work Package 5: Financial Services Linking

A two pronged approach is being pursued by the programme to increase financial access at community level. This includes (1) the promotion of a culture of savings and credit among farmers; and (2) linking of farmers to established microfinance institutions, including banks. A total of 3,909 farmers (1,608 women) were reached by activities carried out under this work package.

A key intervention in Ethiopia was in supporting community based financial institutions to inculcate a culture of savings and credit. Three new village saving groups, with 59 members (12 women), were formed. Most of the members are poor farmers, with no access to conventional credit services. These groups and the Rural Savings and Credit Cooperatives (RUSACCO) leaders were trained on i) financial linkage services; ii) management of Village Savings and Loans Associations (VSLAs) and Saving Groups (SGs); iii) financing, credit and saving management; iv) business plan development; and iv) financial resource and property management. In addition, eight RUSACCOs were provided with equipment, such as saving cash boxes, shelves, tables and chairs. This equipment was provided under a payback/pass-on arrangement, where the recipient farmers or groups will pass-on similar benefits to others at a future time¹.

The programme endeavors to increase the participation of smallholder farmers in targeted value chains. However, such farmers are often constrained by lack of a capital due to limited access to financial services. Although no finalized linkages were realized, farmers participated in various events aimed at facilitating linkages to financial service providers. In Ethiopia, 84 representatives (17 women) attended platforms which attracted governmental and private banks, Dedebit Credit & Savings Institution (DECSI), local RUSACCOs and 824 farmers (637 women). In Niger, 67 farmers (six women) were linked to and held meetings with *Yarda* and ASUSU S.A In Kenya, 59 participants (15 women) drawn from 41 organizations attended a financial linkage forum organised in collaboration with the Association of Micro Finance Institutions (AMFI). This forum aimed to familiarize value chain actors with the financial service providers and explore potential for formalized arrangements.

¹ As provided for the Section entitled “Country Service and Technology Access Modality” (for Ethiopia) in the Consolidated Programme Implementation Plan (PIP).

The process was initiated to link 2,643 farmers (1,770 women) from eight FOs to Betta Grains and Pisu Company Ltd in readiness for the next harvesting season.

2.6 Work Package 6: Local Governance & Institutional Strengthening

This work package involved activities such as stakeholder mapping (carried out in Ethiopia and Kenya), improving the governance of local institutions (Ethiopia), strengthening existing and mobilizing new farmer organizations (Kenya and Niger) and institutionalization of farmer-led extension systems (in Kenya). A total of 307 farmers (175 women) participated in these activities. Teams in Ethiopia and Kenya were also involved in stakeholder mapping.

The presence and capacity of sub-national level institutions are critical for successful local governance systems and are fundamental to the success and continuity of programme interventions. The DryDev programme aims at improving this capacity and the institutional arrangements to ensure the programme is owned at that level. Activities undertaken in 2015 included awareness raising meetings, establishment of steering committees, strengthening of the community based natural resources management organizations, innovation platforms and farmer organizations. In Ethiopia, district steering committees were set up in the six districts with a mandate to improve coordination and facilitate synergistic relationships, experience sharing knowledge and ownership of the DryDev programme at that level. In addition, 90 community leaders (16 women) were trained on good leadership and governance.

The programme aims to work with farmer groups/organisations as an approach to extension and training. One of the major activities carried out in 2015 involved assessing existing farmer organizations (FOs) and mobilising the formation of new ones. In Kenya, 197 FOs, representing 3,679 farmers, were assessed, and 113 were identified for engagement. Some initial capacity needs (financial management, planning and governance) were identified and formed the basis for capacity development activities. Ten of the FOs came together to form community based organisations (CBOs) for more effective coordination and cooperation. In Niger, there is great focus on Innovation Platforms, four of which were set up during the Inception Year. An additional municipality (Dogon Kira) established a new platform comprising 196 members (31 women) from 33 villages. Furthermore, 100 people were trained across the five platforms on roles and responsibilities and information communication and management. Participants were drawn from active members (farmers and innovators) designated members (local authorities and technical services), as well as other local actors (traditional leaders, business persons, transport services). Training in natural resources management was provided to watershed management committee members in Ethiopia and Innovation platform leaders in Niger.

Advisory or extension services are used to avail and transfer information and technologies and build skills at local level. As such, access to information and technologies by smallholder farmers is dependent on the availability of extension services. It was important, therefore, to undertake a study to understand both government and non state actor advisory and extensions. An Agricultural Extension services study, building on the work undertaken in the Inception Phase, was carried out in all the six sub-counties in Kenya. The results will be used to explore and strengthen the role of farmer-to-farmer extension services.

2.7 Work Package 7: Planning, M&E, and Scaling of Learning

The year 2015 was typified by planning in response to the new theory of change. The better part of the first half of the year was dedicated to the production of the programme implementation plan (PIP) and the detailed implementation plan (DIP) for 2015 which were submitted in May and approved in July. The latter half of the year was focused on integration of the options-by-context

(OxC) approach through the community action planning process and the production of the 2016 DIP. In Ethiopia and Kenya the CAP was almost completed and the results incorporated into this document, whilst in the Sahel the CAP process was completed towards the end of the year, with some activities spilling over to 2016.

The CAP process was preceded by a number of trainings and induction meetings for programme staff and extension agents who facilitated the process. Two five-day meetings were held in numerous communities to reach as many farmers and local communities as possible. As many as 7,016 farmer representative participated in this process across 145 sites (Table 2.8). This process enabled the implementing teams to have a greater understanding of the biophysical and social conditions they were aiming to change through the programme. In the same way farmers had an opportunity to systematically contribute to the identification and prioritization of interventions options into the programme. All the site level outputs were then consolidated at country level and used to update DIP 2016.

Table 2.8: Number of farmers involved in the identification of options and learning priorities

Country	Burkina Faso	Ethiopia	Kenya	Mali	Niger	Total
Farmer representatives	1,108 (443 women)	747 (166 women)	631 (352 women)	2,736 (828 women)	1,794 (637 women)	7,016 (2,426 women)
Number of sites/ sub-watersheds	1	29	12	52	51	145

Another major activity under WP7 was the development of the PMEL plans and output tracking tools, based on a standard framework of 80 indicators. By the end of the year, all countries had drafted their PMEL plans and produced their first output tracking reports. The other activities that countries participated in were i) production and submission of the Inception Phase reports, which were all successfully submitted, ii) delineation and finalisation of programme sites, iii) baseline surveys, and iv) holding of country and regional coordination meetings, which are elaborated under Section 6.

2.8 Work Package 8: Policy Analysis & Influencing

Besides the production of the policy synthesis report, not many activities were undertaken under this work package. In Ethiopia, a policy awareness meeting was held in Boset and attended by 67 people composing DryDev staff, farmers and other stakeholders. In Mali, the coordination team participated in meetings facilitated by the Advocacy Network for the Security of Farm Land Tenure (RP- Sefa Mali), which aims at improving the resilience of small family farms through farm land security.

3.0 PROGRAMME GOVERNANCE COORDINATION AND TECHNICAL SUPPORT

3.1 Governance and Coordination

A functional programme governance and coordination system is critical for a consortium the size of DryDev. The first step in the roll out of the implementation phase was the development/revisiting of the sub-granting processing to facilitate swift implementation, minimize delays and improve/standardize technical and financial reporting. All NLOs signed 4-year agreements with ICRAF based on four year Programme Implementation Plans (PIPs) and corresponding budgets. In turn, the NLOs signed similar agreements with their respective IPs. This process took almost two months and lasted until October 2015 in some cases, such that some of the IPs did not initiate substantial field activities.

In addition and as per the Inception Report, various committees charged with management and coordination of the programme activities were set up and initiated activities to deliver on their mandate. At the country level, Core Teams were set up, charged with coordination of planning and sequencing of field activities met every two months. At the regional level, Regional Programme Coordination Committees (RCCs) were set up and two meetings were held in East Africa to tackle common issues and build synergies between the country programmes.

3.2 Options-by-Context and Related Action Learning

At the end of the Inception Phase, the programme framework was revised and there was a new emphasis on contextual tailoring of interventions and the adoption of a core co-learning paradigm founded on a process of integrating local and expert knowledge through joint participatory processes for selecting refining, and reviewing the contextual appropriateness and performance of options.

In order to realize this objective, a guideline was developed to integrate the OxC approach into the programme. The guideline, an 8-stage process, was used to re-engage the farmers to identify site specific options and learning priorities that will drive the co-learning process (Figure 3.1).

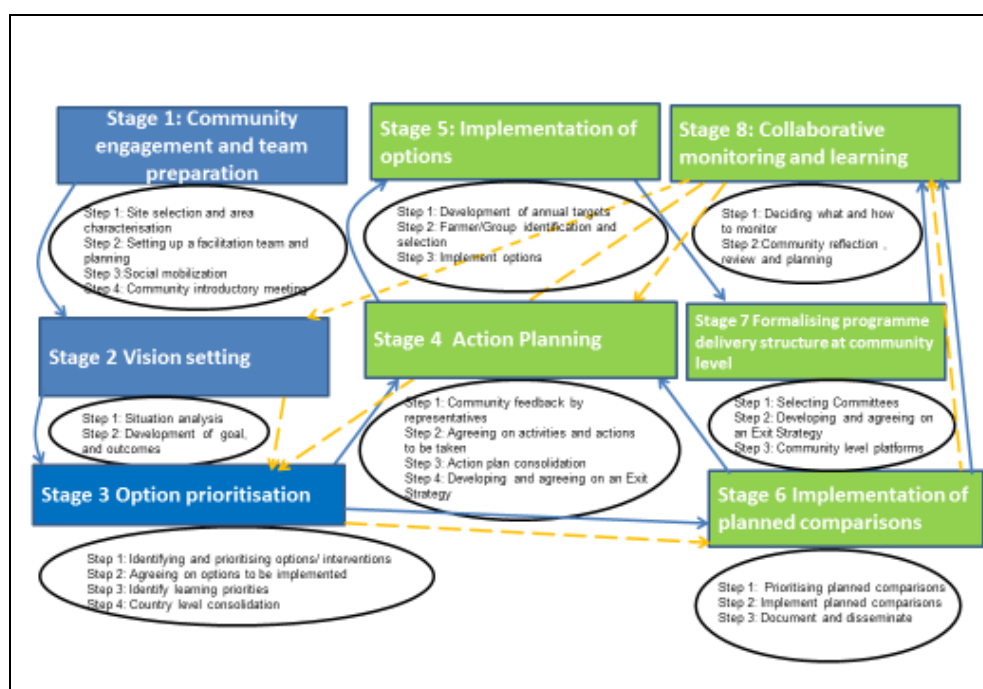


Figure 3.1: Community action planning and visioning: integrating options-by-context approach

To roll out the process, all technical teams in five countries were trained on the concept and further inductions were conducted for the site/district level teams, which included field and government extension staff who were tasked with facilitating the community level processes. In total, 242 people were trained (Table 3.1).

Table 3.1: Number of people trained in facilitating the CAP process –integrating options by context

Country	Burkina Faso	Ethiopia	Kenya	Mali	Total
Country level training	21	21	20	48	110
Induction training	00	71	39	22	132
Total	21	92	59	70	228

There is a general realization that interventions—no matter how meticulously chosen and designed—do not always deliver expected outcomes across all contexts, due to fine scale variation (biophysical, economic and socio-political/ cultural). Action learning activities or planned comparisons have been adopted in the programme to address this problem by inculcating a culture of inquiry and systematic and structured co-learning by farmers, implementing partner staff and other stakeholders.

As part of the CAP process, farmers identified learning priorities associated with the key options identified. Learning priorities were aimed at querying practices and identifying knowledge gaps about the performance and appropriateness of practices and technologies. In Kenya and Ethiopia, 62 learning priorities were identified. However, most of the learning priorities were related to capacity and information needs. Thus, after filtering 17 learning priorities were listed, nine of which were further developed into action learning activities (Table 3.2) to be implemented from 2016 onwards with co-funding from the EC/IFAD-funded project² implemented by ICRAF and other CGIAR centers. Protocols for guiding the systematic learning were drafted for all the action learning activities besides the last two on FMNR. The process of identifying the learning priorities in the three Sahel countries was carried over to 2016.

Table 3.2: Action learning activities for Ethiopia and Kenya

Action learning activity /Planned Comparison	Country
1. Tree seedling survival and planting methods	Kenya & Ethiopia
2. Bee colonies multiplication	Ethiopia
3. Variations and combinations of CA principles – Zai pits	Kenya
4. Post-harvest pest control methods	Kenya
5. Intensive participatory tree diversification –Indigenous knowledge systems	Kenya
6. Composting methods in dryland Ethiopia	Ethiopia
7. Benefits of farmer managed natural regeneration (FMNR)	Ethiopia, Kenya

3.3 Technical Support and Capacity Development

ICRAF and NLOs are charged with building capacity of the implementing staff. This is done through various ways, including,

- Developing tools or contributing to developing tools
- Contributing, reviewing and developing training material
- Conducting training, reviewing and providing training material

² Restoration of degraded land for food security and poverty reduction in East Africa and the Sahel: taking successes in land restoration to scale (<http://www.worldagroforestry.org/project/restoration-degraded-land-food-security-and-poverty-reduction-east-africa-and-sahel-taking>). Funded by the European Commission (EC) and the International Fund for Agricultural Development (IFAD), this project complements the work of DryDev as it seeks to develop tools for targeting up-scaling land restoration activities with a view to providing appropriate options, and matching those options to sites and farmer circumstances.

