

Mid-term Evaluation SNV programme 2007-2015

**In-depth study of SNV's support to the
fruit value chains in Ethiopia**

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The present report is part of a series of four in-depth studies that have been conducted under the responsibility of ACE Europe, commissioned by IOB. The four in-depth studies are part of the IOB mid-term evaluation SNV programme 2007-2015.

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Hannelore Beerlandt (IDIS)
Belgium, August 2013

Acronyms and abbreviations

AA	Assignment agreement
AJ	Africa Juice (private company – processor)
ARD	Agriculture and Rural Development
APHC	Arbaminch Plant Health Clinic
B2B	Business to business
BDS	Business development services
BOAM	Support to Business Organizations and Access to Markets programme
CBE	Commercial Bank of Ethiopia
CD	Capacity development
CG	Coordination group
Coop	Cooperative
CPO	Cooperative promotion office/ officer
DA	Development agent
DAC	Development Assistance Committee (OECD)
DARD	Department of Agriculture and Rural Development
DSA	Daily subsistence allowance
EHDA	Ethiopian Horticulture Development Agency
EKN	Embassy of the Kingdom of the Netherlands
ETB	Ethiopian Birr (EUR 1 = ETB 3.8)
FMC	Fruit and marketing cooperative
FO	Farmers' organization
GA	General Assembly
GG	Goma Gofa zone
GIZ	Gesellschaft für Internationale Zusammenarbeit (Germany)
ICCO	Interchurch Organization for Development Cooperation (the Netherlands)
ID	Institutional Capacity Development
IOB	Policy and Operations Evaluation Department (the Netherlands)
JICA	Japan International Cooperation Agency
KHC	Kale Heywet (Word of Life) Church
LCB	Local capacity builder
MSEDA	Medium to Small Enterprise Development Agency
MoU	Memorandum of Understanding
MSP	Multi-stakeholder Platform
OD	Organizational capacity development
OVOP	One Village One Product programme (JICA)
PPD	Primary process days
PPP	Public–private partnership
PSD	Private sector development
SEAF	Small Enterprises assistance Fund
SME	Small and medium enterprises
SIP	Strategic Intervention Plan
SNNPR	Southern Nations, Nationalities and Peoples' Region
TOT	Training of trainers
VC	Value chain
VCD	Value chain development

Value chain concepts

Business to business (B2B) – describes commercial transactions between businesses, meaning that a business is not providing services or goods to the final consumer/ beneficiary but to another business. In this case study, it refers to business between cooperatives and private actors or between private actors.

Contract farming – is agricultural production carried out according to an agreement between a buyer and farmer(s), which establishes conditions for the production and marketing of a farm product or products. In a traditional way of contract farming, the farmer agrees to provide established quantities of a specific agricultural product that meets the quality standards and delivery schedule set by the purchaser. In turn, the buyer commits to purchase the product, often at a predetermined price. The contract can be formal or informal. In some cases the buyer also commits to support production, for example, by supplying farm inputs (sometimes on credit terms included in the contract), by preparing land, by providing technical advice and arranging transport of produce to the buyer's premises. In this case study, the latter is referred to by SNV as 'inclusive business'. Apart from the named services, the term inclusive business can also mean that the contract does not include the price at which the product will be sold to the buyer; price is set at the time of the sale, based on the current market price. For producers, the possible benefits of contract farming include: an assured market, a minimum price and access to support services. Indirectly, producers also gain a stronger market position because they have a reference market channel where they can sell their product anyhow. Mostly, this also functions as an incentive for cooperatives to improve the quality of their produce because this is required by the processor. The system also benefits buyers who are looking for assured (timely) supplies of produce of certain quality for resale or for processing. Processors are among the most important users of contracts, as they wish to ensure full utilization of their plant processing capacity. The better farmers are organized (for sales) and the better the local enabling environment (roads, collection centres, coolers), the more interesting the concept is for buyers as a way to reduce transaction costs.

Outgrower scheme – This is a specific form of contract farming that links farmers to a large farm or processing plant that supports production planning, and provides input supplies, extension advice and transport to farmers, and in which the farmer agrees to supply established quantities of a specific agricultural product that meets certain quality standards and delivery schedule.

Topworking –refers to a way of grafting new varieties on to an existing fully grown tree, by removing the top branches and grafting scions of new varieties onto them. In this case study, topworking has been introduced for mango. Topworking for mango allows for new varieties to skip part of the tree growth phase and to produce fruit after two years, and makes it easier to spread the harvest of the fruit of one tree over several seasons. Shortening the time between grafting and harvesting mango is an important issue for most farmers as they are reluctant to replace their mango trees with new varieties because of the loss of harvest for some years.

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1 Introduction

- ¹ ACE Europe has been commissioned to carry out four in-depth studies as part of the SNV programme evaluation conducted by the Policy and Operations Evaluation Department (IOB) of the Netherlands Ministry of Foreign Affairs. This report presents the evaluation of SNV's support to fruit value chains in Ethiopia, which was carried out between June 2012 and May 2013.

1.1 OBJECTIVES OF THE EVALUATION

- ² The general object of this evaluation is the subsidy provided by the Netherlands Ministry of Foreign Affairs to SNV for the implementation of its programme 2007–2015. More specifically, the object of the evaluation is the subsidy provided during the period 2007–2011, since the original subsidy agreement was drastically revised in January 2012 and was replaced by an adapted agreement.
- ³ The original agreement called for an external independent evaluation in 2011, for which IOB would be responsible. The evaluation is based on SNV's original subsidy application and how this unfolded in the subsequent strategic plans (2008–2009 and 2010–2012). The evaluation is expected to inform SNV's strategy and to shed light on how well the programme is being implemented, how well SNV is performing and how effective SNV's support is.
- ⁴ The evaluation has two purposes. First, to account for the subsidy received by SNV, and second, to learn from the experiences gained during the programme's implementation. The evaluation examined a sample of 12 programmes, selected after an evaluability study that took place in 2011, focusing on three sectors in which SNV will continue to work: agriculture, renewable energy, and water, sanitation and hygiene (WASH). Eight programmes would be assessed based on a document study, and four would be subject to an in-depth study. This report presents the in-depth study of one programme, namely SNV's support to the fruit value chains in Ethiopia. The results of the four in-depth studies will contribute to the final evaluation report to be drafted by IOB.
- ⁵ According to the ToR, the in-depth studies were to shed light on SNV's **way of working** and **effectiveness**¹ in terms of: 1) the capacity development of its clients, 2) the related quantitative and qualitative changes in the outputs of its clients, and 3) the changes in poor people's access to services and products, and how this was affected by the outputs of SNV's clients. The evaluation also measures **efficiency** but only in terms of SNV's input–output ratio, and assesses the costs of SNV services in relation to the results achieved regarding its clients' capacity development and outputs.

¹ Effectiveness will not be studied at the impact level (e.g. changes in the socioeconomic status of the ultimate beneficiaries) in the four in-depth studies as this would require efforts beyond the scope of this evaluation. Impact information will thus only be included as far as reliable information is available from earlier evaluations of SNV activities and relevant international research

1.2 SUBJECT OF THE EVALUATION

- ⁶ The subject of the evaluation is the SNV's subsidy application 2007–2015, the overall objective of which is to contribute to poverty reduction. SNV is '*dedicated to a society where all people enjoy the freedom to pursue their own sustainable development*'. The core of SNV's strategy is to develop the social capacity of actors at different levels so they can take measures to reduce poverty themselves. SNV defines capacity as: '*The power of a human system (be it an individual, organization, network of actors, or a sector) to perform, sustain and renew itself in the face of real-life challenges. It is about empowerment AND impacts. They go together.*'
- ⁷ To achieve its overall objectives, SNV's strategy for 2007–2015 included the following central elements:
- *Meso-level organizations* are SNV's core category of clients because, according to SNV, they play a key role in reducing poverty in a sustainable manner and in improving the living conditions of the poor. SNV provides its support through advisory, knowledge and facilitation services such as roundtables. As a rule, SNV does not provide financial support to its clients.
 - SNV emphasizes *impact orientation*. This implies that SNV focuses its capacity development services more sharply on specific sectors and subsectors. As a result, SNV's programme 2007–2015 was more concretely defined in terms of better access to basic services (BASE) for the poor and increased productivity, income and employment (PIE) for the poor.
 - Another key element is *localization*. SNV is committed to providing capacity development services, but also to helping to improve the enabling environment for capacity development. This strategy is shaped through: a) subcontracting advisory work to local capacity builders (LCBs); b) creating local capacity development facilities (LCDFs) that seek to improve demand–supply–financing dynamics for local capacity development; and c) the professionalization of LCBs through cooperation, knowledge brokering/networking, and learning and training events, in order to improve the quality and outreach of their services.
 - *Governance for empowerment* is a critical concept in all SNV's work. With this approach, SNV seeks to realize changes in power relations in order to expand the assets and capabilities of poor and marginalized people. Such an expansion would allow the poor to participate in, negotiate with, influence, control and hold accountable the institutions, policies, values, relations and processes that affect their lives.
 - SNV seeks to align its country programmes with national development strategies and agendas. It also aims to bridge the *micro–macro divide* that often hampers development efforts. SNV encourages linkages between national, meso-level and local actors; supports the involvement of local actors in changing and shaping national development agendas; promotes the generation, analysis and sharing of information about local realities; and fosters the development of implementation approaches at field level. This is all done to ensure that micro-level realities are taken into account in the formulation of macro-level policies, and that promises made at the macro level lead to concrete local results.
 - Among the range of capacity development services and products that SNV provides to clients, the facilitation of *multi-stakeholder engagement and processes* (MSPs) is often a central ingredient. It is assumed that these MSPs make other capacity development services and products effective. This service comprises various advisory roles and

approaches to clients that tend to evolve and change over time during a process of facilitation. Facilitating an MSP may involve and combine a number of elements, including information brokering, deal making, convening, negotiation, conflict resolution, financial brokering, moderation, coaching and introducing innovations. SNV's facilitation is assumed to stimulate improvements in the dynamics of the multi-actor client system and thus to contribute to the production of targeted results. However, SNV never facilitates MSPs as if they were their own programmes, but on the basis of emerging dynamics, collaboration and consensus in the domestic system.

- 8 In its 2007 policy framework, *Managing for Results 2007–2015*, SNV set out its results chain, which is organized into three different levels: outputs (services provided by SNV), outcomes (performance of clients as a proxy for changes in their capacity and the policy environment) and impacts (changes at the level of poor people). During the evaluation process, IOB and SNV agreed on the results chain shown in Figure 1.

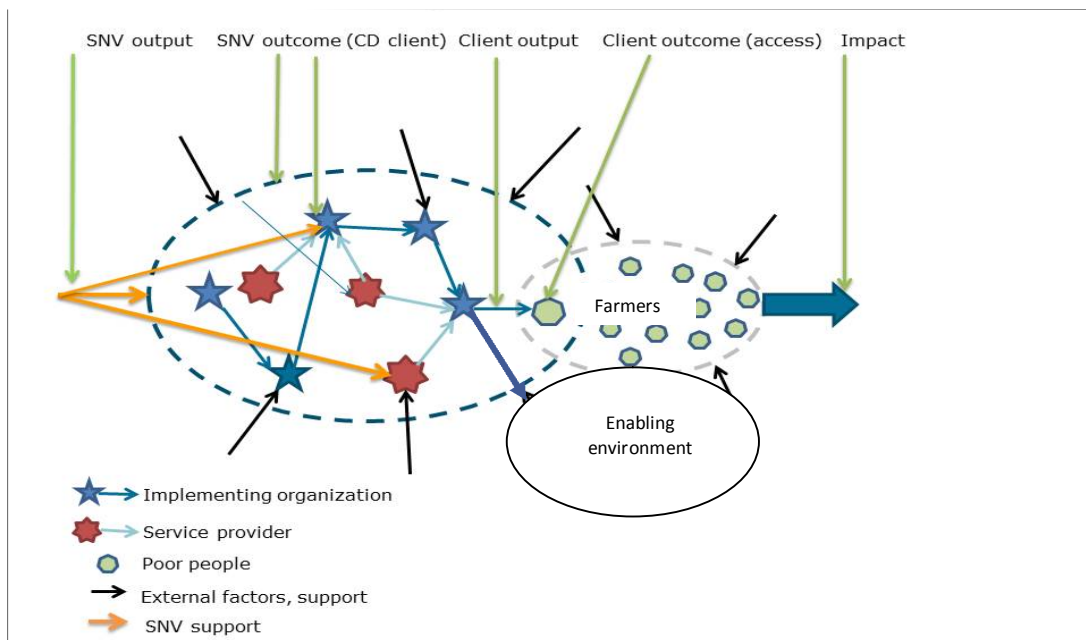


Figure 1. SNV's results chain.

- 9 Within the framework of capacity building, SNV chose to focus its support on two areas, organizational strengthening and institutional development. SNV aimed to provide demand-driven and client-centred services. SNV categorized its ways of working in 2007 by distinguishing four *delivery channels*:
1. advisory services;
 2. knowledge brokering;
 3. advocacy; and
 4. local capacity development facilities.

The in-depth studies assessed in particular the quality, relevance and effectiveness of SNV's advisory services and the knowledge brokering activities.²

1.3 STRUCTURE OF THE EVALUATION REPORT

- ¹⁰ Chapter 2 describes the SNV's Support to Business Organizations and Access to Markets (BOAM) programme in Ethiopia, and Chapter 3 assesses its effectiveness in terms of the (changed) capacity of SNV's clients. Following the requirements in the ToR, the analytical framework of the 5 core capabilities (5CCs) is used where possible to examine how changes in these capabilities have contributed to changes in outputs (in terms of the services delivered by SNV's clients) and to what extent these improved outputs have resulted in improved access of final beneficiaries to these services. The chapter concludes by describing the (internal and external) factors that have influenced these changes.
- ¹¹ Chapter 4 assesses SNV's way of working, focusing on: (i) the identification of clients; (ii) an assessment of its capacity development support; (iii) the level of alignment and harmonization achieved; (iv) an assessment of the strategies and practices for upscaling; and (v) of the strategy for and practice of knowledge development. Chapter 5 presents an analysis of the level of effectiveness in relation to SNV's way of working.
- ¹² Chapter 6 deals with efficiency in three ways: (i) a quantitative analysis of the input–output ratio of SNV's intervention; (ii) a qualitative assessment of the costs related to capacity development outputs; and (iii) the factors that have influenced the level of SNV's effectiveness. Detailed quantitative information regarding efficiency can be found in the annexes.
- ¹³ Finally, Chapter 7 presents the main conclusions of the evaluation, and Chapter 8 provides information about the approach and methodology used in the in-depth study.

1.4 LIMITATIONS OF THE EVALUATION

- ¹⁴ In order to respond to the question of SNV's contribution and the attribution of effects to SNV (the situation with and without SNV), the evaluation used following approaches:
- Evaluation of the direct outputs of SNV's efforts (inputs) in terms of its support to institutional and organizational development and knowledge brokering and development, and the efforts of other programmes and stakeholders. The evaluation also looked at the interest of clients in the support of SNV (at that time).
 - Evaluation of concrete outputs of SNV's clients in terms of their services to their members, performance in the market and lobbying outputs/activities. The absorption capacity of members of clients (the extent to which they are able to integrate services into their businesses/ farms) and results of advocacy have also been considered. The evaluation studied the timelines of clients and their members in order to understand the sequence of

² Advocacy is a minor activity for SNV and is mostly executed at the macro level. LCDFs are implemented in partnership with other local and international actors, and are managed and governed outside the regular SNV organization.

the changes in capacity and the performance of clients and SNV's interventions. The evaluation considered external drivers that have influenced the changes in capacity and the decisions of its clients, in particular the presence of market opportunities or anticipated revenues.

- The evaluation team decided to conduct a household survey among mango and apple farmers in order to assess the outreach of government extension services with regard to fruit tree management and improved varieties, all newly introduced by SNV in the training of trainers (TOT) system, and to assess the extent to which farmers are applying the new techniques.³ The household survey also included questions concerning changes in their production methods, production and sales.

¹⁵ Sources have been continuously cross-checked and information has been triangulated to put inconsistencies in perspective. This was done both vertically (e.g. between members and leaders, between trainers and trainees, etc.; between farmers, model farmers, development agents (DAs), members and leaders of cooperatives, *woreda* agriculture and rural development (ARD) staff, *woreda* cooperative promotion officers, unions and the private sector), and horizontally (e.g. between processors, cooperatives, farmers, DAs, model farmers and *woreda* ARD offices). The conclusions presented in this report are based on an analysis of the triangulated data.

¹⁶ What did not work well during the evaluation was the following:

- The lack of reliable data at the level of the cooperatives and farmers was frequently a stumbling block. Most reports were limited to output level of clients and information was not detailed enough, and not all reports were available. Results chains had to be reconstructed, which was often complex as such result chains are not linear.
- The fact that from the start SNV focused on institutional development rather than on organizational development was another stumbling block. In each value chain SNV supported one coordination group (CG) to promote innovations for its clients, but this was usually not embedded in a long-term organizational support process for the client concerned, although it potentially could trigger further development of the client, as was anticipated by SNV but not necessarily supported by them. The application of the 5CC framework made these organizational gaps at the level of the clients very visible (and provided useful learning opportunities).
- Ideally, the 5CC framework should have been applied at the level of the value chain, rather than at the level of client groups. However, at the time of the evaluation, the interventions and actors were still weakly linked within the chain (although improving) and were supported separately by SNV via test projects identified by clients and approved by the CGs. Thus, in this report, the 5CCs are highlighted by key institution and not by value chain.
- During the survey, SNV's clients did not anticipate spending a full day at a workshop on capacity analysis. Therefore, the analysis focused on the most crucial changes in their capacity (still using a timeline exercise). Information and insights were cross-checked between organizations and with information from client files and existing evaluation reports.

³ For pineapple, the impact on households was rather predictable. A household survey would not have added much information.

- It proved difficult to convince public sector actors to participate in the CG questionnaire survey, so this was replaced by structured interviews with all clients (including public agencies).
- Another challenge was to convince private sector actors to participate in the survey. Those that did participate (Ecopia, Dibabisch, Africa Juice, Kifle Bulo) were contacted twice; once before the interviews with cooperatives, and once afterwards to verify information and ensure that the evaluators' interpretation was sound. Dibabisch, a private investor in the BOAM programme (VC fruit) refused to be interviewed, despite several attempts by the evaluation team and SNV. This gap was filled by discussions with SNV and other CG members and by studying the client files and documents that underpin the process, including a feasibility study, training manual, assignment agreements (AAs) and reports of CG meetings.
- For cooperatives, questionnaires were completed during guided interviews, in order to overcome their capacity gaps for completing a questionnaire. Cooperatives' record keeping was weak and so it was more difficult than expected to retrieve sales data. Reconstruction of sales data was only possible for the more successful cooperatives such as Chench and Lante.
- During the household survey, some farmers could not recall exact production and sales information, so the survey and analysis focused on their perceptions of how these had changed. The enumerators had been trained in ways to cross-check and re-check such information (asking the same questions in different ways, comparing answers to similar questions, etc.). Moreover, all enumerators were trained by *woreda* technical staff so that they would understand the technical aspects of tree management practices and information about new varieties at the farmer level, in order to guarantee that their interpretations were consistent.

2 Brief description of the BOAM programme

2.1 THE BOAM PROGRAMME AND FRUIT VALUE CHAIN DEVELOPMENT

- ¹⁷ SNV's support to the mango, apple and pineapple fruit value chains (VCs) is part of the Business Organizations and Access to Markets (BOAM) programme (2007–2011) to promote private sector development in the Southern Nations, Nationalities and Peoples' Region (SNNPR) of Ethiopia.⁴ From the start, system changes were central to SNV's theory of change, with a focus on joint learning following the introduction of innovations in the value chains, the integration of new techniques in the extension system, joint prioritization among stakeholders and new market arrangements with the private sector for cooperatives.
- ¹⁸ It is important to note that at the start of the BOAM programme, the VC approach in Ethiopia was completely new, private sector development was very limited (and the investment climate also still weak), the connections between stakeholders in the VCs were weak and fruit was not generally regarded as a cash crop. Tree (plant) management techniques and improved varieties were known, but the adapted model and varieties had not been identified and/or had not been promoted or introduced to farmers.⁵ The market demand for the three commodities has been increasing since 2007, especially for apples, and prices have increased steeply.

2.2 SNV'S THEORY OF CHANGE OF THE BOAM PROGRAMME

- ¹⁹ The main challenges identified by SNV for the three fruit VCs included: (i) the limited diversity of market segments, channels and products; (ii) low quality and productivity; and (iii) the limited business relationships and related services provided to farmers and farmers' organizations. SNV's intervention logic, as presented by SNV (shown graphically in Annex 3) is rather complex and connections in the scheme are not always clearly explained, as will be clarified in the text.
- ²⁰ SNV expected to achieve an impact on farmers by improving the quality of fruit, and thus upgrading the value chains. Quality fruit would improve the chances of developing new market arrangements for farmers (between cooperatives and private businesses), breaking the traditional power of middlemen and traders, and thus presumably leading to a better market position and profit for cooperatives and in particular for farmers. To improve the quality of fruit and establish sustainable market relations between cooperatives and businesses, SNV envisaged both functional as well as system changes. SNV adopted a role as the facilitator of the multi-actor platforms and of knowledge development and as a broker for market relations between the private sector and cooperatives, and as a funder of innovations and training for farmers and members of cooperatives.
- ²¹ First, to address *functional issues*, SNV has promoted three pathways:

⁴ The BOAM programme is financed by EKN and Irish Aid, and not by SNV core funding.

⁵ For apples, some initiatives in Chenchä aimed to integrate community support, supported by the Kale Heywet Church (KHC), which had developed considerable knowledge of apple production.

- Increasing the availability and use of high-quality planting material and promoting better cultivation practices and technologies to farmers in order for them to produce better quality fruit.
- Enabling cooperatives to develop a good market position by strengthening their business planning and management capacity, as well as the negotiation capacity of farmers and their cooperatives.
- Supporting the development of local private actors to create market outlets and a local input market (seedlings, knowledge) for cooperatives and farmers. It was assumed, for all three value chains, that increasing the profit margin for farmers would require increased investments in value-adding processes for fruit (mainly by local processing).

²² Second, SNV envisaged *improvements in institutional cooperation in the VCs* via three coordination groups, one for each commodity. This cooperation was expected to (i) facilitate market and input supply relations in the market; (ii) increase shared prioritization and coordination among stakeholders in each fruit VC; and (iii) create linkages for the promotion and development of viable systems for coordinating and regulating quality services, technologies and inputs.

²³ Third, SNV has supported local capacity builders (LCBs) and the private sector to provide *professional services and inputs* to multi-stakeholder platforms, cooperatives, government agricultural extension offices and farmers.

²⁴ Between 2009 and 2011, SNV's theory of change basically did not change but the focus on specific intervention mechanisms, links in the value chain and services in the VCs increased. From the results chain formulated by SNV in Annex 3, four changes can be observed:

- An explicit choice to test technical or market innovations, identified and approved by stakeholders of the value chains in the CGs. The results of tests of innovations would be shared with a wider audience first within the three CGs and then with other stakeholders (e.g. via the media).
- Private businesses would provide services to cooperatives and farmers to increase the quality of fruit (often under contract arrangements with processors who would train members of cooperatives) and supply inputs to cooperatives (mainly private nurseries).
- Greater attention would be paid to quality control systems and post-harvest management by cooperatives and to promote fruit products/ varieties to consumers.
- A more explicit goal to develop the leadership of the Medium to Small Enterprise Development Agency (MSEDA) to coordinate the value chains.

²⁵ The role of SNV shifted accordingly. First, coaching for the CGs became more important. According to SNV, a key aspect of the role of coach involved continuously exploring emerging opportunities, capacities and 'positive energy'. Second, the role of SNV as broker and facilitator between cooperatives and the private sector became more important (for inputs, training and shared investments).

²⁶ The reconstructed results chain of the BOAM programme for fruit value chains is shown in Table 1.

Table 1. Reconstructed results chain of the BOAM programme for fruit value chains.

Improved position of farmers in the market		Enabling environment	
<ul style="list-style-type: none"> Improved quality of planting material available to farmers Improved extension on husbandry and technologies (including post-harvest) available to farmers 	<ul style="list-style-type: none"> Improved business planning and management of cooperatives Strong negotiating capacity of farmers and cooperatives Relations of cooperatives with processors and retailers have improved Fruit products are promoted Development of local private businesses that absorb supply of farmers/ create employment to farmers (retailers, processors, outgrower schemes) 	<ul style="list-style-type: none"> Contacts between stakeholders and CG facilitated, meetings between stakeholders take place Knowledge, market information and results of tests on innovations are brokered and learning processes facilitated 	<ul style="list-style-type: none"> Pooled competences and internship programmes for young professionals LCBs available for large-scale business development services and technical knowledge in the VC Private input providers more efficient and stable (seedlings)
<ul style="list-style-type: none"> Improved quality of fruit supplied by farmers (and productivity) 	<ul style="list-style-type: none"> Cooperatives can collect and manage fruit supply of their members Cooperatives can explore markets, and set realistic sales conditions More processors and market outlets, investors available for cooperatives 	<ul style="list-style-type: none"> Stable bilateral relations between value chain actors Responsive coordination and prioritization of VC development Discussions of needed policy, systems, regulation of input and output markets among stakeholders 	<ul style="list-style-type: none"> Stable and efficient (local) service and input providers
<ul style="list-style-type: none"> New market arrangements, more profitable for cooperatives and for (more) farmers 		<ul style="list-style-type: none"> Enabling environment for production of quality, investments in the sector and efficient/stable market arrangements for farmers 	

- 27 The BOAM programme developed impact and outcome indicators that were refined following the 2008 mid-term evaluation, and activities and targets have been updated on a continuous basis during CG meetings. The BOAM programme described the expected results as follows:
- A significant percentage of the existing low-quality fruit production is replaced with better, marketable quality production for fresh consumption and processing. The quality assurance and supply system can be sustained to a large extent by private laboratories (pineapple), entrepreneurial farmers (mango) and collaboration among cooperatives (apple). The accompanying required quality services (extension, finance etc.) are provided.
 - Successful marketing arrangements between wholesale traders and farmers' organizations are established, based on quality based pricing and with embedded⁶ service provision.
 - New market segments/products have been developed with marketing systems established and successfully replicated.

⁶ Embedded services refer to services provided by private buyers/ processors to cooperatives under a sales contract between the cooperatives and private actors.

- The possibility for the regional Micro and Small Enterprise Development Agency to facilitate the coordination of overall sector development has been explored and private sector associations are emerging.

²⁸ Outcome indicators were defined at different levels:

- Income and scale – Improvements in the annual incomes from fruit production for members of the supported cooperatives, the number of targeted households, and the number of people employed in cooperatives and processors;
- Productivity and quality – Improvements in apple production and the productivity of cooperative members, the percentage of fruit production of better quality, the quality and quantity of fruit supply by cooperatives, the area under fruit production, and the capacity of public extension services in highland areas;
- Coordination – Local coordination groups are steering extension, and collaboration among stakeholders has improved;
- Market development – New market outlets established, local private nurseries as major suppliers of seedlings, new products developed, private business development services (BDS) have increased, additional business to business (B2B) services developed;
- Cooperatives (coops) have developed stronger relations with markets.

²⁹ The evaluators would like to make a few remarks related to this intervention logic and approach (see SNV's original intervention logic, Annex 3).

- The intervention logic is complex because changes at all levels were envisaged, but at the same time it remains vague. Outcomes are changing and are continuously reset by the CGs. The intervention logic also presents a mixture of results chain and intervention mechanisms. Some of the envisaged results did not take place. There is no clear capacity development strategy that underpins the intervention logic. Within the intervention logic, some elements of capacity development are mentioned, but the links between the capacity development activities and results are unclear, as is the link between SNV's role and the capacity development goals. For example, according to SNV's intervention logic, the capacity of cooperatives to explore new markets would be strengthened by market planning, improved 'quality' of fruit, business management and leadership. Yet it is not clear how these aspects would be strengthened by the facilitating and brokering role of SNV, or how these activities/ capacities would help the cooperatives to gain sustainable market access.
- The approach of the programme combines supporting clients to try out innovations (tests) with system development (improving economic relations between value chain actors and the enabling environment). Both of these were expected to trigger the further development of SNV's clients. While it is clear why system development was chosen as an entry point to support the fruit value chains, it is not clear how the outcome indicators could be achieved without paying attention to the further organizational development of its clients. This is particularly relevant when looking at the capacity of cooperatives and of the public extension services.

- The intervention logic and identified challenges do not mention some basic constraints such as the quality of the extension system, top-down priority setting or the influence of power relations on policy making.
- The intervention logic is based on SNV's choices and on implicit assumptions that are not motivated by SNV. For example, SNV's support to organizations to transfer appropriate technologies was limited to support for trainers of trainers (TOTs) who would be able to provide 'fruit quality services'. This would be achieved by providing technical training for these TOTs only. The extension system as such was not questioned, except for the introduction of fruit quality technology.
- It was assumed that by providing technical training for farmers, farmers would apply the techniques. Other assumptions such as that farmers would have the right tools for tree husbandry and for specialised techniques or limited adaptation because of farmers' risk management practices, etc., were not identified.
- The expectation that better quality fruit production would lead to higher prices and higher incomes for farmers is based on an implicit assumption that the cooperatives would pay better prices that would cover the farmers' extra costs of producing quality fruit.

2.3 SNV'S APPROACH AND INTERVENTION MECHANISM

³⁰ In this section the evaluation team provides a pragmatic reconstruction of SNV's approach and intervention mechanism.

- The general approach and intervention mechanism (see Figure 2) of the BOAM programme was to support the capacity of three coordination groups (CGs for apple, pineapple and mango) to: (i) set priorities for VC development focused on innovations; (ii) develop a common understanding of the VC approach; (iii) create a meeting place where bilateral relations between VC stakeholders could develop; and (iv) to trigger changes that would contribute to an enabling environment.
- The programme has promoted capacity development of stakeholders by supporting tests (innovations) in the VCs, including financing of innovations, training and sometimes coaching by SNV. Since 2008, the CGs have selected project concept notes for these innovations. Clients and LCBs can apply for support to these innovative projects; LCBs in particular can apply for projects to support clients with an innovation. The results of the innovative projects are also reported back during the CG meetings.
- Finally, SNV also facilitates LCBs to train farmers and cooperative members, and finances competence and internship programmes for LCBs.

³¹ The approach is market driven, meaning that VC actors are supported to produce/ process fruit that meets market demand; it is the market that dictates quantity, quality and efficiency/ productivity in order to be competitive. SNV promotes (i) cooperation between stakeholders to set priorities, learn and develop policies; and (ii) vertical (economic) integration of the VCs, making sure that input supplies and production are more efficient via cooperation between value chain actors and support services. For the latter, SNV combines a 'push' approach to enable farmers to produce more quality fruit, and a 'pull' approach by creating incentives on the demand side that will encourage farmers to produce more and better quality fruit.

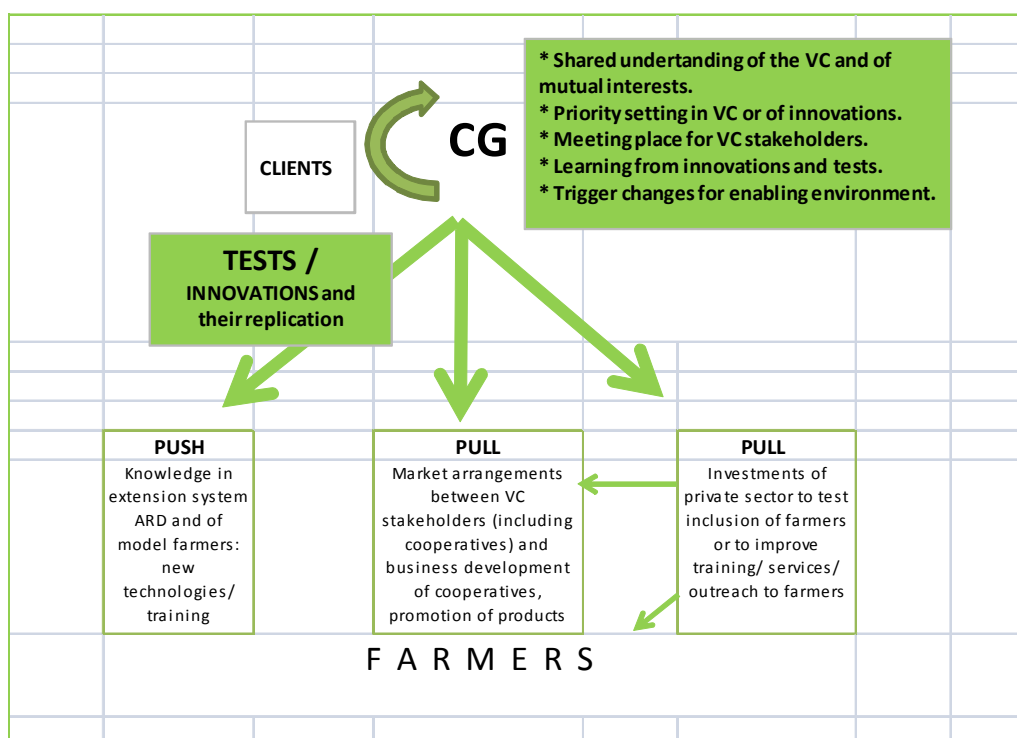


Figure 2. Overview of the BOAM programme setup, 2007–2011.

- Since 2007 the focus of the pull approach has evolved from developing the organizational capacity of cooperatives, to business to business relations (B2B; see list of VC concepts, page 6) and on triggering changes between several actors and at several levels.
- The push approach has involved the introduction of new knowledge to improve the quality or productivity to deliver to markets through the training of trainers (TOT) via the extension system of the agriculture and rural development (ARD) offices⁷ and, more recently, also through services of cooperatives to their members. Before SNV's interventions, the extension system provided no training on fruit tree management. SNV has tried to complement this TOT approach in several ways, such as by providing direct training to farmers and ensuring follow-up by trainers from specialized knowledge institutions. In principle, the *woreda* ARD offices target all farmers through the extension system. Their monitoring data are based on extrapolations (based on the assumption that the TOT system works perfectly).

³² SNV's client constellation is a combination of institutions and interventions at the macro level (coordination groups), at the meso level (value chain actors and supporters) and at the micro level (direct training to (model) farmers to complement the TOT system of the ARD offices). SNV has supported the following clients (see Figure 3):

- *Coordination groups* (CGs) in each of the mango, pineapple and apple value chains.
- *Cooperatives* – nine for apple, six for mango and two for pineapple – although support to pineapple cooperatives has been very limited. The stronger cooperatives (one for apple

⁷ *Woreda* staff train development agents (DAs), who then train model farmers, and who then train other farmers.

and four for mango)⁸ received support to develop their businesses and stable, rewarding market outlets.

- *Agricultural and rural development (ARD) offices* that provide extension services (including development agents, DAs, who work in the field with model farmers) to improve their capacity to train other farmers on fruit tree management and to distribute seedlings of new fruit tree/ plant varieties.⁹
- *The Medium and Small Enterprises Development Agency (MSEDA)* to train and coach small processors and to coordinate the CGs.
- *Private sector organizations* – to improve the efficiency of their commercial links and services to cooperatives or farmers (processors, investors, retailers) and to provide improved planting material (private nurseries and laboratories).

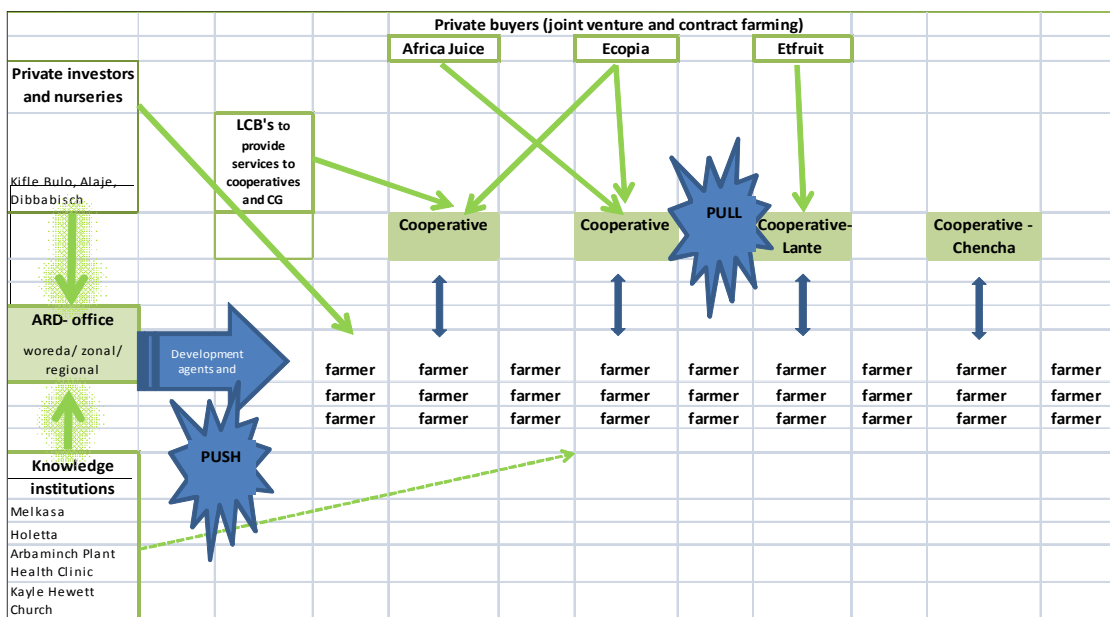


Figure 3. Overview of SNV’s clients (and links between them) to support fruit VCs in Ethiopia.

To assist understanding of the three fruit commodities, the evaluation team has further divided SNV’s support into four categories: (i) productivity; (ii) the enabling environment; (iii) market development; and (vi) quality improvement; see Table 2.

⁸ The strongest cooperatives are: ‘Lante cooperative’ for mango and for apple: ‘Chencha cooperative’.

⁹ Specialized institutions have been involved to train *woreda* ARD staff or to train farmers directly or to identify appropriate improved plant material (by Melkasa Research Center and Arbaminch Plant Health Clinic for mango, Kale Heywet Church and Holetta research for apple).

Table 2. Components of SNV's support to fruit value chains in Ethiopia, 2007–2011.