- Reviewing technical reports or contributing to producing reports
- Designing, rolling, monitoring PCs and co-learning

In 2015, the programme facilitated the training of a number of programme staff and representatives from other stakeholders and farmer organizations on (i) rain water harvesting, held in Ethiopia (attended by participants from all 5 DryDev countries) aiming at increasing knowledge and skills on various technologies for rainwater harvesting, (ii) monitoring and evaluation, a key step to rolling out the programme's PMEL framework held in Nairobi and Niamey, (iii) integration of OxC, focusing on the use of the CAP guidelines delivered at national level across the five countries, and (iv) development of the website by introducing Real Simple Reporting by AKVO held in Nairobi and Bamako (Table 3.3).

Table 3.3: Training of programme staff facilitated by DryDev in 2015

Training delivered	Number of participants
Rain Water harvesting Dire Dawa	25
Community Action planning and visioning- integration of options by context	142
PMEL roll out	16
Website development -RSR	33

3.4 Monitoring and Evaluation

Although a lot of work had gone into the development of the programme PMEL system in the Inception Phase, this had to be revisited following the changes made in the programme framework. A draft PMEL strategy with standard outputs was produced, together with a country PMEL plan framework, to guide programme performance monitoring and evaluation at country level by the NLOs and facilitate consolidation at programme level by ICRAF. Training meetings were held in Nairobi for the East Africa team and Niamey for the Sahel team. By year end, the plans were at various stages of finalization. In addition an output tracking reporting template was shared and adopted in all the countries also to varying levels.

In 2015, one of the major activities involved the thorough delineation and mapping of all DryDev sites and potential areas for comparison purposes. This was followed by an extensive in-depth baseline survey data collection and cleaning process, with the data analysis and report writing being done in 2016. The programme adopted a quasi-experimental approach to impact assessment where baseline and end-line data will be collected and analyzed from both intervention and comparison sites. Remote sensing was used to capture biophysical baseline conditions in the programme sites. Over 7,000 households, across the 5 programme countries, participated in the baseline survey.

3.5 Communications and Visibility

One of the major achievements of the year was the establishment and operationalization of the programme website: <http://drydev.org/>. The website, which is based on the AKVO Real Simple Report platform, was designed by AKVO³ that also conducted training to enable programme staff to compile stories and produce videos for uploading on the website. Options are currently being explored to make the website more interactive and a repository for programme documents. The development of a programme communication strategy was initiated and is expected to be completed in 2016, together with the country specific plans.

3.6 Scaling of Evidence and Learning

Identification, engagement and capacity building of local institutions is key to the sustainability of any programme. By end of 2015, stakeholder mapping and social network analysis had been

³ www.akvo.org

completed in Ethiopia and Kenya and draft reports produced. The results will be used in developing engagement and communication plans for specific groups of stakeholders to facilitate information sharing. In addition, sub-national level platforms will be established to facilitate coordination, cooperation, co-learning and up-scaling of programme interventions. In addition, the results of the mapping will be used to capture profiles and classify stakeholders for their engagement as scaling out successful interventions. Such 'scaling stakeholders' are those that have the capacity, interest and mandate to use the evidence generated to upscale DryDev interventions (processes, technologies, practices and approaches) and will be identified and engaged at local, national and international levels.

3.7 Policy Analysis and Influencing

Based on the findings of the characterization studies undertaken in the Inception Year, a further analysis of legislation, strategies, guidelines and programmes was undertaken for Ethiopia and Kenya and a draft synthesis report produced. One of the major components of the report was a SWOT (strengths, weaknesses, opportunities and threats) analysis of the legal and policy framework to support and or facilitate the DryDev programme. The proposed strategies will be used to develop action plans and initiate discussions with policy makers.

4.0 KEY CHALLENGES AND OPPORTUNITIES

4.1 Key Challenges and Constraints Encountered in 2015

- The year 2015 saw delays in several key processes that, in turn, impacted negatively on the performance of DryDev in several countries. There were delays in the approval of the Implementation Phase, signing of agreements between parties, and disbursement of funds to the NLOs and down to IPs. The combined effect of all these delays was a missed cropping season in all countries and a general underperformance in terms of the implementation of activities planned in the 2015 DIP.
- The *El Niño* phenomenon of 2015 had significant negative influence on agricultural performance in DryDev's implementation sites. This was particularly felt in the two East African countries – Ethiopia and Kenya. In Ethiopia, the phenomenon manifested itself in dry conditions that affected the livelihoods of the communities where DryDev is working. In Kenya, however, the *El Niño* effect was manifested in heavier-than-normal rains in the period between October and December, which coincided with the period of intense implementation of DryDev activities (following the release of funds in September).
- Though it proved necessary to introduce new concepts and change approaches following the Inception Phase (as had happened in the middle of 2015 after approval of the 2015-2018 PIP and the 2015 DIP), several implementing partners (notably in Ethiopia and Kenya) felt that such activities (like the sub-sub catchment scoping and mapping exercises, the baseline surveys, rain water harvesting training and the CAP processes) were introduced without proper consultations. They particularly felt that these had the effect of slowing down programme implementation, and hence further delaying the commencement of the 2015 activities.
- A case unique to Mali is the challenge posed by the fluctuation of currency rates, between the dollar and the Francs CFA, given that one IP (OXFAM America) prefers funds being given in dollars. Due to frequent fluctuations in currency rates, the rates used by ICRAF to transfer funds to the NLO are not often the same when the NLO has to reconvert the funds into US dollars to transfer to OXFAM America. This makes it hard to maintain the original budget figures.

4.2 Opportunities Identified in 2015

- In most countries, the target communities are enthusiastic about DryDev and what it seeks to do and achieve. The programme should make use of this goodwill to achieve its objectives and maximize its impact
- Suitable structures exist in the local communities in several countries, which fit well with the mode of operations that DryDev is proposing. In Ethiopia, there are suitable structures at the district level. In Kenya, there are locally based water resources management committees and environment management committees that answers to the sub-catchment committees needed to implement work packages 1 and 2. In Niger, the existence of community-based innovation platforms, and the experience of the NLO (CARE International) in working with these platforms provides a strong foundation for implementing the DryDev agenda in the country. However, the issue of capacity of these institutions is something that needs strengthening.
- The stakeholder mapping process revealed that there are many governmental and public/non-governmental development organizations that have resources, capacities and technologies and are targeting the same farmers and groups in the areas that DryDev is operating in. Appropriate networking and multi-stakeholder engagement are required to harness complementarity and boost synergetic approaches to avoid competition and duplication of efforts that might lead to confusion and/or creation of unnecessary tension between organizations and projects.

- Many DryDev countries have laws that are favourable to the programme's agenda. In Mali, for example, an Agriculture Land Act was only adopted in 2015, and there is chance for the programme to influence its implementation and evaluate its suitability.
- The DryDev website (<http://drydev.org/>) provides an opportunity for each NLO to upload their respective country's stories directly, without having to go through ICRAF management. This should encourage partners to upload/share information freely, and use the website to know what and how other countries and partners are doing.

5.0 LESSONS LEARNED

5.1 Working with Partners

- The involvement of multi-sectoral partners in DryDev, where different institutions offer complementary skills and expertise to implement the WPs and deliver on common goals, is a beneficial arrangement. The involvement of programme stakeholders in different management levels (such as the Steering Committee, Country Core Team, review meetings, planning events and other major programme events) has created an environment of cooperation and support among all actors in the programme.
- Partnership arrangements need to allow some room for flexibility to institutional preferences and capacities. Institutions differ in their requirements and approaches to managing partnerships and joint arrangements, and there is no single approach that fits all partners. For example, while most partners had no problem opening a dedicated bank account for DryDev funds, some found this unnecessary and insisted in using their regular accounts. In one instance, this difference led to protracted discussions that delayed the signing of MoU between the NLO and the IP involved.

5.2 Functional Involvement of Stakeholders

- Strong links and synergy between stakeholders help in delivering DryDev's various WPs and are crucial for the success of the programme. Involvement of various stakeholders in the CAP process helped develop an understanding among all stakeholders about the roles others can and would play in the programme implementation. This created ownership of the programme interventions and ensured continued community support.
- The CAP process revealed that local communities have considerable capacity (knowledge and organizational skills) that, when harnessed, may provide solutions to many of their problems. What has been lacking is fora to exchange information, empower their leadership structures and give them space to exercise their organizational abilities.
- Ownership of the programme by grassroots stakeholders was enhanced when community members and farmer organizations actively participated in identifying options relevant to their context, and selected their representatives to spearhead the implementation of DryDev activities.

5.3 Good Practice/Innovation

- The CAP process helped raise individual and collective awareness around the issues and challenges relating to the sustainable management of strategic resources. The open nature of the CAP process enabled free deliberation of critical issues and integration of themes and ideas towards formulating plans and strategies to spearhead a sustainable development agenda. The process allowed people to take their destiny in their hands, and formulated their vision for the changes they desire for their community.

- DryDev Ethiopia initiated a move away from the use of paper forms and towards the use of electronic data capture through mobile phones. This new data collection system, based on the Android app, EpiCollect, has increased efficiency, reduced errors, and transformed the data management system.

6.0 COUNTRY REPORTS

6.1 ETHIOPIA

The DryDev Programme in Ethiopia is implemented in 29 sub-watersheds within the two regions of Oromia (Boset, Gursum, Jarso districts) and Tigray (Tseada Emba, Kilte Awlaelo, and Samre districts). It is implemented by World Vision Ethiopia (WVE) as the National Lead Organization, with the Relief Society of Tigray (REST) and Ethiopian Orthodox Church - Development and Inter Church Aid Commission (EOC-DICAC).

6.1.1 Work Package 1: Sub Catchment Level Natural Resources Management

- **Activity Area 1.1: Establish and/or strengthen community watershed teams.** Community sub-watershed teams (CSW) were established in all 29 target sub-watersheds, comprising five teams in Boset, four each in Gursum, Jarso, Samre and Kilte Awlaelo, and eight in Tseada Emba districts. A total of 1,487 people (299 women) from these CWS teams were trained to enable them lead natural resource management activities in their respective sub watersheds, and to integrate these activities with other livelihood interventions. Community Action Planning (CAP) was introduced as a highly participatory staged process of visioning and planning that incorporated specific categories of farmers and other vulnerable groups.
- **Activity Area 1.2: Development of sub-watershed action plans.** A multidisciplinary team drawn from the programme staff, together with experts from various district-level government departments/offices (from Boset, Gursum and Jarso in Oromia Region, and from Kilte Awlaelo, Samre, and Tseada Emba in Tigray Region), conducted the CAP activities in all 29 sub-watersheds (Table 6.1). Government representatives involved in CAPs were drawn from the district offices of Agriculture and Rural Development, Natural Resources Management, departments of Crop Production and Market Promotion, Livestock Development, Irrigation Development, District Cooperatives Office, District Office of Women and Children Affairs, District Youth Affairs Office, District Office of Water, Mining and Energy, Department of Irrigation Infrastructure Development and Department of Energy Efficient Technology Promotion. Some 29 sub-watershed CAP reports, with accompanying Sub-Watershed Action Plans (SWAPs), were developed by the communities. These SWAPs were then integrated into the existing 2015 DIP and formed the foundation of the 2016 DIP. In addition, learning priorities were identified and prioritized by the community during the CAP process. These were further validated with the communities, and have been incorporated into the 2016 DIP. Each learning priority required a series of protocols, which have now been developed for use with the Planned Comparisons⁴ (PCs).