	Apple	Pineapple	Mango
Component 1: productivity improvement	<ul style="list-style-type: none"> • Training on tree management for development agents (DAs) and farmers and for cooperatives, including development of manuals and posters • Introduction and promotion of new varieties at <i>woreda</i> and farmer level 	<ul style="list-style-type: none"> • Training of farmers on management of improved variety • Introduction of plantlets of improved variety 	<ul style="list-style-type: none"> • Training DAs and model farmers on the introduction of improved varieties via topworking and distribution of tools • Training model farmers on tree management and disease and pest management (cultural methods), + manual
Component 2: enabling environment and knowledge of the sector	<ul style="list-style-type: none"> • Capacity development of MSEDAs to coordinate value chains • Establishment and facilitation of CG apple and bilateral public-private partnerships (PPPs) (meeting platform, coordination platform, learning platform) • Establishment of local extension coordination group and taskforce for regulation of apple seedlings (Chencha) • Sector study, market information and market analysis introduced via the coordination group • Research on new varieties of apple adapted to different zones and resistant rootstocks 	<ul style="list-style-type: none"> • Capacity development of MSEDAs to coordinate VC • Establishment and facilitation of CG (meeting platform, coordination platform, learning platform) • Facilitation of initiatives and studies to government to support establishment of new pineapple investors • Sector study, market information and market analysis introduced via CG group • Promotion of tissue propagation for pineapple 	<ul style="list-style-type: none"> • Capacity development of MSEDAs to coordinate the VC • Establishment and facilitation of CG and bilateral PPPs (meeting platform, coordination platform, learning platform) • Sector study, market information and market analysis introduced via CGs • Assessment of the situation of pests and diseases in mango-producing <i>kebeles</i> in Arbaminch
Component 3: market development	<ul style="list-style-type: none"> • Support to private nursery (mist propagator) • Support to cooperatives to supply seedlings to market • Training and coaching of cooperatives for leadership and business development • Brokering linkages between cooperatives and niche market outlets in Addis • Establishment of joint ventures for local fruit processing • Development of new processed products • Promotion of apple and processed products • Local market regulation for trading seedlings (Chencha) 	<ul style="list-style-type: none"> • Promote tissue culture for private nursery • Attracting and facilitation of new investors and link to financial institution • Organizational analysis of cooperatives • Brokering linkages between cooperatives and processors (Etfuit, Etfloa, Africa Juice) and developing new processed products • Training and establishment of small local processors (by MSEDAs) • Establishment of joint ventures for local fruit processing 	<ul style="list-style-type: none"> • Training and coaching of cooperatives for leadership and business development and market study • Brokering linkages between cooperatives and processors with embedded services (Ecopia, Etfuit, Africa Juice) • Establishment of a joint venture for local fruit processing (with Ecopia) • Developing new processed products • Training and establishment of small local processors (by MSEDAs) • Promotion of mango products (website, promotion of new mango variety for consumers – after 2011).
Component 4: quality improvement	<ul style="list-style-type: none"> • Training of DAs, farmers and cooperatives on harvest and post-harvest handling and awareness raising on quality (fruit and seed) • Coaching of Chencha cooperative for development of quality control system • Promotion of new varieties • Contribution to design and finance of a coldroom for cooperatives (after 2011) 	<ul style="list-style-type: none"> • Promotion of improved variety (Smooth Cayenne), multiplication and distribution to farmers 	<ul style="list-style-type: none"> • Promotion of existing improved varieties via topworking • Training model farmers and cooperatives on disease and pest management • Training on harvesting and post-harvest handling, awareness raising on immature picking, tools for harvesting, and trade based on weight • Development of quality system for cooperatives and trade based on weight (not on number of items)

3 Effectiveness

3.1 Assessment of (changed) capacities of clients

- ³³ This chapter describes the changes in the capacity of SNV's various clients that are not necessarily linked to external support from SNV or other agencies. The assessment is based on interviews with these clients and with development agents, on a document review (including client files and reports of CG meetings), on questionnaires (guided interviews) involving 18 cooperatives and CG members, and on the existing evaluation of the pineapple CG (Maastricht School of Management, 2011) and the capacity analysis of the VCs (requested by SNV, 2011). The methodology is described in Chapter 8, and a list of the institutions and individuals interviewed is presented in Annex 2.
- ³⁴ First, this section summarizes the changes in the capabilities of the three VCs (mango, apple and pineapple), and of the following clients: coordination groups, cooperatives, *woreda* ARD offices, MSEDAs and private sector actors. These institutions have been most closely followed up by SNV. The 5CC framework has been applied, although for MSEDAs and private sector actors the evaluation team only screened aspects related to the fruit value chains. The eventual output of the clients and VCs (performance in terms of sales, investments, priority setting and the enabling environment) are presented in section 3.2.

3.1.1 Changes in the capabilities of the three fruit value chains (general)

- ³⁵ The most significant changes in the capabilities of the three VCs are summarized in Table 3, and the changes of each client are elaborated in sections 3.1.2–3.1.6 and in the analysis of the effectiveness of SNV's support in Chapter 5. It has been a challenge to summarize the changes in capabilities of the VC stakeholders using the 5CC framework, given SNV's intervention mechanism (coordination of the VC and testing of innovations via the CGs) and given that SNV has mainly played a role of VC facilitator. The changes in capabilities of the VCs are the result of changes in the capacity of the CGs, and of the individual clients who received funding for innovative projects (or support for their replication) via the CGs. It should be noted that clients were not necessarily supported to develop their full set of organizational capabilities (as explained in section 4.2).
- ³⁶ Table 3 also points to capability gaps, not all of which were explicit organizational development goals of the BOAM programme. Also, many of the gaps could not have been covered in the time period of the programme, given the very infant stage of the fruit VCs at the start. The evaluators find it important to indicate these gaps, however, because some of them have undermined the eventual outputs or sustainability of the output of the clients (see Chapters 4 and 5).

Table 3. Overview of changes in the 5CCs for the three fruit value chains, 2007–2011.

A: Apple; M: Mango; P: Pineapple value chains.

0 = no capacity development expected or no significant results; + reasonable results; ++ good results; +++ significant results that can be translated sustainably in output.

Capability	Rate A	Rate M	Rate P	Main changes/ achievements	Main capacity gaps
Capability to act and commit	++	+	+	<ul style="list-style-type: none"> CG has well developed guidelines and procedures to improve Strategic Intervention Plan (SIP), to select project concept notes for funding CG has a very diverse membership CG has decision power over selection of projects (concept notes) Common goal setting via SIPs for each commodity Increased commitment of private actors to cooperate in the CG and with other stakeholders At the zonal level of Goma Gofa (and other zones in the SNNPR) a specific budget and plan for fruit development is developed. Increasing number of cooperatives have been established in the apple VC (Chencha <i>woreda</i>), increased number of cooperative members for apple and mango 	<ul style="list-style-type: none"> Loose membership of the CG, no stable participation of government decision makers and financial sector Weak commitment of members between CG meetings Very few fruit marketing cooperatives and private actors in the fruit sector in Ethiopia Capacity of CGs to contribute to concrete policy development is still weak. CGs' capacity for advocacy campaigns (e.g. via the media) is not yet developed Executive committee of CG has not been re-elected A full replication strategy is not yet in place for the innovations, or an organizational capacity development plan of key institutions, or a VC plan Priority setting in <i>woreda</i> ARD is top down
Capability to deliver	+++	+++	+	<ul style="list-style-type: none"> Improved knowledge and skills of <i>woreda</i> staff, development agents, model farmers and leaders and members of cooperatives as trainers (of farmers) – for the first time – on improved farming techniques to improve productivity and quality, and for introduction of improved varieties Improved business orientation and business management of the stronger cooperatives, and improved use of internal financial capital Improved awareness among cooperative members of the need to produce quality fruit Improved capacity of the private sector to invest in services for farmers (training, advanced payments) and market arrangements with farmers 	<ul style="list-style-type: none"> CG is dependent on finance and facilitation of SNV(financing meetings) Quality systems of coops start to establish but are not yet well developed Capacity of government for regulating the quality of planting material and fruit is weak (standards, certification, control, certification body) Cooperative members have a weak understanding of price mechanisms Cooperatives do not have access to storage facilities (coldrooms) Cooperatives do not have TOT system in place Private sector willing to invest in services to farmers but have little experience and find communicating with farmers a challenge
Capability to relate	+++	++	+	<ul style="list-style-type: none"> Improved occasion for VC stakeholders to meet, exposure to innovations and to ways and conditions of cooperation between VC stakeholders, exposure to how innovations can be applied in the field Improved capacity for joint reflections on priority innovations and their role in strengthening farmers in the VC Increased access to information on opportunities in the market Improved capacity (of the stronger cooperatives) to explore markets Improved capacity to start bilateral partnerships in the VC 	<ul style="list-style-type: none"> Weak capacity to access financial institutions (by private sector, by cooperatives), weak understanding and relations with financial institutions for fruit VC

				<ul style="list-style-type: none"> Local extension coordination forum in Chencha is functional, brings together relevant local actors and has clear goals 	
Capability to achieve coherence	++	++	0	<ul style="list-style-type: none"> Shared understanding of VC and of mutual interests in VC development Common focus on reaching small holders in the VC Improved trust between cooperatives and private sector Increased number of tests in the VC that involve at least two type of stakeholders (private actor–cooperative–public agency–knowledge institution) Local taskforce to regulate quality of seedlings in Chencha has capacity to discuss and reach consensus 	<ul style="list-style-type: none"> Weak leadership of CG, depends mostly on initiative of SNV. Some cooperatives have originally a weak business orientation (socially oriented, instrument for government) Cooperatives' and <i>woredas</i> capacity to participate in discussions of CG is not fully developed Local coordination between institutions is weak (except for apple) Day-to-day contact and communication between private sector and cooperatives demonstrates difficulties Government's slower speed of transition to VC approach, For the financial sector, fruit VCs are not a priority
Capability to learn and adapt	+	+	0	<ul style="list-style-type: none"> Strong participation of knowledge institutions Results of implementation of innovations are presented in the CG Decisions of CG based on market studies (recently) Chencha <i>woreda</i> ARD office has improved its monitoring system of apple production 	<ul style="list-style-type: none"> Quality of reporting is variable and evaluation of impact weak. No continuous assessment of needs, priorities, satisfaction of farmers, decisions based on market opportunities and results of activities Risk assessment of innovative projects (which of course entail a lot of risks) in CG is rather weak No systematic collection and records on market information Between CG meetings, members of CGs do not exchange knowledge, trends (e.g. on pest and diseases between <i>woreda</i> ARD and Arbaminch plant health clinic) Record keeping of strongest cooperatives has improved but needs further improvement to enable informed decision making

³⁷ A positive trend in the evolution of capabilities can be observed, as illustrated in table 3, especially in the apple VC. The levels of changes are less pronounced for the pineapple VC; the two cooperatives in the intervention area are not fully functional and the capacity of the private investor concerned has only developed slightly. The capabilities that have changed most significantly are: the ‘capability to deliver’ and the ‘capability to relate’, followed by the ‘capability to achieve coherence’ (referring to increased awareness and formulation of common goals in the VC approach, common focus, etc.). The ‘capability to learn and adapt’ and ‘to act and commit’ have also improved compared with the situation in 2007, but there are evident gaps that limit the translation of this capability into clients’ outputs or their sustainability. In particular, the CGs, which play an important role in knowledge sharing and learning, have made only limited progress in its capability to learn. The learning system of the CGs needs further development to guarantee a poverty focus, to collect and use information by themselves, to evaluate impacts, to reconsider assumptions, etc.

3.1.2 Changes in the capabilities of coordination groups

³⁸ **Summary** – Coordination groups (CGs) are (i) new meeting places for value chain actors (per commodity); (ii) platforms with joint reflection on priority innovations and developing experience with innovations; and (iii) platforms where priority projects are selected for funding. Guidelines and procedures have been developed to that end. The discussions and projects have paid a lot of attention (via local institutions) to improving farmers’ knowledge of techniques to improve productivity and quality of fruit to reach better the market demand, on improved planting material and on market arrangements between private actors and cooperatives/ farmers. Diverse and relevant stakeholders are represented in the CGs, except for government decision makers and the financial sector who do not participate on a regular basis. There is no national ‘masterplan’ per VC yet, but the strategic intervention plans (SIPs) are regularly reviewed and adapted by the CGs. The dynamics of the CGs are strong during meetings but rather weak in between (stronger for the apple VC). Some relevant bilateral relations between members are developing from the CG meetings. There are some gaps. It remains difficult to get commitment from the side of government institutions. Farmers’ representatives are not strengthened to participate in discussions with government actors or to lobby in the CGs, so that there is some stereotypical behaviour between private sector and cooperatives.¹⁰ The CGs rely on one source of external funds. ‘Natural leadership’ has not emerged yet, but this is normal as the platforms are young and innovative, particularly in the Ethiopian context, where both private sector development and the investment climate for smallholder horticulture/ agriculture are weak. The CGs do not yet have a strategy on how to replicate the innovations or on how to shape policy. The capacity of the CGs to collect and analyze information is limited to discussions about activities in the projects. Information is not regularly evaluated or systematically analyzed against progress or the emerging needs of farmers.

¹⁰ This does not mean that cooperatives would not participate or express themselves in the CGs, but the way this is done sometimes causes stereotypical behaviour. The same can be said for the private sector.

Capability to commit and to act

- ³⁹ **Organization** – The CGs are informal forums/ networks established by SNV between 2006 and 2008 where actors in the three value chains can meet, share knowledge and experiences, and set priorities for support. The CGs can decide to fund specific innovative projects for participants of the CGs. The goal of the CGs is to improve commitment, information, coordination and innovation in each sector, to trigger policy changes and to create long-term bilateral or multilateral relations between participants (business-related, or for service delivery or investments). The CGs were started from a private sector development perspective but clearly integrated poverty concerns from the start. This is mainly visible in the number of innovations presented and funded for farmers. The CGs have encouraged the participation of farmers' organizations by inviting them (SNV), by using Amharic language and by paying daily subsistence allowance (DSA) to all participants. The CG can be regarded as innovative for the mango and pineapple VCs, where contacts were weakly developed and no platform existed for stakeholders in the VCs.¹¹
- ⁴⁰ **Membership**¹² – There is a good mixture of participants from both the private and public sectors.¹³ All relevant administrative levels (national, regional, local) are represented and the Ethiopian Horticulture Development Agency (EHDA) has recently joined. There is a slight overrepresentation of public institutions (decision makers, service providers, research institutions), which is normal in the Ethiopian context. The increased participation of the private sector (especially in the mango VC) is significant, as is the increased number of participating cooperatives in the apple VC (but not so for mango and pineapple). The Goma Gofa union (GG union) participates in the CGs.¹⁴
- ⁴¹ As the number of CG members increased in 2009–2010, there was a shift in the topics discussed in the CGs towards fruit quality and marketing aspects. This number of participants varies from one meeting to another. There is some overlap in the membership of the three CGs (private companies and public agencies at regional, zonal and national levels), which strengthens the 'embeddedness' of the CGs in these sectors; because of their participation in three CGs they are more exposed to the VC approach and actors, to experiences and dynamics from the field level, and have a wider basis and more confidence to develop their own strategies. Membership is open. It is SNV who actively invites participants. The CGs are not fixed groups. Some members have attended only one meeting to present, for example, their roles or programmes for the sector. There is a loose participation and not all representatives on the participant lists can be regarded as active members. This is also because the VC developments are young. There is a high rotation of representatives, especially for the public sector, and so decision makers are not always present. The chair of the mango CG, for

¹¹ For apple, some relations in the VC existed (driven by the Kale Heywet Church, KHC) but they were not systematic and involved only a very narrow range of stakeholders.

¹² For mango and pineapple the CGs have about 30 members, for apple about 40 members (see list of participants in Annex 4).

¹³ Including research centres, ARD, cooperative promotion office, BDS providers, NGOs/CSOs and associations, farmers' organizations and cooperatives.

¹⁴ The GG union is more active in bananas (for export) than in the concerned commodities.

example, usually sends a delegate to the meetings, in which case it is not clear to whom the CG is accountable.¹⁵

- ⁴² The interests of poor farmers are represented by the *woreda* ARD offices and research institutions and by some of the cooperatives; this is positive and is reflected in the poverty orientation of the decisions taken by the CGs. Both *woredas* and cooperatives show a weak capacity to participate and to represent themselves: both do participate but there is still stereotype behaviour towards them or by them to other participants. Several cooperatives mentioned that they cannot always speak up and express their opinion in the presence of private actors (not limited to one private actor). The GG union represents more progressive farmers.
- ⁴³ Despite the increased diversity and number of participants, there are some weak aspects of the CGs: (i) not all relevant private sector actors are involved yet. (ii) The financial sector is not permanently represented, despite efforts by the CGs/SNV to include them. Some financial institutions participate when there is a specific topic to be discussed (e.g. financing investors in the pineapple CG). (iii) Development agents do not participate and only focal points or sector specialists of the *woreda* ARD offices attend. It is quite normal in the Ethiopian context that this level is underrepresented as the policy structure is still very top down. Also, the capacity of the DAs to participate in such meetings is quite limited. It should be noted that there are many DAs: there would need to be a rotation system in their representation and specific training for them to participate. (iv) There are not many other donor agencies that can be regarded as permanent members of the CGs. (v) The executive committees, which decide on the selection of project concept notes to be funded by the CGs, have not been re-elected since the start. For mango, the executive committee is not fully representative, since it does not include all key knowledge institutes and drivers of the VC.
- ⁴⁴ **Commitment** – The CG participants have a genuine interest in sharing their ideas and experiences during meetings; there are lively discussions and open information sharing. For most participants the DSA is not the prime motivation to attend meetings, except perhaps for some public agencies. The fact that the CGs can decide on funds from BOAM is also not the main motivation to participate. It is the opportunity to meet other stakeholders and to learn of possible solutions for the VCs, which is their main interest. In between meetings, the commitment is weaker and is mainly driven by some private actors (who wish to be connected to cooperatives and to improve the quality of the fruit at the farm level) and by some knowledge institutions (NGOs, research institutes). These stakeholders ‘get stuck’ on the government’s lack of commitment to engage in long-term relationships and to institutionalize some of the CGs’ proposals. The motivation of the *woreda* ARD and cooperatives depends a lot on their own internal coherence and thus varies from one *woreda* and from one cooperative to another. MSEDAs have not yet taken up the role of coordination although it has been supported by SNV to do so. The Ethiopian Horticulture Development Agency (EHDA) has recently joined the CGs, which is promising, but fruit VCs are new;¹⁶ the agency has not yet demonstrated convincing leadership.

¹⁵ Members are often unable to indicate who is the chair of the CG (especially for mango, less so for apple).

¹⁶ The EHDA’s interest in the fruit sector is only recent and is still focused on strawberries and bananas (for export).

⁴⁵ **Strategic plans for the VCs and CGs** – The CGs have a theory of change, albeit rather vague, of how the private sector and a ‘pull’ strategy for farmers can contribute to economic growth and increased incomes for farmers. One positive aspect is that a collective and permanent goal-setting process already takes place in the CGs and this has resulted in the continuous updating of the strategic intervention plans (originally of SNV), which have become ‘living documents’. It is not clear from the theory of change how the CGs can contribute and what their role would be in the long run. There is also no clear strategy (for each commodity) to break trade monopolies/ oligopolies. The strategic intervention plans (SIPs) mainly set priorities for activities. The theory of change does not reflect capacity development for institutions but is related to the delivery of services to farmers/ cooperatives, the participation of cooperatives in market arrangements and relevant investments for the private sector in order to reach more farmers. A global strategic plan for each fruit VC is not yet available, which leaves several questions unanswered, such as how much of which product is needed, who will deliver what, how many coldrooms are needed, who will fund replication at farmers level, etc.? This is normal at this stage of development. The priority setting on the SIPs is already a step in the right direction.¹⁷ One of the main challenges of the CGs is how to translate the tested innovations for more farmers and cooperatives. An institutional plan for what the CGs will become in future (boards? associations?) and how they would be financed is also not yet available. This is also normal for young platforms and given the institutional framework in Ethiopia.

Capability to deliver on objectives

⁴⁶ Guidelines and procedures are in place for the CGs to select projects. SNV has an assignment agreement with the team facilitator of each CG, who invites participants to produce reports, invites regular participants and co-facilitates the meetings. Each CG has an executive committee (five elected members) that is responsible for evaluating concept notes based on a set of criteria (scoring of criteria).¹⁸ The executive committee members are trained on this procedure. Not all CG members know the rules and regulations. There are no other permanent committees in place; the CGs work through ad hoc action groups or taskforces to prepare specific issues for the next meeting.

⁴⁷ The functioning of the CGs is dependent on SNV. This concerns organization of meetings, providing information on the sector (apart from monitoring reports and presentations of members about their activities) and funding of projects. No other donors provide funds to cover any of these organizational costs. SNV has not (yet) developed an exit strategy. It is SNV who takes the initiative to call the CGs together and who suggests the agenda. A detailed agenda is shared with participants before the CG but, according to motivated members, it arrives too late to allow close reading. For the pineapple and apple VCs, the initiative is shared within a tripartite constellation consisting of SNV, the chain facilitator and the CG leader.

¹⁷ Also, MSEDAs have produced 17 VC documents (not all on agriculture), among which also fruit VCs, but these are rather theoretical. Some are already being operationalized by MSEDAs or other agencies, but few of the agricultural VCs (for rural areas) have been operationalized.