Table 6.1: Community representatives by district who participated in the CAP

District	Targeted sub-watersheds	Number of community members who participated in the CAP					Total CAP Facilitation Team Members
		Men	Women	Total	% of Youth attending	% Other Vulnerable groups	
Boset	Osole , Doni, Sala Denkie; Chaffa Dula Kesha Bama	59	23	82	24	12	11
Gursum	Dolis,Eja Goebensa, Obeley, Santala	59	18	77	30	0	13
Jarso	Kora, Mite Herab, Mudi,Wale	63	16	79	32	0	13

⁴ Planned comparison is a term that refers to the systematic, prospective comparison of different ways of (i.e. options for) addressing specific problems or achieving desired goals. Such comparisons form an integral part of DryDev's Participatory Action Learning (PAL) agenda and broader Planning, Monitoring, Evaluation, and Learning (PMEL) cycle. The term Participatory Action Learning, or PAL, is used consistently in the remainder of this report

Tseada Emba	Alenta ,Dimello; Enda-cherkos; Enda-petros; Mai-Hantseo; Mai-Nefayit; Mai-Raza, Takot	304	88	392	22	7	13
Kilte Awlaelo	Agona, Gosemiti, Maogo, Meseke	52	8	60	25	17	25
Samre	Atami, Endamariam, Bara, Waza	44	13	57	21	9	40
Total		581	166	747	24	7	115

Source: CAP sub watershed reports, 2015

- **Activity Area 1.3: Rehabilitation of degraded lands.** Efforts towards rehabilitating degraded areas were made during 2015 in the programme intervention areas. A total of 1,448 ha of degraded land was brought under rehabilitation interventions through FMNR and enrichment planting. The total land area covered by the programme through these rehabilitation interventions is now 6,618 ha. A total of 4,615 community members (1,025 women) participated in activities to rehabilitate degraded areas, across all intervention districts. Further, 626 community members (90 women) participated in trainings and experience-sharing events. Twenty nursery workers, foremen, technicians, model daily laborers from ten nurseries received theoretical and practical training in Samre and Kilte Awlaelo districts. Similar training was provided to 25 youth in Jarso to enable them manage a newly established nursery. Four nursery sites, located in four sub-watersheds in Kilte Awlaelo, were provided with various nursery equipment, while those in Jarso and Gursum districts were provided with farm tools such as rakes, shovels, hoes, sledge, GPS units, polythene tubes, watering cans, pick axes, measuring meters, nylon rope, levels and other tools to run the nurseries. The provision of these materials was guided by the policy defined in the consolidated programme implementation plan in the section entitled “Country Service and Technology Access Modality” (for Ethiopia).
- **Activity Area 1.4: Sub-catchment soil conservation & water-harvesting.** A total of 625 farmers (111 women) were trained in soil and water conservation (Figure 6.1). Fourteen water buffer structures of 6 different types were constructed in the districts (Figure 6.2).



Figure 6.1: Practical training on physical soil & water conservation, Gursum



Figure 6.2: Community constructing gabion check dam, Tseada Emba

- **Activity Area 1.5: Promote mitigation measures on drivers of deforestation.** For purposes of reducing deforestation and promoting mitigation measures, 1,332 people (1085 women) were reached through energy-efficient cook stoves in Jarso, Gursum, and Boset districts (all in Oromia region). The cook stoves were provided to the households in these communities through a cost-sharing arrangement.

- **Activity Area 1.6: Enhancement of sustainable grazing management.** The DryDev team organized a capacity building event on grazing management in each of three districts (Kilte Awlalelo, Jarso and Tseada Emba) where 427 (184 women) people participated. As a result of the training in Tseada Emba, water-harvesting trenches were constructed on seven hectares of grazing land in Endapetros sub-watershed with the intention of increasing availability of moisture and biomass of the grazing land, which will aid re-vegetation.

6.1.2 Work Package 2: On-farm Water and Soil Management

- **Activity Area 2.1: On-farm integrated soil & water management.** A total of 1,870 community members (368 women) participated in various on-farm soil and water management interventions. A total of 666 farmers (141 women) were trained on on-farm soil conservation and fertility enhancement practices, and an additional 90 people reached through soil and water conservation (SWC) training.



Figure 6.3: Practical training on compost preparation, Jarso

- **Activity Area 2.2: Agro-forestry and on-farm FMNR.** A total of 731 farmers (99 women) participated in various trainings on FMNR and enrichment planting, as well as on planting and management of trees on farm (Table 4.2). Following these trainings, approximately 48,000 tree seedlings were planted by the community across the watersheds in Gursum. The DryDev team also distributed 3,200 grafted fruit tree seedlings (apple mango) to 300 households (average of 10 seedlings per household), and facilitated the planting of 120 seedlings of apple mango at six farmer training centers for demonstration purposes.

Table 6.2: Farmers trained on FMNR and enrichment planting by district

District	Number of Farmers		
	Men	Women	Total
Boset	96	9	105
Gursum	123	12	135
Jarso	150	10	160
Tseada Emba	40	4	44
Kilte Awlalelo	144	54	198
Samre	79	10	89
Total	632	99	731

To enhance community knowledge on agroforestry and FMNR, exposure visits to best practice areas (Ganta-Afeshum, Kilte-Awlaleo (Abraha-Atsbaha Tabia), Werie-Leke and Seharti-Samre) were organized for farmers from Samre and Kilte Awlaelo districts. Seventy-four farmers (14 women) who participated in these exposure visits met and interacted with the farmers who have extensive experience in traditional/FMNR of *Faidherbia albida*, agroforestry practices and hill side Eucalyptus tree plantation, animal forage development mainly *Sesbania sesban* plantation on agroforestry sites. They also visited the biogas plant and solar panel beneficiaries in these areas. The agroforestry and FMNR interventions undertaken under this activity covered a total of 174 ha of on-farm land.

- **Activity Area 2.3: Small-scale irrigation promotion.** The programme team approached this activity in 2 intervention areas, namely, capacity building and direct support in the provision of irrigation infrastructure. On capacity building, a total of 298 individuals (98 women), comprising 274 farmers and 24 development/extension officers, participated in training on small-scale irrigation practices and exposure visits (Table 6.3).

Table 6.3: Participants from different districts trained in various irrigation methods

District	Training Provided	Category of participants	Number of Participants		
			Men	Women	Total
Tseada Emba	Operating pumps; Management of irrigation water	Farmers	22	18	40
		Extension workers	10	3	13
Kilte Awlaelo & Samre	Efficient utilization of irrigation water	Farmers	55	15	70
		Dev. agents	4	4	8
	Exposure visit to Mereb-leke and Kola-Tembien areas	Farmers	59	16	75
Boset	Operation and maintenance of motorized water pumps	farmers	49	40	89

Apart from capacity-building, DryDev supported the construction of water harvesting structures, with farmers contributing part of the cost of the initiatives. This enabled farmers to develop ponds, access water-lifting devices and build roof water harvesting structures. A total of 67 farmers (20 women) were supported by the programme through various irrigation technologies. The work here included:

- One check dam pond constructed in Samre District, with a cross sectional length of 19.5 meters and estimated to have a capacity of 3487.5m³. The dam is expected to irrigate 11.25 ha of land and serve 22 households.
- Ten lead and volunteer farmers were supported in constructing water harvesting structures in Boset District.
- Five reservoirs/roof rain water containers, with a total construction volume of 210m³ have been constructed for five lead households – two in Agona watershed (Tabia Tseada naele) and three in Gosemti watershed (in the Tabia Gemad sub watersheds) of Kilte Awlaelo District.
- In Takot sub watershed of Tseada Emba, 30 farmers (11 women) were facilitated to access two motor pumps, and now 30 households are irrigating their land covering 12 ha.

6.1.3 Work Package 3: Agricultural Commodity Production

Crop production and productivity in Ethiopia were greatly hampered by the El Niño-induced drought that affected most of the dryland areas in the country⁵, including DryDev's targeted areas. These harsh seasonal conditions, and a severely limited implementation time, impaired the ability of the

⁵ According to a United Nations report, Ethiopia is experiencing its worst drought in 30 years. A recent report published by the UN Office for the Coordination of Humanitarian Affairs (OCHA) noted that the impact of the failed spring rains was compounded by the arrival of the El Niño weather conditions that weakened summer rains, which feed 80 to 85 per cent of the country. As at February 2016, reports suggest more than 10 million people are in need of food aid.

implementing partners (IPs) to achieve the targets set for WP3 for 2015. Nevertheless, despite these challenges, 6,330 farmers (1,715 women) were reached through various interventions under WP3 (Table 6.4).

Table 6.4: Farmers reached with WP3 activities by district

District	Farmers Reached		
	Men	Women	Total
Boset	-	-	-
Gursum	2,795	883	3,678
Jarso	292	113	405
Tseada Emba	337	102	439
Kilte Awlaelo	491	242	733
Samre	615	223	838
Total	4,615	1,715	6,330

Improved farming techniques, promotion of improved varieties with corresponding trainings, improving input supply system and strengthening of producer groups were among the on-farm interventions to help farmers improve production and productivity.

- **Activity Area 3.1: Develop an efficient input supply system.** DryDev provided improved agriculture inputs for 4,495 farmers (1,098 women) and improved livestock for 91 farmers (46 women). Farmers were given seeds of 11 improved varieties of different crops. These included 62 quintals (6,200kg)⁶ of high-yielding and Striga-resistant varieties of sorghum (three quintals of melkam, 12 quintals Hormat, 8 quintals of Misikir, seven quintals Teshale, 13 quintals of Birhan, 13 quintals of Gedio, one quintal Yeju, two quintals of Gambela, two quintals of Tetebe, one quintal of Machia). A total of 2,067 farmers in Gursum received approximately three kg seed per farmer. Access to improved varieties of maize and sesame was also facilitated, benefiting 880 and 400 farmers, respectively.

Based on the information obtained from the district agricultural office, farmers in the area produce only 12 quintals of sorghum and 9 quintals of maize per ha, when using local varieties. These improved varieties of sorghum and maize (melkasa2/3/4/6) are expected to produce on average 38 and 24 quintals/ha, respectively. Thus, the target beneficiaries are expected to gain additional 10 quintals of sorghum/ha and 23 quintals of maize/ha as a result of this intervention.

In Tseada Emba, 85 quintals of seeds of two improved and certified barley, Fotina and Heryti, was purchased and distributed to 340 farmers.

Farmer cooperatives in Kilte Awlaelo and Samre districts were provided with different varieties of improved vegetable seeds. A total of 84.25 kg of improved vegetable seeds (20 kg of onion, 23 kg of Swiss chard, 16 kg of lettuce and 25.25kg of cabbage) were provided to the multipurpose farmers' cooperatives in the eight watersheds of the two districts. Through the cooperatives, 808 farmers (243 women) were reached.

To improve the livelihoods of economically disadvantaged households, 91 farmers (46 women) from across the sub-watersheds in Samre and Kilte Awlaelo, were enabled to access 500 small ruminants for fattening. Small ruminants were supplemented with concentrates to meet the forage supply gap. Some 28 quintals of concentrates were purchased and distributed to both districts for these beneficiaries. The farmers were linked to the Rural Savings and Credit Cooperatives (RUSACOs), with the provision that they will pay the same amounts (costs of items provided) back to RUSACCO so as to avail the same funds to assist other needy community members.

⁶ 1 quintal (qt) = 100 kilograms (kg)

- **Activity Area 3.2: Commodity production / utilization capacity development.** A total of 720 farmers (186 women) participated in various capacity building events (trainings and farmer field days) on improved commodity production options. Areas covered included improved crop varieties and their production, utilization and management. Trainings on seed production and seedling-raising were provided to the producer groups and farmers by experts from the Bureau of Agriculture and Rural Development for three consecutive days in Wukro town. The training mainly focused on seed-bulb production techniques, fruit seedling raising and production (targeting avocado and apple), and creating linkage between the farmers and input supplier groups in Kilte Awlaelo and Samre districts. A total of 108 farmers (72 women) benefited from these trainings. In Tseada Emba, a three day training was provided to 96 farmers (seven women) and three government extension staff (all men) focusing on identifying varieties of seeds, cereals, fruits, and vegetables for intercropping, and awareness-raising on advantages of intercropping to combat pests and sustain productivity. Further, training on managing horticultural crops was provided to 246 community members (44 women) drawn from all watersheds of Samre and Kilte Awlaelo districts, and to 12 development agents (five women) from both districts. The training included theoretical and practical sessions and a field visit. Finally, a farmers' field day was organized for onion seed producers at Tabia Genfel (a vegetable producing area) in Kilte Awlaelo District. Participants included 22 smallholder farmers (four women), two private individuals, and two development agents.
- **Activity Area 3.3: Formation and strengthening of producer groups.** Seven new commodity producer groups, consisting of 341 farmers (134 women), were established during 2015 (Table 6.5). Other producer groups were also organized in the form of cooperatives and provided with material supports and training on motor pump maintenance. In total, 13 producer groups were strengthened in 2015.

Table 6.5: Commodity producer groups established in 2015

District	Established new producer groups	Membership		
		Men	Women	Total
Boset	2	21	14	35
Gursum	2	76	67	143
Jarso	2	78	45	123
Ts. Emba	1	32	8	40
K. Awlaelo	0	0	0	0
Samre	0	0	0	0
Total	7	207	134	341

Further, the DryDev programme worked in collaboration with local partners to identify and assess the needs of 40 farmers in Boset District for onion seed multiplication. This comprised 20 farmers in Cheffe Dula and 20 from Osole sub-watersheds. To create linkages between the farmers and input suppliers, REST organized a regional forum that included 30 smallholders (four women), two development agents, two district agricultural office experts, five REST staff, and representatives from Mekelle University. Four of the smallholder farmers are already involved in seed production. Also attending were representatives from the government's Agricultural Transformation Agency (ATA), Regional Input Supply Bureau, Ethiopian Seed Enterprise (ESE), Regional Regulatory System and Tigray Agricultural Research Institute (TARI).