¹⁸ They present the reasons for their decision to the CG and ask SNV to take further action. SNV will then start a client intake process, and if this assessment is positive, the ‘client’ can write a project proposal. If SNV approves this, the client will sign an assignment agreement or MoU with SNV.

⁴⁸ The CGs do not meet every three months as foreseen in the regulations, probably because this would be too expensive, but three times a year (for each commodity) for one day, which participants consider insufficient. During the meetings, the executive committee presents evaluations of the project concept notes and progress of BOAM projects, and some members also present their own activity reports. For the apple VC some field visits have been organized (by private sector or service delivery organizations), which have been enriching and motivating for participants.

Capability to relate

⁴⁹ **Internally** – The CGs have functioned as excellent forums for meeting other value chain actors and are recognized for this. For most participants it is the first time they meet other actors and for *woreda* ARDs, it is the *only* place to meet them. The main challenge remains getting the right people from regional and national governments to attend meetings, rather than delegates without decision-making power. Some bilateral or multilateral partnerships/links have evolved from CGs but they rarely involve relations with government institutions. Some positive examples include the links between Africa Juice and the mango cooperatives, Chenchu cooperative with Hawassa University for the design of their coldroom (2012), and Kifle Bulu (a private apple nursery) with Holetta Research Centre, Ecological Products of Ethiopia (Ecopia)/MSEDA. Some expected partnerships (with potential) have not materialized (yet), e.g. between *woreda* ARD and the Arbaminch Plant Health Clinic (APHC). The CG mediates in possible conflicts between cooperatives and the private sector. However, cooperatives mention that they do not always dare to speak freely about these relationships in the CG and that the reaction of the CG is sometimes not timely (too late).

Externally – Many external stakeholders have become members of the CGs. All reports on CG meetings and projects are published on the BOAM website. The CG members have not developed real lobbying campaigns; they are not set up for it and are not trained for it. The context is one of top-down policy making with all levels of government institutions being involved in the CG. However, clear questions for action from the government side are expressed during the CG meetings, such as for market regulation and certification of apple seedlings, and regulations to control the sale of unripe fruit. Some of these issues have been illustrated with evidence from the field but no real lobbying campaigns have been elaborated. Contacts with the financial sector are fragmentary despite many efforts by SNV. The CGs are regularly covered in the media, for promotion or information about the sector, but the media are not used in a particular advocacy strategy/activity.

Capability to learn and adapt

⁵⁰ As well as being meeting spaces, the CGs are also learning and information platforms. There is a strong drive to learn in the CGs. There is a very good involvement of knowledge institutions and innovative private actors. CG members testified about the exposure to new ideas and new possible solutions for the sector. Through granting small, innovative projects and presenting their results, the CGs support learning by doing of several VC actors. There are also constraints that hamper learning, such as:

- Market studies have come late in the process and are not systematically updated. The CGs do not yet have a market information or coordination function, but they introduce and

discuss fragmentary market information (e.g. on new demands or new production of seedlings), which is certainly a step forward.

- Projects lack risk analysis.
- The available information supports so-called first-order learning; it allows learning on what has worked and how, what could possibly work, what has been applied and where. However, there is no evidence that the CGs have a system in place for systematically recording information on changes/ satisfaction/ needs of farmers in the field that can be used for decision making. External constraints in the Ethiopian context (like top-down instructions to the extension system) or the internal weaknesses of government systems are not addressed. Instead, decisions are based on activity reports of clients, new concept notes and general VC analyses of market opportunities.
- The quality of the information and monitoring of projects is variable. Clients have to report on their activities and the results of projects, and this is used for the formulation of potential future concept notes by the same clients. Some clients, such as the Arbaminch Plant Health Clinic, have gone further in their reporting and include results at the farmer level. The CGs do not apply specific evaluation criteria to assess the results and impacts of projects.
- International reference and knowledge is not sufficiently or systematically introduced or shared within the CGs (except for information on new varieties), although private actors have clearly asked for this.¹⁹

Capability to achieve coherence

⁵¹ **Participation** – Participation in the CGs (and in the temporary task forces) is most active for the apple VC, medium for the pineapple VC and weakest for the mango VC. Leadership for mango and pineapple is rather weak. This is at least partly linked with organizational weaknesses of the involved *woreda* and regional ARDs (e.g. the *woreda* ARD Arbaminch shows internal coherence and accountability challenges). Any leadership of the CGs is hampered by the weak commitment of the government agencies involved.

⁵² **Results driven** – A sector-wide vision for apples has progressed further than for mango or pineapple. When asked about their vision of the CG, most participants of the mango CG talk about their own vision for the sector. In general for the three CGs, there is no shared vision of how innovations will be replicated.

⁵³ **Trust and transparency** – The CGs have contributed to improved trust between the stakeholders who met for the first time during the CGs. There remain some gaps, which sometimes leads to stereotypical behaviour between processors and cooperatives (both sides) and between knowledge institutions and government institutions. The diversity of the CG participants is commendable but this sometimes also limits their effectiveness, especially considering the ‘distance’ of some regional and national institutions from the field, both literally and in terms of their weak understanding of the real situation at the grassroots. For the mango VC, for example, it would help if the CG were complemented with a local coordination forum to handle some local coordination processes and to strengthen the participation of local stakeholders in the regional/ national CGs.

¹⁹ MSED staff have been supported for international exchange visits, not the private sector.

3.1.3 Changes in the capabilities of cooperatives

- ⁵⁴ This assessment concerns a limited number of cooperatives for the fruit VCs in the original intervention zone: Arbaminch Zuria for mango, Chench *woreda* for apple and Chuko and Dara *woredas* for pineapple. They include: (i) the marketing cooperatives of Arbaminch *woreda* involved with mango (seven are involved in mango, of which three have not invested much in mango VC but are mainly involved in bananas, four trade in mangos and bananas but most of their turnover is still based on bananas); (ii) ten marketing cooperatives involved in apples in Chench *woreda* (of which nine are active, and most developed their apple *seedling* businesses in the past. In 2011 the majority were also involved in trading apples but four are still only trading apple tree seedlings), (iii) two cooperatives involved in pineapples in Sidama, both as good as inactive;²⁰ (iv) one ‘farmers’ group’ that was established with members of the Lante cooperative in order to test a new form of joint venture with Ecopia (a processor), after the joint ventures with traditional cooperatives seemed impossible in the SNNPR; (v) the Goma Gofa union, established in 2005,²¹ which has recently demonstrated a new dynamic; membership increased from 7 to 21 cooperatives (11 for mango and bananas, and 10 for apples). The union currently plays a strong role in trade (export) of bananas.
- ⁵⁵ **Summary** – The fruit and vegetable marketing cooperatives’ legal status and their identity are not fully business oriented; e.g. they have a social orientation and in the SNNPR they are not allowed to invest in joint ventures. Still, a few of them have made significant progress businesswise, particularly the originally strong cooperatives that already had a strong business orientation. They have developed capacity to explore markets, to create awareness among members of the need to produce high-quality fruit, to lay the basis for quality systems, to use their capital more efficiently and to establish sustainable relations with processors or other buyers. The strongest cooperatives are also increasing their membership. Women are weakly represented in the leadership and specific measures to discourage them from selling unripe fruit are not taken by the cooperatives. The cooperative promotion offices have not been very present in the field to support organizational gaps in the cooperatives.
- ⁵⁶ The leaders and/or members of cooperatives are aware of technical innovations, but their sustainability is threatened by the absence of extension systems or training of trainer strategies. The awareness of cooperative leaders and members about the need to produce quality fruit and seedlings has increased, and they can now better identify quality fruit/seedlings. Business and strategic plans are available within some active cooperatives. However, a few cooperatives use them actively nor update them or link the plans to marketing strategies. The strongest cooperatives have developed quality control systems (still at infant stage), and are better linked to markets and have developed the capacity to explore markets themselves (for mango and apple, but not for pineapple) and this has strengthened their position. These changes have been stronger for the mango cooperatives over the last three years, particularly those that are linked to processors with contracts (including services to the

²⁰ SNV is also supporting mangos in Wolaita zone (topworking) and is supporting the apple VC in 10 other *woredas* but there are few apple cooperatives there (4 or 5) and are not specifically supported by SNV.

²¹ The union has not always been active. At one time another union was established but dissolved again as only one union per zone is allowed.

cooperatives). In Chenchha the cooperatives have started a taskforce to regulate the local seedling market.

- ⁵⁷ All cooperatives also still have a good part of reactive sales, since they lack appropriate storage facilities. They have found it difficult to convince members to sell to the cooperative and to produce better quality fruit, and have fragmented access to market information.

Capability to act and commit

- ⁵⁸ The cooperatives are young – 66.7% were established between 2001 and 2007.²² The establishment of most mango and pineapple cooperatives has been pushed by the Cooperative Promotion Office (at that time part of ARD office), and have a clear social orientation. However, the establishment of Chenchha and Lante cooperatives emerged from more entrepreneurial farmers. The young apple cooperatives have known a reactive and impulsive establishment to enable them to participate in the growing seedling market but they do not have the capacity to identify and sell guaranteed quality seedlings. The cooperatives are all registered and all have procedures in place for decision making, and all have renewed their leadership since 2010. 83% of the coops hold regular meetings of leaders (less so for pineapple) and 90% hold annual general assemblies where more than 50% of members attend; only two of the 18 coops have less than 50% attendance.
- ⁵⁹ The membership of the apple and mango coops has increased. The interviewed coops represent a total of 4830 members. 3578 of these farmers are members of apple cooperatives, of which 600 are members of Chenchha and 1200 are members of other young apple cooperatives; the other seven coops have around 200 members each. The membership of 33% of the coops is stable, and 22% have increased their membership over the last three years (two mango and two apple cooperatives). Chenchha, the strongest apple cooperative, increased its members from 37 to over 300 (in 2006, when offices were built) and to 600 (based on the success of seedlings). The continuous increase has led to the establishment of the new apple cooperatives: one could not handle so many members. Also Lante, the strongest mango cooperative, increased its members from 56 to 287, of which 47 are women.
- ⁶⁰ **Organization – systems** – The entrepreneurial orientation of Lante (mango) and Chenchha (apple) cooperatives and of the union have clearly improved.²³ 66% of all coops have a specific committee(s) for sales in place (8/10 apple coops, 4/6 mango coops, none for the pineapple coops). This gives evidence of a good professional level of the Cooperatives. Apple cooperatives have written rules and regulations on quality standards used for fruit and seedlings (60% of apple cooperatives against 33% of all cooperatives interviewed). Only 22.5% of the 18 coops have an updated business plan, which is low level but it has improved since

²² Two waves of establishment can be distinguished: in 2001 and 2007–2009. For apple, the oldest cooperative is Chenchha (2001) and nine young cooperatives were established between 2007 and 2009. For mango/ banana cooperatives, there is a mixture; Lante, the strongest cooperative, started in 2006 but was officially established in 2009. The two pineapple cooperatives have existed since 2000; one of them resulted from the fusion of different *kebele* cooperatives.

²³ Chenchha is planning to trade more apples (instead of seedlings). This is an informed decision, and encourages members to plant more apple trees (five trees each per year). It also wants to start a processing unit and is investing in a coldroom. Lante aims to increase the amount of mango traded via contracts and so wants to increase the quality of the mangoes produced by farmers. The mango cooperatives have a clearer idea about the future of the banana trade than for mango. (iii) The union has experience with exports of bananas and with contracts with Africa Juice and plans to increase this trade and to invest in storage and shops for cooperatives.

2007. Chench and Lante cooperatives have a business plan (for Lante this is a 10 year plan) which is updated and used. Other cooperatives (two for mango) have a business plan but it is not used nor updated. Four of the mango coops have a strategic plan but not a business plan. The vision and strategy of the two pineapple cooperatives is weaker now than it was five years ago. The mango farmers' group (test of a joint venture with Ecopia) has a business plan but does not understand how to use it and has not developed a clear vision of where and how they will sell their processed products (30% of the products are to be sold by the farmers' group, 70% by the processor). For both Chench and Lante, marketing is better planned than in 2008: e.g. more contracts for Lante, planned collection at the farm level, tenders for seedlings by Chench, and both coops are also exploring markets in other regions. However, these coops do not have a marketing strategy: questions such as: " how much of which quality grade or fruit will be sold to whom and under what conditions?", are not yet adequately addressed so that part of the sales remain reactive and of mixed quality. Their marketing strategy is also not yet linked to their business plan.

Capability to deliver on objectives

⁶¹ **Capital** – The cooperatives work mainly with their own capital, except for the organization of training, which is financed externally. The capital of the cooperatives varies greatly (see section 3.2 on outputs). The cooperatives do not have access to credit from banks or microfinance institutions, whose requirements did not become more accessible or flexible to cooperatives. The GG union (apples and mangos/bananas) has provided small credits to nine cooperatives (based on its own capital and funds from VITA). Chench and Lante have improved efficient use of their own capital and savings for investments (linked to their business plan). Lante receives advance payments from Africa Juice and Chench asks advanced payments for seedlings for new clients only (25% of payment). Lante and Chench coops and the GG union have developed assets, all related to marketing²⁴. Most cooperatives currently do not have a coldroom (like Lante), or only have access to very simple storage facilities.

⁶² **Competence and human resources** – The stronger cooperatives are already employing staff. Both Chench and Lante and one other mango cooperative have a (paid) manager, and rely on their leaders and their purchase and sale committees. The union has four staff members (partly financed by VITA): a manager, accountant, storekeeper and sales manager. The chair of Chench knows the apple industry and varieties very well and has had international experience. Real price setting mechanisms are still weakly understood by cooperatives. The leaders of Chench and Lante found it difficult to explain how they set prices and price setting mechanisms in general. Only 55.56% of cooperatives know how to calculate the price (based on the production price of the product), while others have no idea. The leaders of Chench and Lante cooperatives have improved their accountancy skills (some leaders and staff only).²⁵

²⁴ The GG union has recently built its own store and outlet shop (Hawassan), and is building 11 stores for cooperatives, two input shops and four potato stores. The union plans to provide storage for cooperatives and outlet shops.

²⁵ 90% of apple cooperatives and 10% of mango cooperatives have received training on business planning and were coached in developing a business plan (61% of trainees have received some kind of follow up). Pineapple cooperatives have not received any training. Only 33% of the cooperatives know where to find BDS services.

⁶³ **Collective sales and quality system** – The awareness of quality and the ability to identify quality fruit among members has increased in Lante and Chencha cooperatives, which is important progress. 38% of the cooperatives had paid staff for sales and quality control (five for apple and two for mango). Apple cooperatives have an internal quality system (standard 1, standard 2) and pay according to these standards. The application of the standards remains a challenge (subjectivity in the application). Lante says that it only buys quality mangoes from members, although it also sells lower-quality mangoes to Efruit, it has not developed a quality standard system. The cooperative pays a better price to farmers than what they could receive for selling 'bulk' mangoes (a mixture of ripe and unripe fruit) in the market.

Capability to relate

⁶⁴ **Internal** – Members' forums are weakly developed. Only 18% of cooperatives use 'price board' to announce prices to members. The Chencha cooperative works with notice boards (to announce prices, tenders) and flyers. The Lante cooperative provide information on quality identification and management of fruit trees but this is fragmented, and there is no real communication system in place.

⁶⁵ **Donors** – Compared with the cooperatives, the GG union's capacity to relate to other donor agencies has improved. The cooperatives find other donors via the union (for apple and mango, not facilitated by SNV), via the apple extension coordination forum (including the KHC, SNV and World Vision) and via the CG, facilitated by SNV. Chencha cooperatives (young ones) are supported by World Vision for hardware and seedlings of improved varieties. Chencha cooperative was/is indirectly supported by KHC (supporting farmers, *woreda*). The Lante cooperative does not receive significant support from other donors, except via the GG union (credit, linkage with Africa Juice). The farmers' group involved in processing fruit is supported by JICA (who had been invited to join the CG). The GG union receives support from VITA (storage, staff, training, shops) without facilitation by SNV.

⁶⁶ **Apple market regulation** – Following clients' doubts about the quality of seedlings from Chencha, seven apple coops in Chencha *woreda* developed a 'seedling quality assurance system' by forming a taskforce and developing by-laws. These by-laws set quality parameters, harmonized prices and market sharing arrangements in order to increase the bargaining power and to improve quality. The implementation of this system has contributed to re-establishing more reliable seedling supplies from the *woreda*, although according to the Chencha cooperative and KHC the young cooperatives still have problems delivering quality seedlings (problems with the compatibility of rootstocks with new varieties) and varieties adapted to the regions where they are to be grown. This system has not been integrated or promoted at the regional level. The CG members of Chencha have pleaded for this regulation and made preparations to ease integration at the regional level.

⁶⁷ **To the market** – Five cooperatives have a strong network of traders to whom they know they can sell (4/6 for mangoes, 1 for apples, none for pineapples). Before 2007, this was the case with only one cooperative (Chencha). For two mango cooperatives (11%) this has improved and for three mango and four apple cooperatives (28%) this has improved slightly over the three last years. The GG union developed contracts with Africa Juice (AJ), but these have been turned back to the cooperative level because the union and Africa Juice sometimes failed to

collect the mango in time. The contact was facilitated by SNV, but continues without support from SNV (except during CG meetings).

- *Mangoes*: SNV has helped three coops to establish relations with buyers and to sell mangoes under contract to Efruit and Africa Juice. These contracts (revised each year) stipulate the quantity and quality of mangoes to be delivered (although Efruit also buys poor quality mangoes) and services to be provided by the buyer (information on harvest/post-harvest, advance payments). The price is set at the time of sale (not included in the contract) and is higher than the market price (by avoiding middlemen). The relationship with Efruit (public marketing agent) is especially good, but still fragile for mangoes with Africa Juice.
- *Apples*: The apple cooperatives had developed their seedling market (since 2006) and were recognized as the main provider of seedlings in the country. Problems occurred following doubts about quality of the seedlings supplied by the young apple cooperatives. Also, other actors and regions have started to produce seedlings and the market has become more competitive and difficult to access. Chench cooperative has been linked to retail markets by SNV and others and is now independently exploring markets (for fruit).
- *Pineapples*: These cooperatives hardly ever sell pineapples collectively, although they had tried some commercial activities in the past (trial and error). These experiences were unsuccessful because of a monopoly of a trader in Addis and because of their weak capacity for price setting and weak internal coherence. The cooperatives do not have a reliable market. Several market linkages were facilitated: with Kaleb (a processor), Efruit and Eflora, but the cooperative failed to turn them into businesses because they were unable to come to agreement or understanding on prices.
- *GG Union*. The union has opened a shop in Hawassa as a market outlet for various fruits (mango, banana, apple, lemon, etc.) from member cooperatives.

⁶⁸ **Marketing and promotion** – Chench cooperative has promoted its products via media, flyers, fairs and now also on television. The GG union is developing a website. Lante will promote a new variety of mango to consumers and traders. All of these measures are taken at their own initiative but with support from the CG.

⁶⁹ **Processing units** – About 25 members of the Chench, Lante and the two pineapple cooperatives have been trained by Ecopia in a joint venture to install local joint fruit processing plants. They have gained experience, but eventually the process failed and the lessons learnt have not been systematized. Ecopia (sometimes with the farmers) has developed processed products and researched outlets. The idea was for Ecopia to sell 70% of the products through established marketing channels and for the coops to sell the rest. None of the initiatives with the cooperatives worked out for various reasons, including: cooperatives cannot be involved in a joint venture in the SNNPR, the profitability of the processed fruit was low for apple given the high market price for fresh apples,²⁶ farmers have never really understood the idea of the joint venture, farmers have not been able to see a way to market their part of processed fruit.

²⁶ Initially the idea was to use low quality apples but soon it was discovered that also for fruit processing better quality apples were needed. This changed the profitability of the venture, since fresh apples fetch a better price than those sold for processing.

Overall, the scale of the investment was small and its profitability in rural areas was doubtful. Therefore a new test was started with a one mango farmers' group of members of Lante coop. Preparatory work has been done by Ecopia (identification of the business types), the plant was prepared and a solar drier purchased and installed. For the latter, JICA's One Village One Product (OVOP) programme has agreed to cover the contribution required from the Lante cooperative side. The solar drier is not functional yet.