6.1.4 Work Package 4: Enhancing Market Access

- **Activity Area 4.1: Promote post-harvest technologies.** A total of 87 farmers (18 women) from Kilte Awlaelo and Samre districts were trained in post-harvest technologies. The trainings focused on time of harvesting, preservation methods, methods of harvesting vegetable and

fruits and how to value-add vegetable and fruit products. Four postharvest technologies (multi-crop thresher, maize thresher, weighing scales and fruit and vegetable transport boxes) were introduced to farmers in Samre, Kilte Awlaelo, Gursum and Jarso districts.

- **Activity Area 4.2: Capacity development of farmers and value chain actors.** Some 749 value chain actors (267 women) from across all intervention areas participated in various capacity building events organized around the identified value chain commodities. Table 6.6 provides a summary of the trainings given in each district and for each commodity.

Table 6.6: Participation of value chain actors in capacity development events

District	Commodity	Capacity building activity provided	Number of value chain actor participated
Boset	Haricot bean, tomato		35
Gursum	Ground nut	Groundnut value chain, agronomic practices, postharvest management, packaging, financial literacy and marketing	77 (6 women)
	Milk	Milk value chain (milk handling, pasteurization packaging, financial literacy, and marketing)	61 (5 women)
Jarso	Shoat	Shoat value chain	80 (40 women)
	Potato	Potato value chain	45 (7 women)
Kilte Awlaelo	Shoat,	Assessment of markets	270
	Bee keeping	Exposure visits on honey and honey processing technology; Transitional bee hive construction, colony multiplication, transfer and honey post-harvest management	75 (21 women)
Samre	Bee-keeping	Assessment of markets	183
		Exposure visits on honey and honey processing technology; Transitional bee hive construction, colony multiplication, transfer and honey post-harvest management Transitional bee hive construction, colony multiplication, transfer and honey post-harvest management	
Total			749

- **Activity Area 4.3: Formation and strengthening of marketing groups.** Training on business plan development and business management was provided to 201 cooperative members (75 women) from eight sub-watersheds of Kilte Awlaelo and Samre. DryDev also supported community groups to access improved dairy cow breeds. Due to improved milk production and need to find better markets for their produce, these community groups merged with other dairy producers to form what is now a strong cooperative with 30 members (eight women).
- **Activity Area 4.4: Facilitate linkages between farmer groups with sustainable markets.** Enhancing access to markets for rural farmers was a key focus geared towards increasing household income and ensuring food security. Platforms were established to enhance the interaction of farmers with other value chain actors along commodities. Forty-four people (six women), including producers, cooperatives, buyer companies, Ethiopian Commodity Exchange (ECE), participated in two platforms organized in Kilte Awlaelo and Samre districts. Linkages was made between 35 (four women) shoat value chain actors.
- **Activity Area 4.5: Strengthening market information systems.** Training was provide on market information system to 16 officers (all women) drawn from Samre district office of agricultural and rural development and local development agents. The programme negotiated for, and sponsored a 16-week (10 minutes per week) airing of farmer-relevant market information, by the Mekelle-based radio station, Fana FM 94.8 to promote and share market information.

6.1.5 Work Package 5: Financial Services Linking

- **Activity Area 5.1: Community-based financial institution strengthening.** A two-day workshop was conducted in Tseada Emba, attended by 42 farmers (three women), to identify the existing village level saving groups, to assess needs, and to strengthen knowledge on saving and use of loan disbursement. The DryDev team organized three village saving groups that have a total of 59 members (12 women), the majority of whom are poor farmers who did not have access to credit before the establishment of their groups. Various training sessions were conducted to increase the capacity of community members in Samre, Kilte Awlaelo and Boset districts. These trainings, which involved a total of 436 people (149 women), covered a wide range of subjects related to financing, saving, credits and business plan development. Further, eight RUSACCOs were provided with the necessary foundational infrastructure such as saving cash boxes, shelves, tables and chairs.
- **Activity Area 5.2: Link value chain actors to financial service providers.** Two platforms were organized in both Samre and Kilte Awlaelo districts to bring financial service providers together and discuss ways to improve farmers' access to finance. Participants came from governmental and private banks, Dedebit Credit & Savings Institution (DECSI), and local RUSACCOs. A total of 84 representatives (17 women) attended. Some 824 farmers (637 women) were linked to financial service providers, through financial forums and business-to-business (B2B) negotiations.

6.1.6 Work Package 6: Local Governance & Institutional Strengthening

- **Activity Area 6.1: Community institutional capacity strengthening.** The DryDev team sought to develop the capacity of local community institutions to enable them play part and take lead in implementing DryDev's programmatic agenda. A workshop was convened in Samre District, with the aim of bringing together key institutions and stakeholders into the DryDev partnership. In attendance were 32 people (three women) drawn from the local government administration office, offices of agriculture and rural development, community associations (youth, women and farmers), watershed representatives, and *Kebele*⁷ administrators.
- The sub-watershed committees, formed under activity area 1.1 (WP1), were strengthened through capacity-building events on catchment planning and management. A total of 1,409 people participated in 17 trainings on integrated sub watershed management, community action planning, and trainings to enable the teams to identify and prioritize gaps in the community for sub-watershed management.
- District steering committees were established in all intervention districts, and their roles and responsibilities discussed and agreed on. Six district steering committees were formed, whose functions were to help the programme synergize existing development activities, share knowledge and create ownership. These committees meet quarterly to review the performance of activities being conducted through the programme. An assessment was done in each district to identify challenges in government service delivery and to devise recommendations on ways to strengthen the implementation of the programme's activities. Possible solutions to the challenges identified were discussed and formulated with each committee. Training needs were identified and plans for their roll out in 2016 made.
- In Samre District, training was provided to 90 community leaders (16 women) on community based leadership and governance. The training was delivered by government experts who had earlier been trained on governance and leadership by DryDev staff. And in Gurum District, eight cooperative leaders were trained on organizational management and preparation of business plans. This training was provided by DryDev staff in collaboration with the district-level cooperative promotion office.

⁷ *Kebele* is a small administrative unit in Ethiopia, similar to a ward

- **Activity Area 6.2: Platforms for improved local governance.** Arising from the close and continuous engagement between the programme and the district steering committees mentioned above, Tseada Emba district government provided 250,000 ETB (USD 12,500) of credit to initiate activities before the DryDev funds arrived.

6.1.7 Work Package 7: Planning, M&E and Scaling of Learning

- **Activity Area 7.1: Programme monitoring and communication.** DryDev Ethiopia made a substantial contribution towards the finalization of the programme M&E matrix. The WVA advisors and WVE's M&E specialist attended an ICRAF-led workshop in Kenya to discuss and adopt the indicator descriptions, targets, and tools. Subsequent design work was necessary to finalize the country M&E framework and matrix, harmonizing these with the programme-level framework and refining district-level targets. The DryDev M&E framework has now been completed and all IPs have a clear vision on what needs to be achieved for each intervention area in each programme period.
- A mobile data collection platform was further developed to operationalize the country M&E framework, track outcomes and sub-outcomes used to collect information from target areas. Data were centrally stored, and made accessible to both the NLO and the data collection points in the field. This has contributed to the collection of better quality data. The lot quality assurance sampling (LQAS) technique was adopted as a novel procedure for sampling for assessment of technology uptake.⁸ Nineteen samples were taken from each supervision area after dividing each district into 5 supervision areas based on LQAS methods. Supportive supervision visits, review meetings, experience sharing events and platforms for learning and exchanging information have all been important processes to ensure proper implementation of activities on the ground. Feedback from these visits and periodic reports have been helpful for monitoring programme progress and allowed the NLO to take corrective action in a timely manner. Other progress made in this activity area include:
 - The constitution of, and development terms of reference and schedules of meetings for Ethiopia's country core team.
 - Identification of capacity gaps for all staff of the implementing partners as well as those the relevant district-level government offices and other partners
 - Training of DryDev staff on use of simple methods of uploading programme stories and videos using the AKVO platform
 - Production and sharing of a video documentary describing how farmers can become more resilient with the support of water lifting devices and other water harvesting options during extreme weather conditions, like the *El Niño* situation in Ethiopia
 - Production of a brochure that provides a quick overview of the DryDev programme in Ethiopia
- **Activity Area 7.2: Participatory M&E with FOs and local stakeholders.** The programme team carried out the Community Action Plans (CAPs) for 29 sub-watersheds across all six participating districts. This was done in close collaboration with, and active participation of, district governments and other local level stakeholders. These CAP processes, which drew the participation of 747 community members (66 women), identified options relevant to specific context and the corresponding learning priorities which informed development of the 2016 DIP. At the same time, all the site-specific CAPs included a monitoring plan that will be fully

⁸ LQAS involves randomly selecting a relatively small number of supported households in each site (e.g. 19). While the small samples used will fail to generate precise statistics for each particular site, the resulting data can be aggregated at the country programme level to give a clear picture on the state of option uptake. Moreover, the hallmark of the LQAS method is that it enables those sites where farmer level uptake is faring very well to be distinguished from those where it is faring poorly. This will, thereby, enhance programme management efficiency by helping to direct relatively more effort and resources to those sites that would benefit from additional participatory engagement and/or learning with farmers.

operationalized in 2016. Efforts will be made to link community monitoring teams to district steering committees to facilitate two-way feedback, supporting better implementation.

- **Activity Area 7.3: Scaling of evidence and learning.** This activity area was intended to initiate the process of generating evidence and learning that can be scaled up and out in the later years of the programme. Two major activities were conducted, namely, (i) facilitation of and collaboration of the NLO and IPs in carrying out baseline surveys for the ICRAF-led impact evaluation and (ii) the identification and refining of the learning priorities through the CAP process.

6.1.8 Work Package 8: Policy Analysis & Influencing

- **Activity Area 8.1: Policy implementation evidence.** A follow-up policy synthesis study was conducted in agricultural growth and food security, environment, water resource management and rural economy (market and finance), building up from the findings of the Inception Year's work. Analysis was done on the various studies, legislation, strategies, guidelines and programme plans focused on main provisions, legal and policy framework, implementation status, challenges/gaps and opportunities. A SWOT analysis of the potential to establish an enabling policy framework was completed and strategies to improve the policy implementation and engagement were proposed.
- **Activity Area 8.2: Stakeholder mapping.** The programme carried out a stakeholder mapping exercise in all six DryDev participating districts. The results of the CAP process were used and further data were collected and analyzed. Various key stakeholders including institutions, local leadership and governance roles and arrangements, associations/networks, decision making power, gaps in linkages, associated challenges and opportunities were identified (Table 6.7). This has helped the programme to identify whom to engage with during stakeholder platforms and other DryDev activities.

Table 6.7: Key stakeholders identified in each programme district

Categories of stakeholder	Oromia Region			Tigray Region		
	Boset	Gursum	Jarso	Kilte Awlaelo	Samre	Tseada Emba
Individuals	0	0	0	0	0	0
Government	19	17	26	12	13	12
Private Sector	2	0	0	0	0	0
NGOs	10	6	6	7	4	1
CBOs	0	3	0	2	0	4
Media	0	0	0	1	0	0
Total	31	26	32	22	17	17

- **Activity Area 8.3: Raise awareness on policy provisions and constraints.** Policy awareness sessions were conducted in Boset District to enhance the awareness of the community as well as key DryDev actors on relevant policy issues such as agriculture, food security and rural economic development. A total of 67 people participated in the event.

6.2 KENYA

The DryDev programme in Kenya is implemented in three counties (Machakos, Makueni and Kitui) by a consortium of four non-governmental organizations (World Vision, ADRA, Caritas and SNV), in collaboration with county government departments and local community organizations. World Vision Kenya serves as the NLO, and also implements programme activities in Machakos County. ADRA and Caritas implement activities in Kitui and Makueni counties, respectively, while SNV supports WP4 (Enhancing market access) and WP5 (Financial service linking) across all the three counties.

Like in all DryDev countries, the programme work in Kenya got off to a slow start in 2015, due to late release of funds and delays in processing contractual agreements between the various partnering organizations. However, the Kenya DryDev team was able to move fast and lay a good foundation for programme implementation once the necessary structures were in place.

6.2.1 Work Package 1: Sub Catchment Level Natural Resources Management

- Action Area 1.1: Sub-catchment action plans development.** The DryDev team in Kenya organized community meetings to select representatives to participate in social and livelihoods analysis that led to the development of Community Action Planning (CAP). The process, which was conducted in 12 sub-locations across the three target counties of Machakos, Makueni and Kitui, also involved the participation of representatives from respective County governments, mainly those from Agriculture, Water, Kenya Forest Service (KFS), National Drought Management Authority (NDMA), Water Resource Management Authority (WRMA), Department of Gender and Social Services, and the National and County Administration staff. The CAP process in Kenya involved the active participation of 631 representatives (352 women) at grassroots level (Table 6.8). It was aimed at determining contextually appropriate options that were aligned to their aspirations and farmer priorities in a bottom up and inclusive manner. Some 12 sub-locational CAP reports were produced.