Capability to learn and adapt

⁷⁰ This capacity is still weakly developed, there is no explicit learning cycle in place and member forums to assess satisfaction or satisfaction surveys are not organized. Record keeping has improved for the stronger cooperatives but records are not systematically used to inform decision making. Ten of the 18 coops surveyed have some records on purchases and sales of fruit, but they are generally weak, which hampers their accountability to members. Except for Chench and Lante cooperatives, the records are not yet used to reorient business plans. Lante cooperative has good documentation of audits conducted over the years (by the *woreda* Cooperative Promotion Office). The accounts of Chench cooperative are currently of good quality and this has improved recently with new leadership and training (Chench could not present audits). Bookkeeping is done manually in both Lante and Chench coops. Chench has records of sales per quality standard but has not consolidated them. Both Chench and Lante cooperatives' decisions are informed in a loose way by their sales data. Cooperatives do not have systematic, organized or formal access to market information; 44% still rely on the network of leaders. Only four out of the 18 cooperatives find that their access to market information has improved since 2008. Pineapple cooperatives only know the prices of the single buyer in Addis.

Capability to achieve coherence

⁷¹ **Inclusion** – The social oriented cooperatives also reach poorer farmers.²⁷ For Lante cooperative, a more entrepreneurial cooperative, this is less the case. Both for mango and apple, the very poorest households fail to pay membership fees or to invest in tree management or in apple trees. Chench and Lante cooperatives both purchase fruit from non-members and Lante now also buys fruit from other cooperatives. The GG union focuses on more progressive farmers. On average, 21.2% of coop members are women. For mango this is only 12% while it is a traditional women's crop; for Lante cooperative, the percentage is slightly higher and has increased lately. 44% of the coops do not have women in leadership. Only 5.43% of coop leaders are women (apple 4.59%, pineapple 19%, mango 1.67%). Cooperatives do not take specific measures to reach out to women or to train them.

⁷² **Leadership** – The leadership, transparency and trust in Lante and Chench cooperatives are good, reflecting their efforts to explore markets and increase sales. Leadership is weak in the pineapple cooperatives and weaker in most new apple cooperatives. Transparency and trust in the GG union (by the coops) have improved. For both Chench cooperative and the GG union, this positive change occurred following changes in leadership.

²⁷ The pineapple and most mango cooperatives have a pronounced social orientation. Lante and Chench are more professional entrepreneurial cooperatives but Chench was founded by church members (KHC) and so still has a social orientation. Since their establishment, the young apple cooperatives have turned out to be aggressive marketers.

⁷³ **Coherent vision/ operations** – The real challenges on coherence appear when considering the capacity of the cooperatives to channel the farmers’ fruit sales through them, rather than to sell to informal collectors. Cooperatives have found it difficult to convince farmers to sell through them. The apple cooperatives, particularly Chench, have made some progress since the local regulation that requires that all seedlings should be sold through cooperatives. Chench coop has also found it difficult to convincing its members to switch from seedling production to apple production. Still, Chench and four other apple cooperatives have increased their sales of fresh apples, meaning that (i) it is mainly the larger apple farmers that are selling fruit already (some have apple orchards on their farms); (ii) farmers have reacted more quickly to markets than expected; and (iii) the cooperative leaders base their decisions on data on the previous harvest only (see also section 3.2, ‘Outputs’).

3.1.4 Changes in the capabilities of ARD offices

⁷⁴ **Summary** – The ARD offices/ departments at various levels have been involved²⁸ and supported in developing their extension systems, mainly by improving knowledge of fruit tree management. For the apple VC, the *woreda* level has been the point of entry (first Chench and then 10 other *woredas* in the GG and other zones). For the mango VC, the ARD office was supported at the *woreda* level in Arbaminch and moved to the zonal level for upscaling in the Wolaita zone. For the pineapple VC, the regional level was the point of entry but eventually the improved plantlets of pineapple were channelled to two *woreda* ARDs (Chuko and Dara). Within several ARDs, the knowledge of the extension staff on (existing) technical innovations has improved thanks to TOTs. This is very promising: this knowledge of fruit tree/plant management was completely new for the staff as they have never been trained on it in a specialized way. The training has been integrated into the training plan for ARD staff at the regional level.

⁷⁵ A budget line for fruit was already included at the zonal level. There is no evidence of changes in the budget for training farmers, in the priority given to training fruit farmers, or in the overall organization of the TOT or extension system at the *woreda* level. Priorities are influenced by top-down policy and strategy making in Ethiopia, and staff turnover at the ARD offices remains high.²⁹ The ARD offices have established contacts with other VC stakeholders via the CG. For the apple VC, this has resulted in sustainable relationships (e.g. with the Kale Heywet Church, KHC), but for the mango and pineapple VCs, the capacity to develop sustainable institutional relations (in the intervention areas) was not strengthened. Their commitment to contribute to local changes also depends on the internal coherence in the *woreda* ARD, which has not developed much. In Chench (apple VC), the *woreda* ARD has been strengthened to monitor the apple sector and to facilitate a local extension coordination forum, which it does successfully.

Capability to act and commit

⁷⁶ In the considered *woreda* ARD offices, there is no specific budget or plan to address fruits, and the existing plan and budget are limited to ‘horticulture strategy’ and a budget for ‘crops’. At

²⁸ In the SNNPR we distinguish between regional, zonal, *woreda* and *kebele* levels.

²⁹ As explained in section 3.2, SNV has tried to complement the TOT system by training model farmers.

the zonal level, however, a plan for the fruit sector (including a budget) was developed. The fact that fruit is now classified as a priority crop at the zonal level is a great improvement but this is not reflected at the local level. The horticulturist of the *woreda* ARD offices or the focal point on horticulture are committed but are not always backed up by the rest of the *woreda* ARD office staff (for apple and pineapple VCs). The ARDs have a cascade system of extension personnel, with high staff turnover at all levels. No changes were witnessed, nor was there evidence that measures were being taken to change the situation. The regional training plan for ARD offices (zonal, *woreda* and DA staff) has been expanded to include topworking for mango, pest and disease management for mango and apple tree management. The cooperative promotion office has only recently (2012) created a separate ARD department; it used to be part of the ARD office. Except for the apple VC (local extension coordination forum), there are no specific local mechanisms bringing together the ARD office and Cooperative Promotion Office (CPO).

Capability to deliver on objectives

- ⁷⁷ The most important change in capabilities is the capacity to provide training for *woreda* staff through training of trainers (TOTs at the zonal and *woreda* ARD level); for development agents (DAs, paid for by the government) and, to a lesser extent, for model farmers; and for monitoring DAs or model farmers when training farmers. The training for *woreda* staff (including DAs) included improved tree/ plant management, fruit handling and the introduction of new varieties. The techniques existed already but extension staff had never been trained and so did not promote them among farmers. Some specialized institutions like KHC did promote these techniques, but always on a case by case basis and only at the grassroots level. For the apple VC, new varieties have been tested and introduced. Manuals were elaborated for *woredas* on these topics and posters for model farmers (for the three commodities). The *woreda* staff and DAs for mango and apple have been trained by specialized partners like KHC, the Melkasa Agricultural Research Centre and the Arbaminch Plant Health Clinic. For pineapple, farmers and DAs were trained by the ARD offices. The techniques for apple and mango are often complicated. The quality of staff training provided by the zonal and regional level DAs is lower than that they received under SNV's support programme.
- ⁷⁸ The number of DAs in the *woredas* has not changed. There are three DAs per *kebele*, one of which focuses on crops, who visit each farmer twice a year. There are also model farmers, who are supposed to develop other model farmers and to train other farmers. The model farmers receive training from *woreda* staff on all agricultural activities and are followed more regularly by DAs and sector specialists from the *woreda* ARD office (including a horticulturalist). There is one model farmer per five 'ordinary' farmers. The budget spent on apples has increased, according to the Chench *woreda* ARD, from 5% to 12% of the ARD budget, which includes the construction of a farming training centre and nurseries. The other *woredas* could not specify any budget increase for fruit, and extension for fruit is not budgeted separately.
- ⁷⁹ **Apples:** Tree management, new varieties and upscaling. 20 DAs and five experts in Chench *woreda* participated in an intensive seven-week seminar on highland fruit (taking place in three different periods of the year) and were trained as ToTs.³⁰ In addition, over 4000 scions of

³⁰ Also direct training of model farmers has been supported; see section 3.2.

preferred variety apples were purchased and distributed to farmers in Chench. Training on harvest and post-harvest of apples was given to extension forum members (including coops) and technical staff in Chench *woreda*. Using the same model of training activities, 62 DAs were trained in seven other *woredas* in Gamo Gofa zone. One session included the planting of 10–15 trees per household participating in the training of the DAs. The experience of working in Gamo Gofa was later upscaled to three other *woredas* in SNNPR (Bule, Hageresalam and Ezha).

⁸⁰ **Mangoes:** Tree management, disease management and new varieties. The *woreda* and zonal ARD staff, including DAs at the *kebele* level, have received training on the production of grafted seedlings and topworking of old mango trees with new varieties. 27 technical staff in Arbaminch *woreda* and 98 in Wolaitta zone (from eight mango-producing *woredas*) were trained in the preparation and grafting of seedlings, back-pruning (cutting back) of old mango trees and grafting with the selected new varieties (topworking). The *woreda* has also supported the installation three *kebele* nurseries, managed by the *woreda* with a view to distributing seedlings to model farmers and tools for grafting and tree management for 40 model farmers and DAs. A manually operated mango harvester was introduced to the *woreda* and to farmers. 150 farmers were involved in the test and eventually received an improved model. With regard to disease and pest management, 220 TOTs (model farmers and DAs) were trained on identification and control measures, major mango diseases and pests and they have trained other farmers in their respective *kebeles*. In addition, Arbaminch Plant Health Clinic has introduced field sanitation and pruning activities as part of follow up of the training.

⁸¹ **Pineapple** – Activities focused on Smooth Cayenne, a variety from South Africa that had not promoted yet by the ARD at farmers’ level. 500,000 Smooth Cayenne plantlets were produced by Jimma (public) and Alaje (private) nurseries and transported. Alaje produced the plantlets using tissue propagation, an efficient method of producing healthy plantlets. The production of plantlets had been slow until involvement of Alaje. Plantlets were distributed to private and public nurseries in Chuko, Dara and Dale *woredas*. ARD trained 2300 farmers on agricultural practices to boost productivity and on handling fruit (of the new variety).

Capability to relate

⁸² **Apples** – A local extension providers’ forum was established in Chench *woreda*, whose members included seven cooperatives, the *woreda* ARD office, service providers such as the Kale Heywet church and World Vision. The forum is active and coordinates activities in the *woreda*. This initiative has been upscaled to the other 10 *woredas* where the training on apple tree management was given. Chench *woreda* also mentions particularly that the problems noted by apple farmers are reaching the *woreda* level more effectively since the DAs have been trained and the extension forum has been in place.

⁸³ **Pineapples** – A local taskforce (members of the CG) was set up to support the process of attracting investors in pineapple to establish local nurseries, outgrowers’ schemes and processing plants). The dialogue has been intensive and the local government is committed to identify land in a land scarce area, to build roads and to provide water to these private facilities.

⁸⁴ **General** – The ARD offices of the concerned *woredas*, zones and regions are active members of the CGs (focal points of SNV, facilitator of CG). They consider this as a very important meeting opportunity. Their capacity to participate in terms of presenting evidence of farmers' needs or to propose proactive solutions is relatively weakly developed, except for Chenchu *woreda* ARD. This particular ARD office shows more internal coherence and has experience with a local extension forum and a local seedling market regulation taskforce. For mango *woreda* ARD offices, it is the only place where they meet other actors of the VC. The *woreda* ARD offices have been linked to the CG and to specialized institutions such as KHC, Melkasa, Jimma, Alaje and Holetta. These relations are not embedded in institutional relationship (facilitated externally), except for the Chenchu ARD office, which has developed sound relations with KHC also via the local extension coordination forum.

Capability to learn and adapt

⁸⁵ The *woredas* have developed a complex monitoring (reporting) system through which the DAs report to the *woreda* ARD office and in turn to the zonal and central levels. This reporting system is complemented by field visits by *woreda* staff. Data at farmer level are mostly extrapolated data based on the TOT system. The system is mainly used to inform central levels. It is not to be considered to be a user survey or an instrument for impact measurement.³¹ The extent to which these data are collected and consolidated (in a reliable way) varies from one *woreda* to another. For Chenchu (apples) this is better developed. Chenchu also collects baseline data on apple production (supported externally) and compares and discusses the updated data in ARD meetings. In Arbaminch, in contrast, the data on mango were found to be incoherent. The reports of specialized institutions that train *woreda* staff are used to complement the monitoring and impact data of the *woreda* ARD offices, although some of these data are also still based on extrapolation of the TOT system at the farmers' level.

⁸⁶ As discussed under the 'capability to deliver', all the *woreda* ARDs have been introduced to technical innovations. For some of them, specific research has been carried out, such as to identify seven new apple varieties, the compatibility of new apple varieties (with climate and chilling requirements, rootstocks), and on nitrogen-fixing fungi for apple. For mango, initial and post-training assessments of mango diseases and pests were conducted in Arbaminch. Also, a manually operated mango harvester was introduced, tested and adapted to farmers' needs.

Capability to achieve coherence

⁸⁷ In Chenchu *woreda*, apple is a priority crop, while in the Arbaminch *woreda* ARD office mango is not yet a priority. For pineapple the situation is mixed; it is not yet regarded as a priority crop, but clearly there have been positive changes, in that there more attention to and a greater understanding of its potential and the challenges involved. The SNNPR and the *woreda* have made considerable efforts to attract investors. Extension priorities are set top-down (from zonal, regional and central levels) and are not always consistent with local priorities. Messages for farmers (by DAs) and their timing are influenced directly and ad hoc by higher-level ARD offices, and are subject to political influence). This implies that DAs cannot always train/ follow-up on fruit farmers at the appropriate time, or they combine this with other agricultural activities of the model farmers and households. Still, from a small survey, the

³¹ However, some elements of the reporting system perform well at the level of model farmers. The evaluation team found that model farmers are replaced if their farms are not well maintained.

evaluation team found that 64% of DAs in the *kebeles* surveyed (mango and apple) have provided specific training or followed up on fruit farmers and/or model farmers over the last three years, which is high. The ARDs have not disaggregated the data on participants in this training according to gender.

3.1.5 Changes in capability of MSED

- ⁸⁸ **Summary** – The Medium and Small Enterprises Development Agency is not yet a recognized leader of the fruit value chains, as was anticipated in 2007. However, MSED has developed: (i) relations with other actors in the sector; (ii) its understanding of VC concepts; and (iii) its knowledge, skills and means to support small and medium enterprises (SMEs), including mango and pineapple processors (the majority are women), with training, advice and equipment for incubator centres.³² MSED has developed some 17 VC plans, which are rather theoretical although some are in the process of being operationalized by MSED or other agencies.
- ⁸⁹ MSED is mandated to regulate, support and promote micro and small enterprises development in the SNNPR. It has well-established organizational facilities and infrastructure, including *woreda* and city-level structures. MSED is dependent on government resources, its staff are permanent employees, but staff turnover remains a problem. MSED's learning mechanisms are not explicit and organizational learning is difficult due to high staff turnover. The agency does not maintain systematic records on the development of SMEs. Exchange and exposure visits to South Africa (externally supported) have enabled staff to acquire new techniques and varieties and have included them in fruit VC strategies. MSED has been supported to facilitate value chain development processes in the three coordination groups for apples, pineapples and mangoes, but it has not demonstrated a proactive attitude.
- ⁹⁰ Within MSED there is full agreement on the need to develop the fruit sectors and the VC approach for enterprise development. The VC approach is considered from the angle of private sector development. MSED has very recently developed action/ strategic plans for the fruit sector, but these have been rather theoretical.
- MSED developed a plan to install six incubators in the region, to support small processors and their future processing activities, and guidelines on how enterprises should use them. MSED found it difficult to explain to the evaluators the financial sustainability of the incubators and the institutional managing arrangements. MSED staff have been trained as TOTs to train small processors (SMEs) on several occasions.³³ MSED is now constructing two buildings to host incubators machines for honey and fruit processors and other support activities for SMEs (in Hawassa and Arbaminch). Two incubators were bought in 2010 (financed by SNV). The construction of the building in Hawassa is almost finished and is in its initial phase in Arbaminch. MSED is searching for markets for future

³² MSED pays for the centres, SNV for the incubators.

³³ 45 MSED staff (15 technical trainers and 30 DAs) were trained as TOTs in fruit and honey processing techniques and in business development (counselling) services. 14 MSED staff also participated in a TOT course on mango processing in Nazareth (Oromiya region) using the incubator managed by the Oromiya MSED. Ecopia also trained representatives of 57 enterprises and four MSED staff in processing techniques and enterprise management.

products of these SMEs and has started discussions with Ecopia, which is licensed, to franchise the processing and packing of the products.

- MSEDAs has published and distributed 17 documents analyzing value chains, including agricultural and non-agricultural commodities. The documents are rather theoretical, but some of them (mainly VCs not related to agriculture) are now being translated in operational strategies.

3.1.6 Changes in the capabilities of private companies/investors

- ⁹¹ **Summary** – Several private sector actors have been involved in the CGs and some of them have received direct support of SNV. The support to the private sector is on a ‘case by case’ basis – there is no general strategy – and is intended to influence small farmers. Specific measures were identified to that end but were only weakly followed up. Private sector actors (i) have been linked to cooperatives that can supply quality fruit; (ii) benefited from cost sharing (in the framework of the provision of training or equipment to farmers); (iii) have been assisted to access financial institutions, including business plan development; and (iv) have been financed for innovative investments that would eventually benefit farmers. This involved:
- linking three private sector actors to seven cooperatives that can supply quality fruit, and for the private sector to support the cooperatives with training (harvest, post-harvest) and advance payments (Africa Juice, Efruit);
 - linking nurseries to ARD offices in order to deliver seedlings to farmers (Alaje, Kifle Bulu);
 - facilitating the establishment of joint ventures between private actors and cooperatives to set up local processing units, including support for training (harvest, post-harvest, processing), equipment, product development, promotion of the products (Ecopia with four cooperatives and one farmers’ group);
 - innovative investments to boost initiatives that will reach or include small farmers (Dibabisch, Kifle Bulu nurseries);
 - facilitating or supporting the development of business plans and linkages to banks for initiatives that can benefit farmers (Dibabisch, Kifle Bulu nurseries).

⁹² The links between the cooperatives and Efruit and Africa Juice were described in section 3.1.3, ‘cooperatives’. In the following, the initiatives involving Kifle Bulu, Ecopia, Dibabisch and Alaje are briefly described.

⁹³ **Kifle Bulu** is an established private nursery (mainly apple) that already had a contract with Oromia ARD to supply apple seedlings at subsidized prices and to train farmers at the nursery. Kifle Bulu purchased a mist propagator to speed up the seedling production process (supported by SNV). It was supported by a BDS provider for training and the development of a business plan (financed and facilitated by SNV). Kifle Bulu was put in contact with SEAFto access equity funding and with the Ethiopian Development Bank to negotiate a loan.³⁴ The company recently received external support to expand its nursery and install a training centre for farmers.³⁵

³⁴ Facilitated by SNV, but neither has been successful so far; see below.

³⁵ Spanish Aid.