Table 6.8: Community representatives who participated in CAP processes in Kenya

County	Sub-County	Sub-location	Number of Participants		
			Men	Women	Total
Kitui	Waita	Waita	20	28	48
		Thonoo	16	34	50
	Kanyangi	Ngomoni	18	18	64
		Masimba	17	17	76
		TOTAL	59	59	238
Machakos	Mwala	Ngulini	21	16	37
		Myanyani	26	27	53
	Yatta	Katulani	33	27	60
		Kaluluini	23	29	52
		TOTAL	103	99	202
Makueni	Kalawa	Kathulumbi	23	29	52
		Syotuvali	19	31	50
	Mtito Andei	Muthingiini	20	22	42
		Nzeveni	21	16	37
		TOTAL	83	98	181
		GRAND TOTAL	279	352	631

The CAP processes provided an opportunity to the communities to assess, analyze the current situation and identify development interventions suitable for realization of their vision. This helped in identification and refinement the activities to be implemented in 2016 and beyond, and resulted in revision of the DIP 2015, amendments of the programme implementation plan and development of the DIP 2016. The process also provided opportunity for initial identification of

potential stakeholders to collaborate in the programme in addressing various context specific options.

The learning priorities corresponding to the options identified by the community during the CAP process were used to develop five themes for farmer-led action learning activities that have been integrated into implementation of planned activities during 2016.

- **Activity Area 1.2: Sub-catchment capacity development for local institutions.** A meeting was held with 27 Mathauta Water Resources Users' Associations (WRUA) committee members (comprising 10 women), in Yatta Sub-county, to foster a common understanding on catchment management. Arising out of this meeting, members identified areas of improvement and drew an action plan for capacity development of its members. The broad areas needing improvement include financial management, community awareness on WRUA activities, and monitoring of community water, and catchment management projects. As a follow up to this, an in-depth assessment is planned for 2016 for other institutions on sub catchment management, and institutional development. Similarly, a meeting attended by 27 members of Miindu WRUA, Machakos County (10 women) as well as by representatives from the departments of Agriculture, Water and Forestry Services, National Government Administration was convened to enable both the county and national governments to understand the role of the WRUA in implementing the DryDev activities through a sub-catchment management approach.
- **Activity Area 1.3: Sub-catchment level FMNR and enrichment planting.** Awareness creation activities were carried out in Miindu sub-catchment in Mwala sub-county, in which 66 people (34 women) were reached on Farmer Managed Natural Regeneration (FMNR), Enrichment Planting (EP) and Environmental Conservation (EC). These events were aimed at promoting adoption of agro-forestry practices and increasing existing forest cover through planting of indigenous tree species, protection of threatened riparian vegetation and wetlands along rivers as well as inculcate business acumen in tree nursery management. To promote and initiate FMNR and EP at sub-catchment level, 45 community members (14 women) drawn from members of WRUA, agro-forestry and FMNR champions from Mwala and Yatta Sub-counties participated in an exposure and learning visit to on-farm FMNR sites in Mogotio of Baringo County⁹. The participants were exposed to the "what" and "why" of FMNR by fellow community members who have had several years of hands-on experience in FMNR. Following the learning visit, two FMNR sites within Miindu and Mathauta sub-catchments were selected with the support of the local community leaders.
- **Activity Area 1.4: Establishment and maintenance of water buffering.** A participatory feasibility study was conducted to identify and assess the viability of the water buffering structures proposed by the communities during the CAP process for each of DryDev Project sites in Kanyangi and Waita wards of Kitui County. Emphasis was laid on identifying appropriate sites for sand dams and accompanying abstraction wells. The study involved an appraisal of both geophysical and biophysical characteristics including physiography, geology, and drainage of the proposed sites, as well as detailed geotechnical survey to identify the most probable sites. Based on these investigations and analysis, four rivers were identified as being viable for sand dams due to their exploitable sand water and stable geological formation (dyke), which provides a foundation for the buffer structures and acts as an impermeable layer beneath the sand dam. Four sites were therefore recommended for sand dams, and one existing sand dam flagged to be improved. In Makueni County, community members identified, during the CAP process, potential sites for the construction of water buffering structures. In Mtito Andei Ward, community members identified the Nthii River for construction of a sand dam, while Kwa Mung'oku was identified for excavation of an earth dam.

⁹ Baringo County is in the Rift Valley, about 260 km north-west of Machakos County. FMNR was a new innovation for dryland farmers of Machakos.



Figure 6.4: Community members taking part in a feasibility study in Kitui County

6.2.2 Work Package 2: On-farm Water and Soil Management

- **Activity Area 2.1: On-farm rain water harvesting.** The DryDev team in Kenya promoted on farm rain water harvesting through various approaches. A total of 30 farmers (17 women) were trained on rain water harvesting techniques and additional 66 farmers (34 women) were reached through community sensitization meetings. A mapping exercise of farm ponds was conducted in Miindu sub-catchment in Machakos, with technical assistance from ICRAF. The exercise culminated in the establishment of appropriate and standard designs for farmers in order to increase water utilization efficiency in crop production. In addition, three frontline staff from three implementing partner organizations participated in a capacity building workshop on rain water harvesting conducted in Dire Dawa, in Ethiopia.
- **Activity Area 2.2: Agro-forestry and on-farm FMNR.** A total of 621 (428 women) farmers were trained on agroforestry and FMNR through different approaches, in efforts involving collaboration between DryDev staff and government staff from the Ministry of Agriculture (MoA) and the Kenya Forest Service (KFS). Further, 25 volunteer champion farmers were identified and assisted to undertake agroforestry and FMNR. Farmers were selected on the basis of their interests in the technology, as well as their readiness and willingness to share information with others. Table 6.9 presents a summary of the various training sessions carried out.

Table 6.9: Trainings provided to farmers on agroforestry and FMNR in 2015

Capacity Building Activity	County/Site	Theme/Topic	Number of Trainees		
			Men	Women	Total
Community sensitization and awareness raising	Machakos and Kitui County	Importance of integrating crops and trees; selection of appropriate tree species for on-farm enrichment planting; and good agroforestry practice	129	348	477
Technical support and monitoring visits	Machakos County	Identification of FMNR sites and steps for development	15	30	45
Farm visit to well performing farms	Machakos County	Demonstration of woodlots and tree planting spacing	32	34	66
Educational tours	Kitui	1. Agroforestry and enrichment planting 2. Soil conservation and fertility management Good agricultural practices and conservation agriculture	17	16	33
Total			193	428	621

Follow-up on the training on establishing tree nurseries conducted in 2014, it was observed that the farmers who had participated had raised 41,200 seedlings of multi-purpose tree varieties from a total of 15 community tree nurseries. Most (75%) of these tree seedlings were planted on the farmers' landholdings, while 10% were sold to other farmers outside the project site. The

remaining 15% were still at the nurseries awaiting transplanting, by the end of the reporting period.

In Machakos County, 15 farmers (three women) who were selected by their fellow farmers to be agroforestry and enrichment planting champions, planted 12,124 tree seedlings of multi-purpose trees, with an average of 808 tree seedlings per farmer.

- **Activity Area 2.3: On-farm soil conservation and fertility enhancement.** The programme team made efforts to follow-up on the farmers that had been trained on various on-farm soil and water conservation, fertility management techniques, agroforestry, EP and FMNR during the Inception Year. The number of farmers trained in 2014 found to have adopted agroforestry, enrichment planting and FMNR technologies were 74 (90% of those trained), 27 (22%) and 38 (31%), respectively. Farmers who had adopted various forms of soil fertility management were 46% for composting, 25% for fertility trenches, 97% for use of farm-yard manure and 46% for organic fertilizer application. A significant number of farmers were also observed to have integrated various productivity-enhancing options.
- **Activity Area 2.4: Small-scale irrigation.** Small scale irrigation was promoted to farmers as an off-season method of farming that also complement interventions on rainwater harvesting through farm ponds. On-farm irrigation training was provided to 40 farmers (17 women) owning farm ponds in Myanyani. In addition, 26 representatives (11 women) from 26 farmer groups in Kalawa (10) Mtito Andei (8) and Yatta (8) were supported with drip irrigation kits for small scale irrigation. It was intended that other farmers and farmer group members will learn from these farms on all aspects related to drip irrigation farming. Follow-up visits to these farmers showed that each farmer had developed at least 1/8th of an acre of their land under a variety of vegetables.

Box 6.1: Benefits of growing high value vegetable crops under irrigation

Farmers reported immediate benefits from the use of small-scale irrigation methods for growing off-season high value crops like vegetable. For example, In Yatta (Machakos County), Joshua Makau reported earning KES 29,000 (US\$290) from growing market vegetables under irrigation, compared to KES 5,000 (US\$50) he obtained per season from rain-fed production of cereals. In the same sub-county, Peter Mumo and Tabitha Mutiso were able to earn KES 25,000 (US\$250) and KES. 30,000 (US\$300), respectively, from their vegetable gardens. In Kalawa (Makueni county), a farmers by the name Nzili reported a daily income of KES 300 (US\$ 3) from kale sales to the local fresh vegetable market.



A farmer in Machakos country inspecting his tomato plot grown under drip irrigation using water from farm ponds



Kales (a leafy vegetable common in Kenya) and tomatoes growing under drip irrigation in Nzili's farm

6.2.3 Work Package 3: Agricultural Commodity Production

- **Activity Area 3.1: Promotion of climate smart production for food security.** The DryDev team conducted various activities, including awareness creation meetings, trainings, field days and exchange visits, aimed at promoting crop production practices and monitoring. Farmer to farmer learning was a major extension methodology used during this period. A total of 1,435 farmers (992 women) representing 27 CBOs, were reached through these efforts (Table 6.10). It is expected that the knowledge and skills acquired will enable the farmers to improve their farm production and returns in the next cropping season.
- No other activity was reported under this work package, for work done in 2015.

Table 6.10: Trainings provided to farmers on agricultural production in 2015

Intervention	Topics/areas covered	Sub-County / site	Farmers trained/reached		
			Men	Women	Total
Awareness creation	Farm preparation & crop production	Kitui	102	309	411
Good agricultural practices training	Integrated pest management	Kalawa	18	66	84
Post-harvest management training	Determination of moisture, proper storage, and chemical application	Yatta	23	53	76
	Various methods of proper grain storage, moisture determination and chemical application	Mtito Andei	205	398	603
	Moisture measure and storage structures- farmers supported with grain drying canvas	Kalawa	30	65	95
Field days		Kalawa & Mtito Andei	65	101	166
Total			443	992	1,435

6.2.4 Work Package 4: Enhancing Market Access

- **Activity Areas 4.1: Conduct market analysis.** The CAP process showed priority value chains as honey, goats and local poultry. Follow-up activities being carried out in 2016 seeks to inform approaches that will further develop these value chains.
- **Activity Areas 4.2: Establish and strengthen marketing groups.** Fourteen farmer organizations (FOs) were assessed for potential engagement in the priority value chains (green grams, cowpeas and pigeon peas). From the analysis, nine FOs, representing 2,803 farmers (1,790 women) were identified. Assessment of marketing capacity needs was conducted and capacity development plans drawn for subsequent roll out in 2016.
- **Activity Areas 4.3. Broker PPP to support infrastructural investment.** Thirteen buyers of pulses (green grams, pigeon peas and cowpeas) were identified, out of which five (Betta Grains, Capwell Industries, Pisu & Co. Ltd, Kamili Packers Ltd and Spice World Ltd) were engaged for possible collaboration. The process was initiated to link 2,643 farmers (1,770 women) from eight FOs to Betta Grains and Pisu Company Ltd in readiness for the harvesting season in February 2016.

6.2.5 Work Package 5: Financial Services Linking

- **Activity Areas 5.3. Establishment of linkages with financial service providers.** The DryDev team in Kenya joined hands with the Association of Micro Finance Institutions (AMFI) to organize a financial linkage forum in Machakos which brought together 59 people (15 women) comprising leaders of farmer organizations, financial institutions, the media outlets, buyers, government representatives (Table 6.11). The forum served as a platform for familiarization of value chain actors with the financial providers and provided opportunity for formalized engagement.

Table 6.11: Participants in multi-stakeholder financial linkage forum

Category	Organisations	Men	Women	Total
Financial Institutions	KWFT, MESPT, Rafiki, Faulu, Equity, Jitegemea, Jamii Bora, Letshego, Post bank and SISDO	9	7	16
Leaders of FOs	Muungano, Faith, Kikima, Ngengi, Kathulumbi, Lower Yatta, Mwala Mango Growers, Mwingi Bee Keepers	8	3	11
Media	KNA, Citizen TV, NMG, Musyi FM, KTN, Standard, K24, Citizen Radio, Mbatu FM, County FM, The star, KBC TV	11	1	12
DryDev reps	ICRAF, WVK, Caritas, ADRA and SNV	11	2	13
Government reps	Office of the Governor-Machakos, MOA-Machakos	2	0	2
Buyers	Betta Grains, Yash Commodities (spin-off from Pisu & Co. Ltd)	1	1	2
Collaborators	EAGC, CGA, WFP	2	1	3
Total		44	15	59

The programme will work, in coming years, to strengthen the platform to give impetus to joint action and provide an enabling environment for sustained financial access by the farmer organizations.