- ⁹⁴ **Ecopia** started collaborating with four cooperatives in the intervention areas (Chencha – apples, Lante – mangoes, Tesso and Safa – pineapples) and 11 cooperatives in other regions in order to establish a local joint processing unit. In this joint venture, 70% of the products would be sold by Ecopia through its established marketing channels and 30% by the cooperative. Ecopia was supported (financial cost sharing) to train cooperative members on harvesting and fruit handling (Chencha) and trained about 25 members per cooperative on processing, most of them women. Ecopia provided simple processing equipment to the coops, tested and developed products (about 10 per commodity) and promoted Chencha apple on television. For the apple VC, more cooperative members have been trained on processing.
- ⁹⁵ This process has been very difficult. Farmers did not understand the purpose of the collaboration and training. When Ecopia realized high-quality fruit was needed for processing, the profitability of the initiative was at stake: for apple it was more profitable for the coops to sell fresh fruit rather than processed apples. Further, the cooperatives did not know where to sell their part of the processed products. The scale of the processing units remained small and sustainability is in doubt. Finally, it became clear that SNNPR did not allow cooperatives to invest in a joint venture, so a lighter version of the joint venture is currently being tested with a farmer group (mango) in Lante. The processing facility premises were assessed and a solar drier has been installed. JICA/OVOP covered the Lante cooperative's contribution.
- ⁹⁶ **Dibabisch** is one of the six investors who applied to the government to be involved in pineapple production. The idea of the local taskforce (linked to the CG) was to attract investors to install plantations, nurseries, a processing plant and outgrower schemes for farmers. Initially it was intended to establish 1200 ha of pineapple. The process has been long and difficult. First, land had to be identified (in an area where land and water are scarce), then roads had to be built by the government, and access to water arranged (by the government). Eventually only one investor remained actively involved. Several steps were taken: a feasibility study was carried out, based on which the size of the investment was scaled down to just 30 ha; farmers were trained (for the future outgrower scheme) and a manual was prepared. The investor was supported to prepare a business plan which was submitted to the Ethiopian Development Bank. The bank refused the loan because of the guarantee was not in accordance to the size of investment and because the business plan had not been updated. Dibabisch cancelled its order of 2 million plantlets from Alaje nursery (for plantation of a nursery), but later received a grant from SNV to purchase about 300,000 seedlings.
- ⁹⁷ **Alaje** was linked to SNNPR and to Dibabisch with the aim of producing 450,000 pineapple plantlets that SNNPR would distribute to farmers and 2 million plantlets for Dibabisch. Although Alaje had used tissue propagation technology on a small scale, it was the first time it had to produce seedlings at this scale. Eventually Dibabisch could not afford to buy the 2 million seedlings because it failed to secure a bank loan (see above) and Alaje had to find an alternative market. In this it only partly succeeded and so had to bear the loss.³⁶

³⁶ Alaje expected that the guarantee for the bank loan from Dibabisch (for the seedlings) would have been taken up with SNV.

3.2 Changes in the outputs of SNV's clients and the enabling environment

⁹⁸ This section describes the main outputs of SNV's clients as a result of the changes in their capacity. First, we look at the outputs of the cooperatives ARD offices, MSEDAs and private sector actors, and then at the results for the enabling environment, which are more complex, in particular, the performance of the sector, knowledge in the sector and the supporting framework (investments, policy, regulations to support VC transactions).

⁹⁹ The three VCs are growing economically: there are more producers producing more fruit and prices are increasing. For the apple and mango VCs there are also more buyers and processors investing in the sector, but the level of investment remains limited.³⁷ It is interesting to look at the structure of the VCs and how this can possibly benefit farmers. The evaluation team found evidence of important changes in the apple and mango VCs, all of which need to be deepened, which is normal given the young history of VC development. In summary, the achievements (and gaps) include:

- The number of cooperatives for apples, and the membership of apple and mango coops are increasing, although to a limited extent. In Chench, one in seven rural households is a member of a coop; for mango the ratio is 1 in 20.
- Farmers sell more fruit through cooperatives, which pay more than the local market price, and the difference is increasing. This is most pronounced for mangoes thanks to the contracts with processors. For apples, the higher prices are mainly linked to the supplies of higher-quality fruit. The number and volume of market outlets for cooperatives have increased and coops have developed more stable relations with them. The percentage of quality fruit sold by cooperatives has increased slightly, but the quality of the fruit remains low and farmers continue to sell directly on the market for cash. Cooperatives do not have access to financial institutions although the three mango coops with contracts with processors receive payment in advance.
- Many farmers have been trained, for the first time, on fruit tree management, improved varieties, and pests and diseases. However, the training was not repeated, and was not systematically combined with access to tools. This training was given via the government's TOT system or directly to model farmers (by LCBs). Cooperatives are also increasingly providing farmers with specialized information but the TOT system needs to be improved.
- More improved planting material is available, although problems with the quality of apple seedlings remain. For pineapple, the trend is not sustainable yet.
- The technology to improve productivity and the quality of fruit has been integrated in the extension system at zonal, regional and for some even at the national level. The government has further included fruit as a strategic priority but has not yet translated this ambition into policies and regulations, or into specific investment funds. Public agencies such as MSEDAs are slowly but surely adopting the VC approach and are establishing partnerships within the VCs.
- The limited number of private sector actors involved in the apple and mango sectors (apart from the informal collectors and middlemen) have improved their links with government extension services (e.g. to deliver seedlings, to train farmers together), with farmers or

³⁷ The investment climate for horticulture (flowers and vegetables) has improved around cities but not in rural areas; see below.

cooperatives (for training or seedlings, for supply of their products). Such links did not exist before.

¹⁰⁰ A real challenge is to replicate and deepen these trends given the limited investments by the government and financial institutions in the sector; the limited attention organizations/institutions pay to their organizational development and to the evident gaps in the enabling environment; and the absence of an exit strategy for SNV.

3.2.1 Outputs of cooperatives

¹⁰¹ **General** – Based on the survey of 18 cooperatives, it was found that 81% of their members have sold their produce through the coop (this also includes bananas), 67% of the members of apple cooperatives sold through the coop and only 12.7% of the members of pineapple cooperatives did so. Three cooperatives pay their members in advance, including the mango cooperatives with contracts with processors or with Etfruit. An important difference between the performance of these cooperatives can be noticed. Chench (apples) and Lante (mangoes) cooperatives have increased their traded volumes of apple and mango (although the banana sales for Lante increased relatively more). The number of market outlets increased and are more stable. Chench coop is a major supplier of apples and seedlings. The GG union increased its sales of bananas. Three other apple coops and three mango coops have also evolved positively but remain (far) behind Chench and Lante coops. The two pineapple cooperatives have almost no collective commercial activities.

¹⁰² Mango coops received technical training on tree management, improved varieties and grafting, disease and pest management and post-harvest handling. Africa Juice trained leaders of Lante coop on harvest and post-harvest techniques. The pineapple coops did not receive specific technical training. All members of the Chench cooperative have been trained in fruit tree management and a selection of members has been trained on processing fruit, harvesting techniques and post-harvest handling. For the training on tree management in the other 10 *woredas*, trainers have been trained in the apple cooperatives (70 ToTs of 10 coops). A strategy to train all members is not yet in place. 38% of cooperatives provide technical training or information to their members, in total 1370 members (all commodities together) received training. There was an increase in number of members trained over the last three year in 40% of the cooperatives. Lante plans to train 280 members on grafting in 2013 but lacks the tools for farmers. It should be noted that farmers (members and non-members) also receive technical assistance from DAs and *woreda* ARD staff (see section 3.2.2, 'ARD').

¹⁰³ In Lante and Chench cooperatives, the awareness of quality and the identification of quality fruit among members have improved. But the eventual quality of the fruit remains a challenge for apple and mango despite the distribution of improved varieties and training of farmers and members on harvest and post-harvest handling. Households continue to sell fruit directly on the market and this is still considered as normal business by all mango coop members. Lack of immediate payment to farmers by the cooperatives and the need for cash (particularly for women) encourages them to sell fruit on the market before it is ripe.

¹⁰⁴ Tables 4–6 illustrate the main changes for the three commodity chains.

Table 4. Changes in the performance of apple cooperatives in Chencha (n = 9).

	2008 (baseline SNV)	2010–2011	Current
Number of cooperatives	1	9	9
Membership (no. of producers)	600	3516	3578 (about 1 in 7 households are members of a cooperative in the <i>woreda</i>)
Membership – Chencha cooperative ³⁸	600	600	600 (about 1 to 3 or 4 households that are members in the related <i>kebeles</i>)
Sales volume (tonnes)	18	32.6	192 tonnes (Chencha 176 tonnes, others between 500 and 10,000 kg of apples)
Number of seedlings – Chencha cooperative	50,000	70,000	158,000 (ETB 1.1 million)
Sales volume – Chencha cooperative	18 tonnes	24 tonnes	176 tonnes
% first grade – Chencha cooperative			30% (estimate)
Price for seedlings (ETB)			40–45 by cooperatives 20 by traders
Price per kg of apples (ETB) to Chencha cooperative	13	20	30 (first grade), 27 (second grade), 17.5 (ordinary) Traders pay ETB 17.
Capital cooperatives			3/8 coops: no increase in capital 1/8 coops: capital ×100 since 2008 4/8 coops: capital ×1.5 to ×10 since 2008
Capital Chencha (ETB)	15,970 (2001)	1,752,109	1,544,260

Sources: 2008, SNV baseline; 2010–2011, *Woreda* ARD, impact study SNV, 2012, cooperatives (IOB evaluation questionnaire and interviews) and cross-check with information from SNV; 2012 (current): cooperatives (IOB evaluation questionnaire and interviews), *woreda* ARD.

¹⁰⁵ The number of cooperatives and their members have increased thanks to the profitable market for seedlings from the Chencha cooperative. Most apple cooperatives have developed their seedling business but since 2012 they are also involved in the trade of fresh apples. Four cooperatives are still trading only in apple tree seedlings. Since the local seedling market has been regulated, the number of seedlings sold via cooperatives has increased, particularly in Chencha.

¹⁰⁶ Sales of fresh apples increased considerably for Chencha cooperative, slightly for two other cooperatives, while for the rest the sales of fresh apples decreased.³⁹ Chencha cooperative, the first in Chencha, attracted some larger farmers at the beginning, and it was easy for them to increase their production of apples compared to smaller farmers who survive on apple seedlings. Also, the fact that it takes five years for a tree to produce apples may explain why Chencha cooperative members manage to increase their fruit production faster than smaller farmers.

³⁸ Chencha cooperative is mentioned separately because it is the only cooperative to which SNV provides coaching. It was also the original apple cooperative in Chencha that developed a mission to trade fresh apples, while the younger apple cooperatives started with the idea of making quick money selling seedlings. Chencha has always been the strongest apple cooperative in the *woreda*.

³⁹ The cooperatives gave various reasons for this decrease, but the two most often mentioned were weather conditions and the focus on seedlings rather than fruit.

¹⁰⁷ Apple cooperatives haven't developed sales contracts that include services from buyers to farmers or that exclude the eventual sale price. They have continuously been changing buyers with short term contracts with a preset price. Apple cooperatives are exploring markets for their seedlings and, in the case of Chench cooperative, also for fresh apples. Chench has increased its number of market outlets and is selling a lot on the retail market in Addis (150 outlets, 20 of which are supermarkets). The apple coops do not have access to financial institutions.

¹⁰⁸ Apple cooperatives have an internal quality system (standards 1 and 2) and pay accordingly. The application of these standards is often a challenge (subjectivity). About 30% of the apples sold by Chench are standard 1. Among the cooperatives of Chench, only Chench cooperative is recognized for the quality of its seedlings, and it pays more to its members than current market prices. The cooperative provides market and technical information to its members. Other regions of Ethiopia are currently producing apple tree seedlings.

Table 5. Changes in the performance of mango cooperatives in Arbaminch (n = 6).

	2008 (baseline SNV)	2010–2011	Current
Number of cooperatives (mango)	13	9	6 active, 4 only with focus on mango
Membership (no. of producers)	270	459	588 (6 coops)
Members – Lante cooperative	56	170	287
Sales volume (tonnes)	66	731.3	?
Capital – Lante cooperative (ETB)	116,000	400,000	1.300,000
No. of markets (contracts)	4	3	Etfruit, Africa Juice, union shop, Mekelle, Oromia, Nazareth, Asela, farmer group joint venture
Price of mango (ETB)	20	44	Price very seasonal, no good records

Sources: 2008 data: SNV baseline. 2010–2011: SNV Impact study 2012, cooperatives (questionnaire IOB and interviews), *woreda* ARD, and cross check with information from SNV. 2012 (current): cooperatives (questionnaire IOB evaluation and interviews), *woreda* ARD.

¹⁰⁹ Sales of mango by the involved coops have increased mainly thanks to the contracts with Africa Juice (AJ) and Etfruit, although Etfruit only takes small volumes.⁴⁰ In 2010 the GG union sold 731 tonnes of mangoes to AJ for ETB 913,910 (2010). Later this trade was done through the mango cooperatives directly, because AJ and the GG union were unable to collect mangoes from the cooperatives in time. The problems arose between the coops and AJ because the coops collected mangoes later than agreed and this affected their quality. When AJ finally arrived, they did not want to pay the agreed price because the quality had deteriorated. This caused major problems for one coop which stopped trading in mangoes. The issue was discussed within the CG (but only months after the fact) and AJ eventually paid the agreed price to the cooperative. Africa Juice finds the quality delivered by the cooperatives not sufficient yet. It shows that the CG plays its role, but also that the contact between private

⁴⁰ Banana sales have also increased, which contributes to the capital. Sales of banana to Etfruit doubled in 2011–2012 (export and local markets). Since 2008–2010 sales of bananas from Lante coop to Etfruit have averaged 576 tonnes per year.

actors and cooperatives needs facilitation in the field and that the negotiating skills of both parties need to be strengthened.

- ¹¹⁰ Lante claims to buy quality mangoes from its members (although it also sells lower-quality mangoes to Etfuit), but it has not developed a quality standard system. Lante receives a higher price for mangoes from Etfuit and AJ than on the market because the quality improved slightly and middlemen are avoided. The improved mango varieties fetch better prices, up to six times more than for traditional mango. The market for this type of mango needs to be further developed because consumers are not familiar with this type of mango. Lante cooperative is planning a television campaign in order to promote this new variety.
- ¹¹¹ Even though the volumes covered by contracts with processors are rather limited, this has enabled the mango cooperatives involved to strengthen their market position vis-à-vis illegal traders. Their position remains fragile for most mango coos that do not have coldrooms. Lante coop is now exploring new markets and sells products through outlets other than wholesalers in Addis Ababa, including traders in Mekele, Nazareth, Asela, etc. The cooperatives' ability to negotiate prices with Addis wholesalers has improved substantially because of their contracts and access to new markets.
- ¹¹² Despite this positive change, the quality of the mangoes is still disappointing, according to Africa Juice. Also Lante cooperative finds it difficult to obtain the quality needed from farmers. Mango remains a small business for the cooperatives compared with bananas, also for Lante cooperative. It remains difficult to convince farmers to sell to the cooperative, even those who continue to sell unripe fruit to get direct payment. Illegal traders push up prices temporarily so that farmers side-sell to them, and then drop them again. Farmers and cooperatives estimate that 50% of the fruit is still sold at these lower prices. However, increasing volumes of mangoes being sold through the cooperatives, so there is a positive trend.

Table 6. Changes in the performance of pineapple cooperatives in Chuko and Dara (n = 2).

	2008 (baseline SNV)	2010–2011	Current
Membership (no. of producers)	800	882	664
Sales volume (tonnes)	1	0	Almost 0
No. of markets	4	0	0 (individual sales to middlemen and collectors)
Price of pineapple (on Chuko market, not to the cooperative)	ETB 2–3 each		ETB 15 each for Red Spanish; Smooth Cayenne (newly introduced variety): ETB 25 each

Sources: 2008: SNV baseline; 2010/2011, SNV Impact study 2012, cooperatives (IOB evaluation questionnaire and interviews), *woreda* ARD; 2012 (current), cooperatives (IOB evaluation questionnaire and interviews), *woreda* ARD.

- ¹¹³ Pineapple cooperatives are currently not involved in collective sales in significant volumes. They offer few services to their members, and their numbers are decreasing. The cooperatives claim that the lack of appropriate storage limits their market position vis-à-vis the monopolistic trader. The improved variety, Smooth Cayenne, gets a better price (see Table 6) because it is larger and has higher sugar content, but prices are also seasonal and are influenced at times by middlemen. This results in unpredictable prices, weak market position and sales of pineapples at low prices.

3.2.2 Outputs of the ARD offices and the extension system

Training of DAs and model farmers

- ¹¹⁴ *Woreda* staff and DAs have been trained as TOTs on complicated techniques for apple and mango (tree/plant management, new varieties, grafting etc.). The training on highland fruit (apples) and on topworking of mango trees was new for the DAs. From a questionnaire survey of 11 DAs in four *kebeles* in Chench *woreda* (apples) and Arbaminch *woreda* (mangoes), the evaluation team found that eight (73%) of the DAs had already been trained on fruit tree management/ fruit handling/ new varieties, seven by the *woreda* ARD and one by KHC (apples). But only two had attended a refresher course; 90% of the DAs said that the training had not been sufficient for them to train other farmers. Kale Heywet church and Arbaminch Plant Health Clinic (mango) have also trained model farmers to complement the ARD TOT extension system. Seven of the DAs had given training to farmers *specifically* on fruit (farmers were trained once in a specific way). This can be regarded as progress: DAs normally train model farmers and farmers in an integrated way (on their farm and in relation to other crops). They usually provided this training to farmers in groups. The majority of the DAs use an updated manual to train farmers and model farmers.
- ¹¹⁵ The DAs are supposed to train model farmers who further train farmers. From a questionnaire survey of 26 *model farmers* in Chench (apples) and Arbaminch (mangoes), all but one had been trained on the above-mentioned subjects, which can be seen as a success; 52% were trained by the *woreda* and DAs, 36% by external institutions and 12% by a cooperative. Only 27% had attended a refresher course. 46% of the model farmers use an updated manual and 23% an old manual to train farmers. 80% of model farmers had visited other farmers at their request. This means that it is mainly left to the motivation, courage, and possibility of each farmer to ask for training. Neither the DAs nor model farmers made specific efforts to include poorer farmers or women.
- ¹¹⁶ Regarding the reporting of diseases and pests on mango by farmers to the *woreda* agricultural services, 51% of respondents to household survey questionnaire stated that they report diseases or pests to the DAs or *woreda* ARD staff. These respondents were model farmers. This is important, as diseases and pests are a major threat to productivity and quality of mango. 31% of respondents stated that they have increasingly reported diseases since 2008. With regard to the responsiveness of the *woreda* ARD in case of reported diseases, only 19% of respondents stated the response was useful and timely, and 24% felt that the response was more useful and faster than in 2008. Clearly, capacity gaps at the level of *woreda* ARD can have a negative influence on good achievements or reporting. This issue should be addressed by the CGs, but they do not ensure systematic follow-up. Preferably, cooperatives should be included to report and control pest and diseases to the Arbaminch Plant Health Clinic.
- ¹¹⁷ The data suggest that a good basis has been created but that training of DAs and model farmers needs to be deeper and refreshed (upgraded), staff turnover needs to be taken into account (and not just by complementing the TOT system with training of model farmers by specialized institutions, paid externally) and other organizational and institutional gaps of the *woreda* ARDs hamper their performance in responding to farmers' needs.

Performance of ARD to train farmers

¹¹⁸ Information from focus group discussions, the household survey and reports of LCBs suggest that farmers have received training from the DAs or *woreda* staff, model farmers and some directly by KHC or APHC.⁴¹ Report data are mostly based on extrapolation of the TOT system and/or on the reports of model farmers and DAs. The progress in the provision of training (particularly on fruit) is illustrated in Table 7.⁴² The trend is positive, given that farmers did not receive any training before 2008. The data on farmers trained in apple tree management are especially impressive. The numbers are based on extrapolations of the TOT system by the *woreda* ARD offices, data provided during interviews with LCBs (and based on their reports) and data from SNV's impact studies (2012, including the post-training assessment by APHC, 2012). Section 3.3 provides other data based on interviews with farmers and household surveys.

Table 7. Performance of the *woreda* ARDs in providing training and improved planting materials for farmers since 2008.