- Activity Areas 5.1 (Enhance financial literacy for the producer organizations) and 5.2 (Broker linkages with financial service providers) were not addressed in 2015.

6.2.6 Work Package 6: Local Governance & Institutional Strengthening

- **Activity Area 6.1: Strengthening existing & mobilizing new farmer organizations.** A profiling tool was developed and used to profile some 197 Farmer Organizations (FOs) from 12 sub-locations for engagement in DryDev in implementing work packages 1 to 4. From the FOs profiled, 113 (representing a total of 3,679 farmers) were engaged for participating in the DryDev programme. Capacity assessment was conducted, and gaps identified.
- A follow-up on the Inception Year's capacity building initiatives on group constitution development revealed that four FOs (representing 111 members [101 women]) in Kitui (Waita and Lower Yatta) benefited from the Uwezo Fund¹⁰ to boost their group activities, such as purchase of farm inputs, small stock, and agribusiness expansion. Each group received Ksh. 100,000 (US\$1,000). Ten FOs in Lower Yatta united to form a Community-Based Organization (CBO) for more effective coordination of their activities.
- **Activity Area 6.4: Institutionalization of famer-led extension system.** Building on the extension study undertaken in the Inception Year, a review on the agricultural extension methods was carried out in all the six sub-counties for 12 actors (four public, seven NGOs and one private). Opportunities for improving access to quality information and services by farmers were identified, based on the assessment of public and private extension services. One of the findings was that field days, demonstration plots, farmer to farmer training, model farmer, and farm visits were considered most effective in crop related extension. Demonstrations and farmer field schools (FFS) were effective for livestock extension, whereas trainings, FFS, demonstration plots and *barazas*¹¹ were effective for environment related extension. For water related extension work trainings and *barazas* were found to be more effective. Some of the weaknesses and recommendations made are presented in Box 6.2 below.

¹⁰ The Uwezo Fund is a federal government initiative seeking to expand access to finances and promote economic development among women, youth and people living with disabilities (see www.uwezo.go.ke).

¹¹ Barazas are public gatherings

Box 6.2: Weaknesses of and recommendations for improving agricultural extension systems**Weakness**

- Uncoordinated extension efforts and approaches among the various extension actors within the project sites.
- Poor information flow among extension actors, research institutions and farmers; weak feedback mechanisms
- Limited continuous capacity development opportunities on emerging technologies for local extension staff.
- Insufficient funding and delays in funding for public extension programmes since Agriculture was devolved
- Poor logistical support to facilitate extension (transport challenges and poorly equipped offices)
- Inadequate extension staff to adequately meet farmer needs at the Ward level
- Decision making and advisory systems are top down (County to village level).

Recommendations

- Partner with the relevant ministries and other extension actors to harmonise extension efforts and approaches
- Work with the county ministry departments to identify capacity gaps, train and link the local extension staff with relevant research institutions for appropriate support.
- Engage with county governments for increased and timely resource allocation for extension support
- Work with local level extension staff to develop a more decentralised farmer lead extension model to serve various categories of farmers and different program objectives.
- Work with local extension staff to initiate platforms for identification of farmer extension needs.

Source: *Extension Approaches Analysis Report (2015)*, by ICRAF and WVK

- No reports were received from the country team on activity areas 6.2 (Action oriented capacity development for local government institutions) and 6.3 (Social accountability for a between FOs and local government institutions).

6.2.7 Work Package 7: Planning, M&E and Scaling of Learning

- **Activity Area 7.2. Participatory M&E with the stakeholders.** The Kenya DryDev Programme Planning, Monitoring, Evaluation and Learning (PMEL) draft framework was completed and submitted to ICRAF. Monitoring tools were developed and shared with partners and used for monitoring of Programme activities. Targets for the 2016 DIP were also re-examined in light of the slower than expected progress of 2015. The annual report for 2014 and a bridging phase report (April-June 2015), which also served as the mid-year report, were prepared and submitted to ICRAF. Overall, the programme reached 4,189 farmers (3,215 women) in 2015 with different technologies. Other activities carried out include the verification of the Programme sites, updating of sub-catchment maps and undertaking of Impact Assessment (IA) baseline surveys.
- No other activity was reported under this work package, for work done in 2015.

6.2.8 Work Package 8: Policy Analysis & Influencing

Activity Area 8.1. Country stakeholder mapping /power analysis. Building on the results of the CAP process, a stakeholder mapping exercise was carried out in all six intervention sub-counties in Kenya. The exercise identified key stakeholders, local leadership and governance roles and arrangements, associations and networks, decision making responsibilities, gaps in linkages, associated challenges and opportunities. Table 6.12 presents the classification and number of the various stakeholders identified during the mapping process. Following this process, future work will involve the development of plans to address gaps, manage threats and enhance opportunities.

Table 6.12: Stakeholders identified per project site

Sub location	Individual	Government	Private	NGO	CBO	Total
Mwala	1	32	10	21	11	75
Kibwezi East	1	34	5	15	16	71
Yatta	1	39	4	16	12	73
Mwingi	5	51	4	22	6	89
Kalawa	8	41	15	25	14	106
Kitui Rural	1	34	6	16	11	68

Activity Area 8.2. Identification of key policy constraints & possible solutions. Following up from the findings of the Inception Year's policy analysis, the DryDev team conducted additional analysis of various studies, legislation, strategies, guidelines and plans. These analyses involved policies relating to agriculture, environment, water and natural resources, and rural economy. A SWOT¹² analysis of the potential to establish enabling policy framework was completed and strategies to improve the policy implementation and engagement were proposed. The results of these analysis is presented in Table 6.13.

Table 6.13: Key opportunities & strategies in policy implementation in Machakos, Kitui and Mwingi Counties

Sector	Opportunities	Strategies
Agriculture / food security	Agriculture and food security prioritized by counties and plans for county food security committees to oversee the sector	Collaborate with the respective County offices to identify opportunities to support cooperatives and farmer organizations
	Availability of a national level online extension information portal that can support county staff	Work with county extension staff to identify capacity gaps and link with appropriate resources; online or research institutes
	Research institutions; KALRO and KEFRI have offices within the target areas and can provide inputs and information	Broker partnership with the institutions to support skills and knowledge transfer with farmers. Additionally promote linkages with the local extension staff
	The 2 nd phase of Vision 2030 has plans for development of digital meteorological systems.	Work with meteorological department through NDMA to capacity build farmers on access and utilization of the information
Environment	Commitment to increase tree cover nationally and at county level provides impetus for action.	Partner with counties to enhance environmental policy development and implementation. Build capacity of community structures for environmental policy implementation
	Developing of environmental policies by counties provide an opportunity for development and implementation support.	Support county governments to domesticate and implement policies within DryDev scope, while promoting farmers participation in the process
Water	Water management structures (WRUAs and WRMA) already exist.	Work with WRMA to identify WRUA capacity needs and strengthen them to oversee community based management plans in priority sub-catchments
Rural economy (market and finance)	Vision 2030, second phase of implementation will include development of market information systems	Sensitize and link farmers to various market information system platforms e.g. I-shamba and e-soko
	Implementation of Kenya National Agribusiness Strategy (KNABS) should include public investment in basic market infrastructure	Align value chain structures in DryDev with KNABS and county plans to promote basic investment on market infrastructure in the target areas
	Existence of Local groups e.g. SACCOS that provide capacity training and financial services	Work with SACCOs and Microfinance Institutions to improve penetration and capacity Link local providers with farmer groups for financial literacy and group governance and management structure trainings
	Government initiatives KAPAP ¹³ and ASDSP ¹⁴ are actively promoting agribusiness activities in the target counties with selected value chains	Link DryDev marketing groups to the ASDSP platforms and interventions

Source: Policy Synthesis Report (2015), by ICRAF and WVK

¹² Strengths, Weaknesses, Opportunities and Threats (SWOT)

¹³ Kenya Agriculture Productivity & Agribusiness Project

¹⁴ Agriculture Sector Development Support Programme

6.3 NIGER

The DryDev Programme in Niger is implemented in five municipalities (Aguié, Dogon Kiria, Droum, Malbaza and Torodi), by a consortium of seven partners (CARE Niger as the National Lead Organization [NLO], Oxfam Novib, World Vision Niger, Karkara, AREN, NGO RAIL, and CRESA). Each partner is responsible for implementing field level activities within one municipality, save for CARE and Oxfam who oversee the development and harmonization of the thematic approaches. As the NLO, CARE Niger has the responsibility for coordination, management and quality assurance of the programme in Niger. In 2015, the Niger DryDev team continued to develop and refine the bottom-up model based on multi-stakeholder Innovation Platforms. The strength of the model has been amply demonstrated in the Aguié Municipality where communities began implementing their CAPs by voluntary participation of 2,500 community members in restoring communal pasture areas. Such a collective approach to resolving matters of communal interests was unheard of prior to DryDev. The programme has shown that a bottom up approach can produce a re-awakening of solidarity between communities. A spirit of competition is popularising the approach and drawing new adherents every day. Recognition of its power to transform community development is growing. Current membership in the five innovation platforms is over 6,000. DryDev has refrained from offering pecuniary incentives for participation in platform activities. Using a co-learning approach, the programme and the platforms will propose and test incentive levels in 2016 that will not compromise sustainability or replicability.

6.3.1 Work Package 1: Sub Catchment Level Natural Resources Management

- **Activity Area 1.1: Sub-catchment management plan development.** The Niger DryDev team identified 31 sub-catchments based on agreed criteria¹⁵ across the five municipalities targeted for intervention. The initial implementation strategy in Niger was based on “village clusters” that were identified by the communities as part of the innovation platform organizational configuration. The Niger team felt that this would provide a solid social basis for collective planning and action. Through detailed mapping of each municipality, it was possible to identify sub-catchments that correspond with each village cluster, *albeit* with minor modifications. This alignment of the village clusters with their corresponding sub-catchments is expected to reinforce the implementation strategy from both the bio-physical and social perspective. DryDev support for this activity included contracting the mapping service. The selected sub-catchments were characterised as part of the baseline studies. The lack of physical or administrative boundaries around the elected sub-catchments may compromise the viability of some of the information obtained, such as the number of domestic cattle within the area. This work spilled into 2016.
- **Activity Area 1.2: Capacity development in sub-catchment management.** With financial and technical support from DryDev, the innovation platforms in Malbaza and Aguié municipalities organized two fora on the management and prevention of conflicts arising from the use of communal natural resources. The fora saw the participation of all stakeholders involved in the management of natural resources including administrative and traditional authorities, representatives of the lands commissions (COFOB, COFOCOM, COFODEP)¹⁶, the regional permanent secretariat of the *Code Rural*, farmer and rancher organizations, members of the innovation platform, local elected officials, women leaders, field partners and the local radio station, RJM. The total attendance was 200 participants (7 women) in Malbaza and 86 (20 women) in Aguié.

¹⁵ ICRAF had provided guidelines for selecting target sub-catchments based on similar slope, catchment delineation 1000 km², sub-catchment 50km²-200km², management sites 2ha-20ha, similar soils, similar annual rainfall (400mm-800 mm), similar population density, and similar poverty levels.

¹⁶ **COFOB** (Commission Foncière de Base - Land Commission Basis (village level)) ; **COFOCOM** (Commission Foncière de \Communale (county level)) ; **COFODEP** (Commission Foncière Départementale (district/department level))

- **Activity Areas 1.3 & 1.4: Rehabilitation / restoration of degraded areas.** Upon completing their CAP, the innovation platform in Aguié initiated restoration work on degraded pasture lands as the first item of business. Farmers were mobilized at four sites, identified by the innovation platform, for the destruction of *Sida cordifolia* on about 60 hectares of pasture areas and cattle corridors (Figure 6.5). Some 2,506 people (1,276 women) participated in the work. This is equivalent to an investment in mandays of approximately 13,031,200 CFA (\$22,087). DryDev provided no material support for this activity, as all material and financial support were provided by the village leaders. However, in the process of “co-learning” the programme and innovation platform together performed a rapid “post-action review” of the activity to determine what kind of support could be required to sustain such communal actions without stifling the platform’s initiative or becoming dependant on outside support. The suggested support will be tested with the five platforms in 2016



Figure 6.5: A community mobilized for the destruction of *Sida cordifolia* in Aguié Municipality

DryDev provided technical and financial support to the innovation platforms of Droum, Aguié and Malbaza municipalities to carry out site visits for purposes of identifying degraded communal lands for possible rehabilitation/restoration. The work of regenerating the identified communal land is scheduled for 2016.

- **Activity Areas 1.4: Water buffering promotion.** The innovation platform teams identified communal water resources for possible water buffering promotion within the platform community action plans. The identified sites (shown in Table 6.14) included communal pasture areas, cattle corridors, and ponds.