<p>Apple</p> <p><i>Plant husbandry training: about 30,000 farmers trained</i></p> <ul style="list-style-type: none"> • 9000 farmers trained in Chench <i>woreda</i>, 2–3 day training in groups of 50 farmers. • Replication to 10 other <i>woredas</i>: 21,750 farmers trained, about 76% of the number planned. <p><i>Planting material</i></p> <ul style="list-style-type: none"> • 12 new varieties identified and 7 introduced to model farmers in the course in Chench. For the replication: 10 new varieties were introduced to 6 or 7 model farmers in 8 <i>woredas</i>. • Chench cooperative continues to be the most important source of guaranteed quality apple seedlings in the country with increased availability of top quality planting material (apple) via Kifle Bulo (private company supported by SNV for mist propagators and for business planning) – the price per seedling is almost double that for seedlings from Chench cooperative
<p>Mango</p> <p><i>Topworking and tree management: 2500 farmers trained</i></p> <ul style="list-style-type: none"> • 1040 households with mangoes in Arbaminch (of total of 10,000 farmers in key mango-producing <i>kebeles</i> in Arbaminch) have been trained (for 3 days) and have trees topworked (2500–3000 trees). • 1500 farmers trained in topworking in Wolaita zone. <p><i>Pest and disease management: 7000 farmers trained</i></p> <ul style="list-style-type: none"> • 220 model farmers and development agents trained, who then trained another 7000 farmers. <p><i>Nurseries: 13,000 seedlings</i></p> <ul style="list-style-type: none"> • 60 private nurseries (farm level) emerged and three <i>kebele</i> nurseries in Arbaminch. Seedlings distributed on a 'first come, first served' basis. 13,000 seedlings of improved varieties have been produced, of which 7600 by farmers in small-scale farm nurseries holding about 50 seedlings in their backyards.
<p>Pineapple</p> <p><i>Access to improved plant material: 4500 farmers – 500,000 seedlings</i></p> <ul style="list-style-type: none"> • 4500 farmers received seedlings of the improved variety, Smooth Cayenne, the number depending on the size of their farms. 80% of the involved farmers in Chuko and 90% of those in Dara received 50–500 seedlings, and other farmers 500–1000 (one farmer received more than 1000). • The farmers who received more than 700 seedlings have established small local nurseries. • In Chuko, seedlings of the improved variety 'Smooth Cayenne' were first planted in a nursery and therefore survival rate improved (in Dara, seedlings were distributed directly to farmers). • Dibabish, who was supported to establish a nursery (among others by a grant for 135,000 improved seedlings, has not eventually improved the access to improved plants). <p><i>Training on plant husbandry: 2300 farmers trained</i></p> <ul style="list-style-type: none"> • 2300 farmers who received new planting material have been trained in agricultural practices and fruit handling.

⁴¹ Data provided by the CGs or the *woredas* (some by KHC and APHC). For apple and mango (diseases and pests), they received follow-up by KHC and APHC, respectively (field visits, checking of reports).

⁴² For apples (Chench) this concerns training of farmers by *woreda* staff and DAs (but KHC follows up on the quality of training by DAs). For mangoes, the data refer to training of farmers by DAs or *woreda* staff (topworking) and by model farmers for pest and disease management (quality of training by model farmers to farmers followed up by APHC). For pineapples, the training is provided by ARD offices and DAs, and farmers did not receive any external follow-up.

¹¹⁹ Except for the specific and unique training of farmers on fruit tree management (once for each farmer), there is no budget to provide some of them with tools and improved varieties, and no meetings were organized at the *woreda* level focused on the fruit crops concerned.

3.2.3 Outputs of MSED

¹²⁰ MSED staff members were trained as TOTs in order for them to be able to train SME processors of mango and pineapple (with a focus on women processors). 220 SME operators have been supported by MSED staff in fruit and honey processing and packing methods and received business development services (counselling services); 85 operators received training on enterprise management and on possible future marketing issues of processed products. Since the incubators were not yet installed, the training remained theoretical. Market channels are not yet clearly elaborated but dialogue is ongoing with Ecopia. SMEs do not have access to finance. MSED does not have records on the current status of the trained SMEs.

¹²¹ The trained staff members of MSED who participated in exposure visits are no longer working with the regional agency. There is no evidence of the institutionalization of the experiences and lessons learned from these visits. MSED has produced 16–17 documents on value chains, a few of which have been implemented by MSED or partner organizations (i.e. paper value chain development by SOS Sahel). Only a few of these documents concern agricultural or rural VCs. The two incubators have not been installed and the buildings in Arbaminch and Hawassa have not been finished.

¹²² MSED now has a better understanding of the VC approach, and has taken the initiative to explore market opportunities for processed fruit products with Ecopia. The capacity and commitment of MSED staff to coordinate the sector remains limited and MSED is not yet the leader SNV anticipated. This is partly due to the high staff turnover, the limited institutionalization of knowledge and the limited practical knowledge of the VC approach. But given that the VC approach was new to MSED and to Ethiopia at the start of the BOAM programme, it is perhaps to be expected that it would take time for MSED to integrate the approach.

3.2.4 Outputs of private sector actors

¹²³ **Africa Juice and Efruit** – As explained in section 3.2.1, the supply of mangoes to AJ (via the GG union and cooperatives) is important and farmers have appreciated the training and advance payments provided by AJ. For AJ and Efruit it was the first time they had worked with cooperatives in an ‘inclusive contract’ setup, and both are now working with cooperatives in other regions. At first AJ focused on poorer-quality fruit, but they soon realized that they need high-quality fruit for processing. For AJ the quality delivered by the cooperatives remains insufficient. The contact with cooperatives is new and has not always been smooth. The fact that there are no cold rooms close to farmers adds to this difficulty since it makes them more dependent on AJ.

- ¹²⁴ **Kifle Bulo** – The Kifle Bulo nursery business has grown steadily, and its output has risen from 3000–5000 seedlings/year after obtaining the mist propagator, to 10,000 seedlings/year thanks to the extra support. The quality of its seedlings is guaranteed, which is important given the weak regulation in the seedling market. Prices are relatively high: ETB 62–96 per seedling, compared with ETB 46 for a seedling from Chench cooperative. With the new training centre, Kifle Bulo has already trained 80 farmers (clients) and 27 DAs for three days. Kifle Bulo has eventually not managed to get access to loans from SEAF and the Ethiopian Development Bank and this remains the companies’ main challenge. Kifle Bulo has developed stable relations with Holetta Research Centre and Oromia ARD.
- ¹²⁵ **Ecopia** – No joint ventures have been established with cooperatives, except with one mango farmers’ group in Lante (test in process) that does not have a plan for where and how to sell 30% of the processed products. The scale of the business (in a remote area) and the quality of the business plan (no reinvestments included) make sustainability doubtful. In Chench, Ecopia has started planting its own apple orchard, without cooperatives, for future fruit processing. Chench cooperative plans to set up a processing unit separately (without Ecopia). Chench and pineapple cooperatives claim that the dialogue with Ecopia has not been facilitated on a permanent basis except via the CG and that they do not dare to speak openly in the CG while Ecopia is present. Ecopia has repeatedly asked the CG to strengthen the organizational capacity of cooperatives. Ecopia has not yet obtained quality certification to allow it export to Europe.
- ¹²⁶ **Alaje** – Has gained experience in producing a large number of pineapple plantlets via tissue propagation and has learnt how to explore markets, but this has not been fully successful. So far it has not received any other demand of this size (for this large number of plantlets).
- ¹²⁷ **Dibabisch** – Of the six initial investors in pineapples, Dibabisch is the only one that has been unable to get a loan from a commercial bank despite intensive support by SNV. It was therefore unable to pay for 2 million seedlings ordered from Alaje. Dibabisch eventually planted 2 ha of pineapple (with 135,000 seedlings) but access to water remains a challenge. There is no outgrower scheme, and a processing unit has not yet been installed.

3.2.5 Results for enabling environment

Economic performance of the fruit sector

- ¹²⁸ Thanks to the success of the *apple* seedling market (since 2006), the increased local, national and international demand for apples, and the training on apple tree management by the *woreda* ARD and KHC, the apple sector is becoming interesting sector to invest in, not just in Chench but also in other regions that have started to produce fresh apples and apple tree seedlings. Imports of seedlings have fallen, although still more are imported than are produced locally. Between 2008 and 2011–12, the average price of apples increased from ETB 15/kg to ETB 30/kg, depending on the quality. The numbers of buyers and cooperatives have increased, as has the number of farmers involved. It must be noted that the number of cooperatives trading apple remains limited and that most farmers have only a few apple trees and limited potential for expansion. Apples of higher quality remain rare and thus the potential for export is still limited.

¹²⁹ The data on the fruit sector in Ethiopia are poorly developed, but data from Chencha *woreda*, the centre of apple production, illustrate some positive trends:

- The total area planted with highland fruits – apples, pears, plums and peaches – increased from 87.4 ha in 2009 to 156 ha in 2011.
- Apple production quadrupled between 2009 and 2011, to 1.28 million tonnes.
- Seedling production increased from 1.98 million in 2010 to 2.25 million in 2011.
- The number of apple and seedling producers increased from 6423 in 2009 to 14,700 in 2011.
- Between 2009 and 2011, apple trees have partially replaced other crops: the area used to grow the traditional ‘false’ banana fell from 4700 ha to 3576 ha; wheat from 5872 ha to 4057 ha; and barley from 7690 ha to 8352 ha.

¹³⁰ The number of interested *mango* cooperatives is not increasing, but those that combine banana and mango demonstrate promising trends. The demand for mangoes is high and increasing, but is less pronounced than that for apples. Farmers and buyers have increased the production of mangoes and the number of sales outlets, but both continue to invest more in bananas. Mango cooperatives in Arbaminch have strengthened their market position, but in general seasonality and manipulation by middlemen continue to dominate the sector, and access to storage is limited. The livelihood concerns of farmers continue to determine their sales patterns (selling unripe and bulk-quality mangoes directly on the market).

¹³¹ The *pineapple* VC is still monopolized by one trader in Addis and there are few active cooperatives. Processors have shown interested to invest but get stuck because of the weak capacity and commitment of the cooperatives and the speculation by the trader in Addis. Investors have been discouraged by the generally poor local investment climate and lack of access to finance.

Knowledge in the fruit sector

¹³² Knowledge of technical innovations has been developed or refined for the the fruit value chains, has been integrated in the extension services of the (regional) government, and introduced to private nurseries and model farmers. The innovations include pest and disease resistant rootstocks (apple), topworking (mango), tree management (apple and mango), pest management (mango), protocols for propagating seedlings using tissue cultures, mist propagators, etc. Manuals have been produced and used. Some of the techniques for mango trees will also be integrated at the regional and national levels. Research institutions such as Melkasa, Holetta, Hawassa University, Jimma, Alaje and Arbaminch Plant Health Clinic have been involved and so have specialized knowledge institutions like the Kale Heywet church.

¹³³ They have learnt from the experience of working via the government’s TOT system and within a VC approach. Further, they have been linked to other institutions but they have not been supported otherwise: they do not have stable access to funds and have not been strengthened organizationally. Market information systems have not been developed. Updated information on price setting mechanisms and market studies are only recently available.

The support framework

¹³⁴ The fruit sector has moved up the government's strategic priority ladder in order to support income generation for farmers and to help them work their way out of safety net programmes. For the government, MSED (SNNPR) and the Ethiopian Horticulture Development Agency (EHDA), fruits are priority crops for poverty reduction. The actors in the three VCs have gained better knowledge of each other and of technical solutions. For mango, they have also learnt about possible local market solutions between cooperatives and the private sector. Given that the VC approach and the promotion of fruit as a cash crop started from scratch, this is remarkable progress.

¹³⁵ Of course many gaps remain and will need much more time and continuous effort. A coherent vision on which markets should be targeted first (export, local markets) and how to put this in practice needs to be developed. The following gaps can be identified:

- The interests and perceptions of the necessary speed of change of the private sector, cooperatives and government are not yet aligned.
- The government has been keen to adopt and promote technical changes and innovations but has been less straightforward when it comes to investments to support the fruit sector (except for their recent interest in bananas and strawberries to export) and in developing a clear regulatory and policy framework. The government at the regional or national levels have not yet approved market regulations for certified seedlings. The local seedling markets thus remain unreliable. Official quality standards for fruit do not exist or are not applied, and an effective certification body is lacking.
- Replication of training to other *woreda* ARDs and deepening the training for DAs and farmers needs extra budget. It is not clear who can invest in this and SNV did not think this over in an exit strategy. At the level of *woreda* ARD, extension services for apple, mango and pineapple are not separately budgeted for and do not necessarily get sufficient attention next to other topics. The situation is better in Chench (for the apple VC) but the organizational capacity of the ARD offices and their TOT system has remained unchanged. In general, public agencies, including MSED and the ARDs, suffer from high staff turnover.
- There is not really a common understanding about the type of farmer organization that is needed to develop a business. Traditional cooperatives demonstrate limitations in that respect. A strategy on the matter is not yet being developed.
- Despite obvious progress (improved quality of business plans and records, improved use of own funds by cooperatives, available funds for unions from VITA), promising private entities are not sufficiently bankable. The requirements of the financial sector and the products they offer are not adapted to the fruit sector yet. The financial sector does not really know the fruit sector and has not made it a priority. There are no systematic market information systems in place to inform farmers. For pineapple, there is no evidence of institutional changes that would improve the predictability of the market.

3.3 CHANGES AT THE FARMER LEVEL (ACCESS TO IMPROVED SERVICES, INPUTS AND MARKETS)

- ¹³⁶ The information related to farmers was collected mainly from focus group discussions for the three commodities and from a household survey for mango and apple.⁴³ Some additional information was gathered during farm visits and meetings with resource persons in the *kebeles* and members of cooperatives. This information was systematically collected after interviews and a document review of SNV's clients involved. The household survey was conducted after the focus group discussions to test some of the hypotheses.
- ¹³⁷ In the household survey the key questions were: 1) to what extent have households in the supported *woredas* been trained by the *woreda* TOT system and have access to improved varieties; 2) to what extent have they applied their acquired skills; and 3) to what extent have their access to markets improved? A random sample of both beneficiaries and non-beneficiaries⁴⁴ of the training by LCBs were included. The survey included recall questions for households. The methodological approach is presented in Chapter 8. The results of the survey should be compared with the situation in 2007–2008 when no training at all was available on improved fruit techniques (except for some households in Chencha with KHC). Farmers may be trained by *woreda* staff, by DAs, by model farmers or by KHC or APHC.
- ¹³⁸ Data on training on tree management and on pest and disease management were cross-checked with data from the APHC post-training assessment (2012), reports of KHC, SNV's impact study (2012) and activity reports of SNV and its clients. The information on 'access of farmers to services, market, inputs' from the focus group discussions, key informants in the *kebele* and the household survey systematically indicated lower numbers than those recorded in the reports of LCBs, *woredas* and SNV (see Chapter 4 on performance). For some training this can be explained by the fact that farmers did not always consider training interventions as separate and specific, for example, because model farmers may have refreshed and upgraded the endogenous knowledge of farmers in the field, rather than giving a formal training on new techniques. This certainly was the case with the training on pest and disease management for mango farmers. KHC and APHC have trained model farmers and not all farmers.
- ¹³⁹ Even though the numbers on access were lower than assumed (assumptions based on the activity reports, and on extrapolation of the *woreda* ARD TOT system), they still demonstrate that a considerable basis has been laid for increasing the knowledge of farmers on fruit tree (plant) management and increasing access to improved planting materials. Compared with the

⁴³ For each commodity, focus group discussions were held in two *kebeles* (in Chencha for apple, in Arbaminch for mango and in Chuko and Dara for pineapple), one with a stronger cooperative and one with a weaker cooperative for mango and apple and at random for pineapple. In these *kebeles*, resource persons were also interviewed in groups or individually (women, first adapters, non-adapters of apple, older and young persons, farmers who develop small nurseries etc.). For pineapple, two additional focus group discussions were held with farmers who received the first batch of plantlets of improved variety (Smooth Cayenne). For mango, 100 households were surveyed (one *kebele* with a weaker cooperative and one with a stronger cooperative = *kebele* with Lante cooperative (a strong cooperative) and *kebele* from Chano Dorga (a weak cooperative). For apples, 120 households were interviewed, similarly in one *kebele* with a weak cooperative and in one with a stronger cooperative (*kebele* Elena Cherae with in Maffo ena Zolo cooperative (a weak cooperative) and Shaye *Kebele* with Chencha cooperative (a strong cooperative). The selection of households was random, including ordinary farmers, model farmers and members/ non-members of cooperatives.

⁴⁴ The *woreda* TOT system and its monitoring data assume that every farmer will be trained and receive follow up.

situation before SNV's intervention, where there was no training on fruit at all and improved varieties were not identified or were not used, the trend can be regarded as important. The survey results indicate that the exact application of the new techniques is still limited and that (model) farmers and DAs need refresher courses and tools.

¹⁴⁰ Access to markets has also improved for farmers: there are more traders in the market, more farmers sell through cooperatives and receive higher prices from them than on the market. Farmers are more aware of the need to produce quality fruit and know better how to identify it. Here, the limitations lay in continued sales of unripe fruit by the majority of households to cover immediate expenses. The survey confirms that the livelihood concerns of households interfere with their integration in VCs.

¹⁴¹ **Poverty focus for access to services** – From the focus group discussions and the household surveys, the evaluation team concludes that poor farmers and women are not excluded from training (via *woreda* ARD, LCBs or cooperatives). However, the factors limiting the application of new technologies and varieties in general, such as the lack of tools and the complexity of the techniques provided in one training only, are especially significant for the poorest farmers and women. It is thus expected that they will adopt new varieties and new technologies less quickly. Especially for the apple VC this is a risk, because late adopters will also pay higher input prices: with the steep price increase in investments in the apple VC, the price of inputs has also increased.

¹⁴² **Poverty focus for access to markets** – Originally, poorer farmers' access to cooperatives was already possible. Moreover, any poor household, member or not member of a cooperative, can benefit from increased market prices and from the increased presence of traders. Poor farmers are clearly more aware of the potential of fruits as cash crops, but their participation in markets is limited by the following:

- as fruits become cash crops, the related income and control shifts from women to men. The same shift was noticeable in the cooperatives: their leadership is dominated by men while growing fruits were originally income-generating initiatives managed by women;
- the limitations on producing quality fruit (as mentioned above) are greater for poorer households and women. They are more likely to sell fruit before it is ripe to cover immediate expenditures; they are more reluctant to replace traditional trees with improved varieties because of the loss of harvest; they have less access to tools; and the training is sometimes too complex for them);
- the strategies of the most successful cooperatives and the Goma Gofa union are increasingly targeted at more progressive farmers who are prepared and ready to go for aggressive and more risky trade; and
- farmers do not always understand the complexities of market mechanisms. This was particularly clear for the pineapple VC.

¹⁴³ The following sections present data on each of the three commodities obtained from the household survey, which confirm the trends observed by the evaluation team in focus group discussions and in interviews with key informants in the field (often DAs).

3.3.1 Apples

¹⁴⁴ **Summary** – 29% of the farmers have been trained. Fewer farmers have been trained via the TOT system than assumed. A clear trend is that farmers' knowledge of seedling production, pruning and new varieties has improved since 2007. This is particularly the case for model farmers directly trained by KHC and members of Chenchä cooperative. 30% of the farmers are already growing new varieties introduced since 2007. Their skills remain too superficial and are effectively applied by a rather limited number of households. However, compared with 2007, the improvement is reasonable. The fact that few farmers have access to the tools they need has contributed to the moderate implementation of new techniques. Few farmers have received post-harvest or processing training. Cooperatives are increasingly providing specialized training, although this is more pronounced for Chenchä cooperative. The number of households with apple trees has doubled since 2007, and almost all households interviewed have apple trees or raise tree seedlings. There are more households producing apple seedlings than fresh apples. Almost all rural households in Chenchä are expanding their apple or apple seedling production, but such expansion is hampered by the limited land and by the need to continue to grow traditional crops like false banana for food security. Apple holdings remain small and unspecialized.