Table 6.14. Sites identified for rehabilitation and/or restoration

Municipality	# Pasture sites; (ha)	# Cattle corridors; (ha)	# Ponds; (ha)
Malbaza	23	50	80
Aguié	9 (678ha)	30 (214ha)	41 (70ha)
Droum	2	7	3

Note: area figures not available in some sites as at compilation of this report

- Pasture and cattle corridors are confronted with two principal problems, namely, encroachment from farm fields, and occupation by the invasive weed *Sida cordifolia*. Ponds are often affected by silting and conflicting or non-inclusive use of the water and surrounding lands. The teams also visited a valley that runs through the Droum municipality with significant potential for irrigated agriculture. Though the valley land is privately owned, it requires communal action to improve sustainable access to water for irrigation.
- **Activity Area 1.5: Resource mobilization for sub-catchment management.** No activity was carried out in 2015, under this activity area.

6.3.2 Work Package 2: On-farm Water and Soil Management

- **Activity Area 2.1: On-farm rain water harvesting.** Farmers in the Malbaza municipality undertook the construction of Zaï (Tassa) on their farm fields, following demonstrations at village assemblies organized by DryDev staff and innovation platform leaders. The activity was centred in the North Maggia sub-catchment where soils are stony and fields must be cleared of stone before land preparation and planting. This work was supported entirely by the farmers, who believed that the beneficial (yield increase) effects of using Zaï is sufficient to provide a good part of their food requirements even in years of below normal rainfall. DryDev support was limited to provision of travel costs for platform members and programme staff participating in the initial demonstrations. However, yield measurements and the number of farmers involved were not taken during this period.
- **Activity 2.2: Agroforestry and FMNR.** DryDev staff worked with innovation platform leaders to develop FMNR activities with farmers in Torodi, Malbaza and Dogon Kiria municipalities. Farmers were trained on FMNR techniques and FMNR surveillance committees were formed at village and innovation platform levels (Table 6.15). The surveillance committees monitor the use of the community's natural resources in accordance with local by-laws that stipulate how trees should be managed.

Table 6.15: FMNR surveillance and adoption in Malbaza, Torodi, and Dogon Kiria

Municipality	Committee officers			# FMNR adoptors	# Fields with FMNR practice
	Men	Women	Total		
Malbaza	86	25	111	332	350
Torodi	148	65	213	Not evaluated	Not evaluated
Dogon Kiria	Not evaluated			Not evaluated	Not evaluated

The three municipalities also implemented training on how to manage a community based organisation, as well as financial management. DryDev provided financial support for travel, lodging and/or food for participants.



Figure 6.6: Training pruning techniques to farmers in Malbaza

- **Activity Area 2.3: Soil fertility enhancement.** DryDev provided technical and financial support to promote improved composting in Malbaza, Aguié and Droum municipalities. The activities in Malbaza and Aguié were conducted jointly by DryDev staff and innovation platform members (including local expertise and local technical services). Malbaza Municipality conducted training of trainers, while Aguié conducted joint monitoring missions to observe adoption levels resulting from the training sessions carried out in 2014. In Droum, the innovation platform organised and conducted peer-to-peer training, with DryDev providing financial support. This demonstrated the innovation platform's growing technical and organisational capacity to plan and conduct activities autonomously. Table 6.16 summarizes the results of the trainings provided in the three municipalities

Table 6.16. Participation in improved composting activities: training and adoption

Municipality	Activity	# Villages	# of trainees or adopters		
			# Men	#Women	# Youth
Malbaza	Training of trainers	15	82	15	8
Aguié	Monitoring of adopters	29	201	120	Not evaluated
Droum	Peer to peer training	22	652	26	Not evaluated



Figure 6.7: Peer to peer training organized and conducted by the innovation platform in Droum

Those targeted for training in Malbaza and Droum included farmer organisations, individual farmers, and farmer-experts from other areas of expertise to encourage inter thematic exchanges. The techniques of improved composting include using a variety of underutilised sources of organic matter such as chaff, straw and weeds, arranged in alternate layers to maximize the available nitrogen, and using micro-dosing of mineral fertiliser.

6.3.3 Work Package 3: Agricultural Commodity Production

- **Activity Area 3.1: Agro-sylvo-pastoral systems development.** DryDev provided financial support to the Droum innovation platform to organize five days of training of trainers on the use alternative methods of pest control. The training covered four alternative methods of crop protection, namely, neem seed extract, hot pepper and soap, tobacco and soap, and kerosene and soap. The techniques are of particular interest in the zone because of the importance of dry season gardening along the valleys. The training was organized by the innovation platform with assistance from an agent specialized in crop protection from the departmental agricultural service. Each of the five village clusters received one day of training targeting two local experts from each village within the cluster. A total of 40 villages were reached, and a total of 73 local experts were trained as trainers during the five days. The trainers will thereafter duplicate the training in their own villages.
- **Activity 3.1: Sustainable input supply system establishment.** A joint team of DryDev staff, local technical services and innovation platform representatives from each of the five targeted municipalities, visited the Droum municipality in late 2015, to evaluate methodologies for developing input supply plans for farmers. The objectives of the mission were to help the Droum innovation platform i) begin the process of elaborating input supply plans and help local actors identify input needs and needs for financing to ensure proper functioning of the plan; ii) help local actors to analyze supply mechanisms for adequacy, efficiency and feasibility; iii) identify needs to reinforce or create new Village Saving and Loans Association (VSLA) groups; iv) analyze the functioning of existing VSLA groups and their credit needs; and v) identify suppliers and micro-finance institutions working in the area and their modalities of operation. The methodology will be subsequently introduced in the other municipalities by their respective DryDev innovation platform teams.

6.3.4 Work Package 4: Enhancing Market Access

- **Activity Area 4.1: Building country capacity in market systems and value chains.** No activity was carried out in 2015, under this activity area.
- **Activity Area 4.2: Value chain group establishment and strengthening.** The Market Analysis & Development (MA&D) approach, developed by the FAO for non-timber forest products (NTFPs), was introduced to 125 potential farmer-entrepreneurs in 30 villages in the Droum, Aguié and Torodi municipalities. Training sessions were organized in each of the municipalities on business planning methods for the creation of village tree enterprises. Farmers were identified, trained and involved in conducting market surveys to determine the economic profitability of various products within their local context. Results of the surveys guided the farmers in their choice of NTFP for development within village tree enterprises. Subsequent workshops were held to develop the farmers' capacity to create enterprise development plans for their selected products. The DryDev team facilitated further workshops with each emerging village tree enterprise in Droum municipality, reaching 109 farmer-entrepreneurs (24 women) and resulting in the finalization of four enterprise development plans on the production of dried Baobab leaves. Three action plans for 2016 were also developed. The annual gross income for the four enterprises was estimated at 7,182,000 Fcfa (US\$12,170). The workshops will be replicated in the remaining municipalities in 2016. A total of 95 enterprise development plans were in development in June 2015 across the five municipalities, as detailed in Table 6.17.

Table 6.17. Elaboration of Enterprise Development Plans in 3 municipalities, June 2015

Municipality	# of Plans finished	# of Plans in progress	Total # of Plans
Droum	17	13	30
Aguié	15	17	32
Torodi	6	27	33
TOTAL	38	57	95

DryDev supported the participation of 18 representatives from all five innovation platforms (including a number of village tree enterprises and women's groups active in agro-transformation) in the week-long Agricultural Entrepreneurship event, organized in Niamey by AgriProFocus. The event brought together farmer-entrepreneurs and other agricultural value chain actors, including business persons, financial institutions and policy makers.

- **Activity Area 4.3: Market information system strengthening.** Representatives from the five innovation platforms participated in two-day discussions with invited consultants on the provision of guidance on platforms' needs and the possible solutions in respect to market information systems.
- **Activity Area 4.4: Agro-processing promotion.** No activity was carried out in 2015, under this activity area.

6.3.5 Work Package 5: Financial Services Linking

- **Activity Area 5.1: Village savings and credit associations.** No activity was carried out in 2015, under this activity area.
- **Activity Area 5.2: Link actors to financial services providers.** DryDev Niger organised meetings with the representatives of two key micro-finance institutions working in the Droum municipality. Following these meetings, 67 farmers (6 women) met separately with Yarda and ASUSU S.A financial institutions to discuss the procedures for opening savings accounts, group credit for income generating activities and dry season gardening, warrantage, repayment schedules, and interest rates. Further, the programme linked 115 farmers in seven farmer organisations from the Malbaza innovation platform to financial institutions, enabling the farmers to take warrantage loans amounting to 6,724,765 Fcfa (about US\$11,400). DryDev

purchased and distributed 490 sacks to the five platforms to secure warrantage stocks from insect damage.

6.3.6 Work Package 6: Local Governance & Institutional Strengthening

- **Activity Area 6.1: Innovation platform (IP) promotion.** DryDev supported the Dogon Kiria municipality to set up their innovation platform. This innovation platform consists of 196 members (31 women) derived from six villages. Twenty-two village cluster representatives (two women) were elected to the municipal level platform executive body. DryDev also supported other innovation platforms in convening their planning workshops at the village cluster and municipal levels. These workshops generated the 2016 CAPs for each platform. Activities were planned at the cluster level, though peer to peer training were planned to be implemented at the village level. Participation in the planning sessions included platform representatives, local technical services, local officials, and traditional authorities.
- In Aguié, the planning sessions drew significant interest from the communities, with 222 people participating in the sessions. This interest translated into action immediately thereafter when two village clusters organized massive collective work sessions clearing *Sida cordifolia* from their pasture areas and cattle corridors (cf. activity area 1.3).
- The programme provided training to and support for innovation platforms in developing value chains (inputs and marketing) and animation of platforms. A total of 123 members (24 women) of the Torodi, Dogon Kiria and Malbaza platforms received training in management of community associations and management of financial resources. Further training was provided to all five platforms on the roles and responsibilities of platform actors, and mechanisms for monitoring and feedback of information. A total of 100 people participated across the five platforms, including platform active members (farmers and innovators) and designated members (local authorities and technical services) as well as other local actors (traditional leaders, business persons and transport services). DryDev also provided training and support for innovation platforms in the identification, characterization, and selection of farmers' innovations. Three-day innovation platform workshops were held in each of the five municipalities, attended by a total of 132 members (29 women). The objectives of these workshops were to characterize the existing selection of innovations (identified in 2014), and to define the actions to be undertaken by all stakeholders to develop and exploit the value of each innovation. The outputs from these workshops were used define the learning priorities for the platforms, that will contribute to the development of participatory action learning activities.

6.3.7 Work Package 7: Planning, M&E and Scaling of Learning

- **Activity Area 7.1: Program monitoring.** Preparation of the country programme included the mapping of 33 sub-catchments (in the five municipalities) for intervention. Half of these sub-catchments covered existing village clusters established within the platform's organizational configurations, and the remainder constitute new intervention zones where village clusters will be identified for inclusion in the platforms and action planning in 2016. As mentioned in WP1, DryDev partners relied on the local technical services to help collect data for the characterization of the new sub-catchments, as part of the baseline study. This work remained unfinished at the end of the year after encountering difficulties in obtaining certain data, such as the cattle population per sub-catchment, for which records do not exist. The DryDev staff were trained on how the monitoring of farmer interventions would be implemented. However, the short duration of 2015 operation (due to late arrival of funds) made for fewer interventions being implemented.
- Activity Areas 7.2 (Participatory M&E with FOs, IPs and stakeholders) and 7.3 (Scaling of evidence and learning) were not addressed in 2015.

6.3.8 Work Package 8: Policy Analysis & Influencing

No specific activities were undertaken in this work package. However, it is worth noting that the conflict management forums described under WP1 have positively influenced the enforcement of policy concerning the management and prevention of conflicts arising from the use of available natural resources.

6.4 MALI

The DryDev Programme in Mali is implemented by four non-governmental organizations, namely,

- Sahel Eco, as the National Lead Organization (NLO) and also implementer in the region of Mopti
- The Malian Association for Public Education and Protection of the Environment (AMEPPE) implementing partner for the region of Segou
- The Malian Association for Awareness Raising and Sustainable Development (AMEDD) implementing partner for the region of Sikasso
- OXFAM America for the implementation of work packages 4 (Enhancing market access) and Work Package 5: (financial services linking) in all the intervention sub catchments.

These four implementing partners are supported by government agencies which provide strategic and relevant services in the country, such as the Agency for the Environment and Sustainable Development (AEDD); the National Directorate of Water and Forests (DNEF); the National Directorate of Agriculture (DNA); and the Institute of Rural Economy (IER).

The year 2015 was marked by few field activities in Mali, mainly due to late arrival of funds, which was followed by a lengthy process of establishing the necessary contractual agreements between the various parties. However, despite this slow start of the Implementation Phase, the Mali team is confident that a solid ground work was laid which will lead to better performance of the programme in 2016 and later years.

6.4.1 Work Package 1: Sub Catchment Level Natural Resources Management

- **Activity Area 1.1: Sub-catchment management plans development.** The Mali Programme team formulated an Integrated Water Resources Management (IWRM) approach for mobilising the local stakeholders in the targeted sub-catchments to develop and implement sub-catchment level natural resource management plans (NRM). The community visioning and action planning (CAP) process, which was carried out in 2014 in 52 villages in the 10 sub-catchments targeted by the programme, was seen as a good start of the IWRM process as it permitted the identification of options for the programme intervention.
- No other activity area was addressed in Mali, under this work package, in 2015.

6.4.2 Work Package 2: On-farm Water and Soil Management

The activities implemented in 2015 under WP2 included the identification of intervention options that are tailored to the needs of the different groups of farmers in each sub-catchment and community. This was done through the CAP process. The options that have been prioritised for the intervention under WP2 are on-farm water management, compost production, Methods of striga¹⁷ control, fodder cultivation, water saving, stone and earth bunds, zai pits, micro-dosing, and grafting of balanites trees. Learning priorities identified through the CAP process will be consolidated at the national level. With assistance from ICRAF, the DryDev team will design farmer-led learning activities and protocols that will be discussed with volunteer farmers who will implement the farmer-preferred and prioritized options in 2016.

- **Activity Area 2.1: On-farm rain water harvesting promotion.** Four partner staff, who are involved in DryDev implementation in Mali, participated in a practical training on rainwater harvesting technologies which was held in Dire Dawa in Ethiopia. This training was part of the international symposium on Rainwater Harvesting & Resilience held in Addis Ababa from June 5th to 11th June 2015. The training aimed at sharing knowledge, experiences and skills with

¹⁷ A pink-coloured parasitic weed common in cereal fields, especially under low soil fertility

experts and practitioners on rainwater harvesting technologies, through discussion forums, practical demonstrations, field tours and exercises. The training covered various subjects on design and dimensioning of varied rainwater harvesting, irrigation and WASH technologies. The knowledge acquired will be useful for the implementation of activities under work package 2 dealing with on-farm water & soil management.

- No other activity area was addressed in Mali, under this work package, in 2015.

6.4.3 Work Package 3: Agricultural Commodity Production

- **Activity Area 3.1: Promotion of climate smart agricultural production.** The Programme team in Mali supported three women vegetable production groups. One women group, in village of Kanian in the sub-catchment of Kondala in the district of Tominian, was supported by way of strengthening the garden fence, repair of their solar water pump and donation of an assortment of small ploughing. Two vegetable production gardens in the village of Sanogo (membership of 51 women) and in the village of Cinzana (membership of 30 women) were assisted by the programme by way of providing solar water pumping system and strengthening of a garden fence. Six-hundred seedlings of Moringa and 300 seedlings of henna were planted to reinforce the fences and protection of the vegetable gardens of Endé Ogodengou, Endé Guinékinda, Kani-Komolé, Kani-Bonzon, d'Endé Ouo et Sadia dogon which have been established by DryDev project during the Inception Phase of the programme.
- **Activity Area 3.3: Improved input supply system.** The DryDev programme provided an initial support to 132 vegetable growers (90 women) in four villages (Ogodengou Ende, Ende Guinékinda, Kani-Komolé and Kani-Bonzon) in the region of Mopti. Improved vegetable seeds (300 kg of potato, 250 kg of shallot, 37 boxes of onion, six boxes of tomato, six boxes of cabbage, three boxes of lettuce and three boxes of carrot) were provided by the project to introduce the farmers to the use of the new varieties of these vegetables and enable the farmers test their performance under their conditions.
- No other activity area was addressed in Mali, under this work package, in 2015.

6.4.4 Work Package 4: Enhancing Market Access

No specific activity was carried out under work package 4 in Mali during 2015. However, the visioning process identified, as priorities options, fattening of goat, sheep and pork, yellow sweet potato conservation and processing, market identification and analysis for sesame products and by-products, local products (forestry and agriculture). The implementation of these options and learning priorities will start in 2016.

6.4.5 Work Package 5: Financial Services Linking

- No specific activity was carried out in Mali, under work package 5.

6.4.6 Work Package 6: Local Governance & Institutional Strengthening

- No activity was carried out in Mali, under work package 6.

6.4.7 Work Package 7: Planning, M&E and Scaling of Learning

- **Activity Area 7.1: Programme monitoring.** In April 2015, the DryDev team in Mali delineated 15 sub-catchments for programme interventions, from the 15 catchments which were characterised by the biophysical studies. However, the final interventions sites for DryDev Mali were later revised, following more detailed analyses and discussions with ICRAF scientists from Nairobi that backstopped the Mali team. The initial 15 sub catchments targeted during the characterisation study were reduced to ten. Comparison sub-catchments were also delineated for each intervention sub-catchment. The Mali team held a workshop in August 2015, which was facilitated by ICRAF staff, to develop a common understanding of the approaches to be used in

the implementation and harmonization of approaches. The workshop also initiated the development of the framework of Planning, Monitoring, Evaluation and Learning (PMEL) and revised the procedures for program coordination and administration. The work plans for 2015 were revisited, targets developed and the concept of Options by Context was introduced.

- **Activity 7.2: Scaling of evidence and learning.** The CAP process was carried out in 52 villages out of 83 villages targeted for DryDev intervention. The process started with a review of the guideline developed by ICRAF titled “Community Visioning and Action Plan”. The review of the visioning/CAP guideline indicated that most of the steps and data required for the process had been covered during the characterisation studies and the elaboration of the country business plan and programme implementation plan. The main gaps were identified as:
 - The analysis of the livelihoods of communities carried out by the characterisation study was too general.
 - Lack of wider community level feedback on options developed by the representatives during the planning process.
 - Lack of prioritisation of the options/interventions to be implemented by the DryDev programme according to the needs of the different groups of farmers. The characterization study had generated a long list of options that needed to be prioritised according to the needs of the different groups of farmers.
 - Learning priorities were not clearly stated
 Based on this review, participatory tools (resources mapping, analysis of livelihoods differentiated by gender and wealth groups, prioritisation of the options and learning priorities) were designed by the programme coordination team to facilitate the finalization of the CAP elaboration.
- The DryDev’s baseline study was conducted in Mali from 26 October to 22 November 2015 in the ten sub-catchments targeted by the programme, as well as in the comparison sub-catchment. Data collection covered a total of 1,000 households, with 440 households (44%) from the programme’s intervention sub-catchments and 560 households (56%) in comparison sub-catchments.
- Seven persons involved in the programme implementation benefitted from training on AKVO platform, which allow project staff to easily share programme information and stories online.

6.4.8 Work Package 8: Policy Analysis & Influencing

- **Activity Area 8.1: Favourable policy for small producer groups.** The Mali country coordination team participated in the activities of the network known as “Advocacy network for the security of farm land tenure” (RP- Sefa Mali). The objective of this network is to contribute to improving the resilience of small family farms through land security. In 2015, the network organised meeting with the Council of Local Authorities to present their views on the newly formulated “Agriculture Land Law” which was adopted by the government of Mali in 2015. The objective of this meeting was to raise concerns over some articles of the law (which were seen to be unfavourable to small farmers) before the law is voted by the national assembly. The council is one of the eight institutions of the Republic of Mali which plays a consultation role in all issues relating to the local and regional development, environmental protection and improvement of the quality of life of citizens within the communities. Sahel Eco will seek to strengthen its participation in this network and other relevant organisation for the implementation of the work package on policy analysis and influencing.

6.5 BURKINA FASO

The DryDev Programme in Burkina Faso is implemented in six selected sub-catchments within six provinces, namely, Bam, Passoré, Sanguié, Sourou, Yatenga and Zondoma. Apart from coordinating the overall implementation of the programme in the country, the national lead organization (Réseau MARP) has responsibility for the delivery of work packages 2 and 3. The delivery of WP1 and WP8 are under the responsibility of Tree Aid, while SNV lead on the delivery of WP4, WP5 and WP6. Technical backstopping of the project at country level is provided by two strategic public institutions, namely, the Institut National de l'Environnement et de Recherches Agronomiques (INERA) and the National Secretariat for Integrated Water Management. At the grass-root level, the programme is supported by local organizations contracted by the three Implementing Partners.

Burkina Faso was significantly affected by delays in establishing contractual agreements with implementing partners, as well as in recruiting and inducting new staff to oversee the implementation of DryDev agenda in the country. This led to little progress being made in implementing most programme activities in 2015.

6.5.1 Work Package 1: Sub Catchment Level Natural Resources Management

- **Activity Area 1.1: Sub-catchment action plan development.** Consultations were held between RMARP and ICRAF to proceed with the selection of the programme intervention sites in Burkina Faso. Six sub-catchments were identified and delineated, including programme intervention sites and comparison sites. This enabled the country to select relevant intervention and control sites following recognition visits carried out by jointly by RMARP and ICRAF staff.
- No other activity area was addressed, under this work package, in 2015.

6.5.2 Work Package 2: On-farm Water and Soil Management

- **Activity Area 2.1: On-farm rain water harvesting promotion.** Five members of the country team participated in the practical training on rain water harvesting that was held in Dire Dawa, Ethiopia
- Activity Areas 2.2 (On-farm agroforestry promotion) and 2.3 (Soil conservation and fertility management) were not addressed in 2015.
- **Activity Area 2.4: Small scale irrigation.** The programme assisted 322 farmers (267 women) in developing/renovating wells for small irrigated vegetable production (see Activity 3.1 for details).

6.5.3 Work Package 3: Agricultural Commodity Production

- **Activity 3.1: Promotion of climate smart agricultural practices.** The DryDev team conducted an identification of vegetable garden sites in the six targeted intervention provinces. Four sites were then selected for the implementation of vegetable gardens in four villages, namely, Kyon (in Sanguié province), Kiembara (Sourou province), Boulounsi (Yatenga province) and Loagha (in Bam province). Each site, which was fenced out with chicken wire, covered an area of about 0.5 hectares. A total of 322 farmers (267 women) benefited from this intervention.
- Activity Areas 3.2 (Promotion of farmer-led extension systems) and 3.3 (Improving input supply systems) were not addressed in 2015.



Figure 6.8: A vegetable nursery of Boulounsi village, Yatenga Province

6.5.4 Work Package 4: Enhancing Market Access

- **Activity Area 4.1: Building country capacities in market systems and value chains analysis.** Promising value chains were identified and verified with the farmers. An operational strategy for WP4 was drafted, with activities to be carried out in 2016.
- Other activity areas under work package 4 were not addressed in 2015.

6.5.5 Work Package 5: Financial Services Linking

No activities related to work package 5 was carried out in Burkina Faso in 2015.

6.5.6 Work Package 6: Local Governance & Institutional Strengthening

No activities related to work package 6 was carried out in Burkina Faso in 2015.

6.5.7 Work Package 7: Planning, M&E and Scaling of Learning

- **Activity Area 7.1: Programme monitoring.** The Burkina Faso PMEL officer participated in the PMEL workshop organized by ICRAF in September 2015 in Niger. The purpose of this workshop was to discuss the PMEL framework developed by ICRAF and the finalization of sub-outcome and output indicators to track programme progress. The Burkina monitoring and evaluation plan is still under development, as at end of 2015. Indicators for work packages 1, 2, 3, 7 and 8 were identified based on the standard indicators proposed by ICRAF monitoring and evaluation experts. Additional relevant indicators were also proposed by the country team. However, indicators for WP 4, 5 and 6 that fall under the responsibility of SNV were not yet developed by the time of reporting, as SNV was not comfortable with the indicators that had been proposed. With the effective establishment of its programme team, it is expected that this stalemate would be ironed out promptly in early 2016.
- **Activity Area 7.2: Participatory M&E with FOs and local stakeholders.** Meetings of the country IPs were held between July and November to reflect on the programme implementation strategy. These consultations aimed at presenting the CAP process and the various stages of its development to partners and agreeing on the steps to be taken. A strategy document describing the different stages of the CAP process was developed and validated by the various partners. A two-day induction workshop was then organized in December 2015 to familiarize field facilitators with the CAP process and its data collection tools. Twenty one (21) participants including implementing partners, field partners, technical services and officials from the municipality of Kongoussi, attended the workshop. This latter workshop was followed by a field process in five communities (Loagha, Bognam, Bognam Fulani, Sakou Sakou and Fulani), which involved the mapping of community resources, farmer livelihoods strategies, socio-economic categorization of farmers, setting community vision. Priority options and farmer learning priorities were identified through the CAP process. A total of 1,108 community members (443 women) participated in the CAP processes.



Figure 6.9: Facilitation of the CAP process in the village of Sakou

- The ICRAF team facilitated a workshop in August 2015, attended by the staff of the programme implementing partners (IPs) in Burkina Faso, to develop familiarity with the "Options by Context" approach and its tools, as well as get acquainted with the programme coordinating procedures. Each IP also shared their strategy for implementing the work packages under their responsibility.
- **Activity Area 7.3: Scaling of evidence and learning.** ICRAF provided lead and technical guidance in the design, data collection and analysis on the baseline parameters in DryDev intervention areas. Some 1,500 households in the target sub-catchments were surveyed.

6.5.8 Work Package 8: Policy Analysis & Influencing

No specific activity was carried out under this work package in 2015.