¹⁴⁵ About 30% of farmers have increased their sales of quality apples, which again is promising: in 2007, quality standards were not applied at all. However, the practice of selling fruit before it is ripe continues. Most fruit is still sold in bulk. More local traders are around in rural areas. Cooperatives pay higher prices for fruit and seedlings than the free market. More farmers sell through the cooperative (and larger quantities) than in 2008, especially seedlings. For Chenchä cooperative, the number of farmers selling their fruit via the cooperative is also considerably higher. One in seven rural households in the *kebeles* interviewed are members of a cooperative. Many farmers do not yet have sufficient trust in the quality system of the cooperatives but are aware of its existence.

¹⁴⁶ **Involvement of farmers in the sector** – As many as 94% of survey participants are involved in apple production, a steep increase since 2007.⁴⁵ This demonstrates that the interest in fruit production has strengthened. The interest in seedling production has also increased since 2006. 75% of apple farmers produce seedlings, as might be expected (Chenchä's cooperatives have grown based on sales of seedlings), but the survey also indicates that about 60% of households sell apples. The 5% of farmers who are not involved in apple production are very poor and often older farmers, who are interested but were too late to step in and in the meantime the prices of inputs (fencing, seedlings, compost) increased.

¹⁴⁷ Most farmers grow apple trees around their homestead (95%) or have small orchards. Of the 84% of farmers have expanded the number of apple trees since 2008,⁴⁶ 63% of them had to uproot other crops, which underlines their motivation. 95% would like to expand but cannot, mainly because of the lack of resources (to invest) and land, and because of the desire to keep food crops such as false banana. This highlights the need for further productivity increase and improved quality of the apples produced in small plots. Women have always been marginally

⁴⁵ 54% of farmers surveyed have planted apple since 2007 (almost double).

⁴⁶ 55% of farmers have 1–10 trees, and 29% have more than 15 trees in small orchards.

involved in selling fruit and seedlings, and may sell small amounts of unripe fruit (leftovers or unripe fruit) for cash for emergencies, except for female-headed households.⁴⁷ For women, the workload involved in apple and seedling production is considered to be high, especially taking into account the preparation of compost (but since the area is very scarce, there is a surplus of labour, so increased labour for apple trees will not reduce the time spent growing other crops).

¹⁴⁸ **Access to training** – 29% of the farmers interviewed in two *kebeles* had received training on tree management and new varieties, or had received some form of follow up for fruit tree management. In 2008 this was 0%. These percentages are lower than suggested in the SNV reports. SNV says that 13,000 farmers in Chench *woreda* had been trained; this would be almost 66% of the 21,000 rural households. The difference can be explained by the fact that in one of the two *kebeles*, KHC (supported by SNV) directly trained model farmers. In the other *kebele*, the TOT system of the *woreda* took care of the training. Of the 29% of farmers that were trained, only 20% received both training and follow up, 54% received only training and 26% only supervision and no training. 40% of trainees were trained directly by the KHC (supported by SNV), which is consistent with the fact that KHC only gave direct training in one of the two *kebeles*, 23% were trained by *woreda* staff (trained by SNV), 23% by model farmers and 9% by the DA. 57% of the trainees were satisfied with the training (those trained by KHC).

¹⁴⁹ **Knowledge and inputs, productivity** – About 30% of farmers grow new varieties of apple trees introduced since 2007 in their orchards. They explained that it remains difficult to find new seedlings of guaranteed quality. 43% of the respondents know the new varieties well (can describe their characteristics), which is an acceptable result. The figure is higher among the farmers directly trained by KHC. 43% of the farmers producing seedlings know about the compatibility of the new varieties and their rootstocks, which is still low given that 75% of them are involved in seedling production (and particularly so considering that farmers sell seedlings among themselves). 22% know the chilling requirements and adequate production zones for the new varieties. This is low, but is acceptable given that this marketing can be done by the cooperatives.

¹⁵⁰ 46% of farmers prune their trees in winter and 48% in summer, which is a promising result. The percentages are higher among farmers directly trained by KHC. The figures are lower than those derived from *woreda* data based on the TOT system. Only 22% of the farmers who prune their trees feel that they do it properly. Only 23% of farmers have access to tools for pruning (66% borrow tools from neighbours), confirming that refresher training is needed and that access to tools need to be improved.

¹⁵¹ **Marketing and sales** – More than 80% of all apple and seedling producers have improved their sales since 2008. It should be noted that new varieties only started to give fruit gradually. 30% of the households say there are more traders in Chench to whom they can sell their apples and seedlings.

- Cooperatives are the main buyers of seedlings (for 74% of farmers) and they pay more than the market price (ETB 40–43/kg compared with ETB 20/kg from traders). Since the new market regulation on seedlings in Chench, cooperatives also buy from non-members.

⁴⁷ Based on information from focus group discussions, cooperatives and *woredas*.

These are promising results and in fact are good signs that the structuring of the value chain, even if young, is starting to work.

- For fresh apples, only 32% of farmers sell through cooperatives but this is also increasing. In 2008, cooperative members sold an average of 31 kg via the coop (based on data from a survey of cooperatives), compared with 144 kg per member in 2011. The cooperatives pay ETB 27–30/kg (depending on quality) whereas market price is ETB 17. However, households continue to sell unripe fruit to cover immediate expenses. Tenders issued by the cooperatives (for seedlings or apples) do not always reach farmers in remote areas. Apples are also sold directly to consumers by 36% of farmers.

¹⁵² Among the farmers who sell apples, 29% of sometimes sell grade 1 and 11% grade 2 apples. For seedlings the figures are lower: 21% sometimes sell grade 1 and 15% grade 2. These percentages are acceptable: selling quality apples is regarded as an enormous challenge compared with just selling fruit or seedlings. Farmers have complained about the quality grading system of Chenchu coop as they believe it is rather subjective (rejected apples by one household sold to the cooperative by other household).

3.3.2 Mangoes

¹⁵³ **Summary** – All farmers who responded to the survey have grown mango for a long time and have expanded their production and sales since 2008. The expansion is however limited and there are just a few specialized mango growers. Since 2008, clearly more farmers have been trained specifically on mango production (24% on topworking and 30% on pest management). Before that date there was no specific training on mango. 20% of the interviewed households are growing improved varieties. This is less than the figure given in the CG activity reports, but is still remarkable: before, mango was not regarded as a cash crop, but more a crop to provide some shade and a small income. Cooperative members are better informed than non-members about quality requirements, market outlets, tree management and market information. Improved seedlings and tools are not readily available for households in rural areas and replacing mango trees with more productive ones or trees that bear better quality fruit, is seen as posing a major risk for loss. On the one hand, this is a positive sign: households see the potential income from their mangoes, but on the other it is a negative one because it means that the households are not able to bridge the short period before their new mango trees mature and produce fruit.

¹⁵⁴ The awareness of mangoes as a cash crop has increased, just as the number of members of cooperatives. Both are to be considered as important signs that the value chain is starting to function, at least locally. This is only partly accompanied by improved management of mango trees and better quality of mangoes. Despite increased sales of better quality mangoes by cooperatives and a slight increase of the number of farmers that receive advance payments, the majority of mangoes are still sold in bulk (not selected quality) on the market by households and unripe picking continues. The need for direct income from sales of immature mangoes on the market weakens the position of farmers in the VC.

¹⁵⁵ **Involvement of farmers in the sector** – Almost all households in two *kebeles* of Arbaminch that responded to the survey (97%) grow mangoes. For households that have grown mangoes for 25 years, this a crop with few soil or tree management requirements, and which provides good shade and some extra income. Most farmers have planted 4–5 mango trees in their farmland. Mango trees compete with bananas for land and they shade other crops. Farmers are traditionally more interested in investing time and inputs in bananas, which give more continuous income and have a better market margin. The awareness that mangoes can also contribute to their income has clearly increased. This is an important trend. 97% of households planted additional mango trees. 29% of respondents said they have uprooted other plants in order to plant mango. Almost all households are interested in expanding the number of mango trees but they do not have sufficient land and do not wish to replace their bananas. Traditionally mango is a woman’s crop destined for small sales. Now that mangoes are regarded as a more important cash crop, men have become more involved (leaders of coops are mainly men).

¹⁵⁶ **Access to training** – Providing advice and follow-up services for farmers regarding mango trees used to be part of the usual activities of the DAs, but not much attention was given to them in the past. Since 2009, farmers have received specific training on mango.

- According to local institutions, 7250 mango farmers have been trained in traditional pest and disease management via TOTs, and (as follow up) also on sanitation and pruning. This is relevant for almost all mango farmers in 10 mango-producing *kebeles* of Arbaminch, or about 8000 households. Farmers have long used traditional mango tree management measures, and this training is seen as refreshing their knowledge. Pests and diseases of mango trees are indeed major challenges, together with the lack of storage facilities.
- According to local institutions, 1040 farmers in Arbaminch have been introduced to top grafting, or about one in eight mango farmers (12.5%). Improved varieties were introduced around 2003, but not with topworking (see list of concepts on page 6).

¹⁵⁷ Based on the results of the household survey, the evaluators conclude that 24% of farmers have been trained on topworking. This is more than the number of people that were trained initially, meaning that the DAs and model farmers themselves have also started to train other farmers. About 30% of the households say they have received training on pest management. The problem is that farmers do not always recognize this training as separate or specific, as it helps them to remember what they already know. These are both good results. From the questionnaire and focus group discussions it appears that the trainees find that they need more in-depth training. Members of cooperatives are better informed about the importance of some management techniques and know more about top grafting than other farmers. This is particularly true for Lante cooperative, a finding based on focus group discussions, farm visits and discussions with leaders and members of the cooperative.

¹⁵⁸ **Applied skills and inputs** – Tree management is still done in a semi-extensive way. 28% of households use compost, 42% cuts back the crown regularly, and 20% have uprooted mango to increase productivity of other mango trees (replacing or reducing the chance of pest transmission), which are good results. However, 41% of the farmers that uprooted their mango trees did so to reduce the shade over other crops and 16% to make room for bananas. 85% of

households use baskets and their hands to harvest mangoes, while 16% simply collect the fruit from the ground.

¹⁵⁹ Farmers' knowledge of diseases is still limited. Only 7% of respondents are aware of more than three diseases, 24% are aware of just one, and 66% have only some idea. However, when it comes to traditional pest management applications, the results are better. 74% are familiar with the practice of smoking trees as part of disease management, and thinning of mango as a way to manage pests and diseases is known by 56% and practiced by 48%. 48% of respondents say they clear the ground around their mango trees more than before, which is a good result.

¹⁶⁰ According to a post-harvest assessment by APHC (2012), training efforts have significantly reduced the incidence of diseases and pests from 58% to 25% in one *kebele*, although the research did not investigate the causes. It is expected that as a result, losses will be reduced from 13% to 6% during the upcoming harvest season. From the household survey for this evaluation, it appears that pests and diseases remain major problems for mango farmers. For 29% of respondents, their mango trees have been less affected by pests and diseases and less fruit has been lost since 2008, while 7% have seen no difference. For the other households, pests and diseases have affected more trees, or fewer trees but the problems have been more severe. Only 51% of households report diseases to the DAs when they occur. For 31% of households this reporting habit has increased since 2008, which is positive and satisfying. Only 19% of respondents were satisfied with the response of the *woreda*.

¹⁶¹ **New varieties** – From the survey and focus group discussions, it seems that farmers are aware of the existence of new varieties but not all have been informed about topworking. Farmers are well informed about the fact that the new mango varieties fetch better prices, but they find them more susceptible to diseases. 20% of respondents grow the new varieties and 18% have already applied topworking (mostly after training received from the *woreda*). 7% of farmers were already implementing topworking before 2007, meaning that 11% have applied topworking since the training by SNV, which is a rather limited proportion of the population and trainees. Only 10% of households have the tools they need for grafting.

¹⁶² **Marketing and sales** – An important change is that 72% of survey respondents sell more mangoes than before, and 83% find that market outlets have improved. Already 49% of respondents sell most of their mangoes to cooperatives (37% sell most of their mangoes to traders and 5% directly to consumers). Cooperatives pay higher prices for mangoes (better quality) and provide market information to their members.

¹⁶³ Farmers are more aware of the importance of selling quality mangoes, can identify quality mangoes and are more used to being paid per mango than by weight. However, most farmers continue to sell low-quality and unripe fruit. 90% of respondents sell bulk mangoes only (mixed quality and maturity), which indicates that additional measures are necessary. Only 8% of households do not sell all mangoes in bulk. There is no real quality grading system in place at the cooperative. 18% of farmers that sell quality mango are paid in advance and the rest after they have been sold. Farmers mention problems with sales to Africa Juice, as they are not sure AJ will collect the mangoes at the agreed time, while there proper storage facilities are not available in the *kebeles*. More continuous follow up of the communication between coops and

private sector actors is necessary. Possibly, the private actors should be coached more on how to communicate with cooperatives (this now takes place at CG meetings).

3.3.3 Pineapples⁴⁸

¹⁶⁴ **Summary** – Farmers in the intervention area, except for the poorest who have limited land available, have expanded their plantations and sales of pineapples since 2010 thanks to better market prices. Their involvement in pineapple has not been very stable, since households are vigilant and are always ready to replace pineapple with other crops, depending on market prices and opportunities. The old varieties of pineapple, such as Red Spanish, are still widely grown. Farmers who have produced the new variety, Smooth Cayenne, and have been trained specifically on pineapple, are positive about its size and sweetness, and the fact that it fetches higher prices. Their position in the market remains weak, prices are unpredictable, and they do not have access to market information or storage facilities, and do not receive advance payments. Most farmers cannot explain the market mechanisms.

¹⁶⁵ **Involvement of farmers in the sector** – Farmers' involvement in pineapple production has varied over time in the two *woredas* supported by SNV, depending on their success in the pineapple trade (the prices they receive) and on the prices of other crops such as chat and coffee. In 2004, many farmers uprooted their pineapples but replanted them in 2008–2009. After their failure to sell pineapples successfully, some farmers started to uproot their pineapple plants again in 2010, but stopped doing so with the introduction of the new variety, Sweet Cayenne. All households are now growing more pineapple than they did in 2005. Currently, Red Spanish is still the most commonly produced variety. Households have some reservations about replacing their pineapples with the new variety because they lose 18 months of production. Due to very limited available land, there is competition with false banana (for food security), chat and coffee (cash crops). The poorest households do not grow pineapples. Women own 10% of the plantations and can control that part of the income. They are also entitled to sell what is left over after harvest. The new varieties are more labour demanding (chasing birds, row planting) but this is worthwhile in view of the extra income they can earn and the advantage of having less thorny leaves.

¹⁶⁶ **Access to training, knowledge and inputs** – According to local institutions, 500,000 Smooth Cayenne plantlets have been distributed to farmers, of which the 50,000 plantlets from Jimma are already bearing fruit. They have been distributed to 4500 farmers in two *woredas*. Farmers were informed by the DAs that they could obtain plantlets according to their land area, but they had to apply for them. Most farmers received an average of 200–500 plantlets each. Some bigger farmers (with more land) received more than 1000 plantlets and are currently functioning as source of new planting material (have become local private nurseries).

¹⁶⁷ Farmers that have received plantlets have all received specific training on agricultural practices by DAs (row planting, spacing, timely harvesting, etc.). For some farmers, this was a refreshment of earlier training provided by the SNNPR in 2009. The survival rate of the

⁴⁸ Information is based on two rounds of focus group discussions, one round in pineapple producing areas and another round with farmers who received new variety plantlets that are already in production.

plantlets has been variable (from 60% to 83–95% in the first season after planting) and was higher where the plantlets were first raised in a nursery before being planted out. Farmers find the plant suitable for their area and prefer the Smooth Cayenne variety (promoted by SNV) above the Red Spanish variety because it is easier to weed (no thorns), sweeter and fetches a better price (it is also much bigger than the Red Spanish variety). However, it grows more slowly, needs more water in the beginning, and produces few suckers. Cooperative members do not have better access to services or inputs or information. Cooperatives have not been involved in distributing plantlets to farmers and have not been trained as TOTs. The farmers do not have any tools, specific credit schemes or advance payment schemes related to pineapple.

¹⁶⁸ **Marketing and sales** – Since 2008 sales of pineapple have increased by about 30% according to farmers. They continue to sell individually to traders and middlemen at or near the farm gate. They have little trust in collective sales. The fruits are picked on time, according to farmers, but the market is seasonal and is manipulated by middlemen who are all linked to one buyer in Addis. Prices drop fast during the two harvest seasons and can be considered as unpredictable. Farmers do not have any other market information than what they learn from these traders and have no access to proper storage facilities. Most farmers cannot explain the market mechanisms of pineapple.

¹⁶⁹ Most farmers still sell the old variety, even though the prices of the new variety are at least 50% higher. It is also much bigger, but it is also difficult to transport as it is easily damaged; no solution to this challenge has yet been found. There are no outgrower schemes in the area and no farmers are employed in processing units, but some small processors have been established (also supported by MSED), but data on how many are not available. The farmers gave a negative assessment of the training on processing by Ecopia and did not understand its objective.

3.4 Factors contributing to the results

Policy, market and investment climate

- The market demand (local, national and international) for the three fruit commodities is growing, especially for apple, bringing steep increases in the prices of fresh apples and apple tree seedlings. The market mechanisms are complex and were dominated by few big traders in Addis in 2007, except for apple seedlings that KHC has provided since 2006.
- Strong top-down policy setting, authoritarian regime in Ethiopia. Government and public agencies are not very open to organizational development, but are interested in partners who support them in implementation of their programmes (to achieve their targets, to complement their budgets and human resources). This is also the case for the *woreda* ARDs and their traditional extension system.
- Ethiopia has an extensive local agricultural extension network, based on a cascade system of training of trainers (TOT). The system functions in a top-down way. Extension services for fruit production were not part of the agricultural extension system.
- ‘Access to market for the poor’ is a priority for the Ethiopian government as a way to limit the number of households dependent on food and income safety programmes. The government is promoting fruit and vegetable marketing cooperatives as outlets for

farmers. In reality, the transition to a market economy and the creation of a supporting investment climate in rural areas is not straightforward. The government focuses on private sector development around cities and on export commodities (and crops). There is a public marketing agency for fruit (Efruit). At the start of the BOAM programme the number of cooperatives and private sector companies in the fruit sector was very limited. Apart from being enterprises, cooperatives are also considered by the government as local structures that can improve livelihoods, provide social protection and allow the government to control the messages brought to farmers. In SNNPR, cooperatives cannot develop joint ventures. Unions and cooperatives have had serious problems with financial accountability and transparency to their members in the past.

- Rural households have very limited land, so that expansion is no longer possible. In the intervention areas soils are generally exhausted, although less so than in the north of the country. The population is growing and vulnerability to food insecurity is high, so all households devote part of their land to producing food crops.
- All cooperatives existed or were established and had already developed some activities without support from SNV. SNV has supported those cooperatives with a business orientation. Cooperatives close to roads and towns, such as Lante, have access to markets and this is especially pronounced for mango (a perishable product, no proper storage facilities available). Mango cooperatives have systematically combined mango with bananas, so their increased capital and sales are greatly influenced by the banana trade.
- Most private processors, buyers and investors in the BOAM programme existed before 2009 and established market outlets, but they were not linked to cooperatives for supply services (Ecopia, Africa Juice, Efruit). Kifle Bulo nursery also existed before and had developed its own clientele. New investors were attracted only because there was no pineapple business in the area or elsewhere.
- Ethiopia has good knowledge institutions for fruit. All technical innovations were known in the country, but they were not promoted at the farmers' level or as part of the TOT (so only by some projects to some farmers).

Support from other agencies

¹⁷⁰ The three value chains and their CGs have received little support from other agencies in the SNNPR. Support has focused on apple (*woreda*, young cooperatives), and 'hardware' (seedlings, tools). VITA is an important funder of livelihood projects in Chencha, and has recently invested in the GG union by providing training for staff, paying staff wages, paying for stores, shops and a credit fund for cooperatives.

- The Ethiopian Horticulture Development Agency has recently trained some cooperatives on technical issues related to fruit, but this remains limited. The cooperative promotion offices audit the cooperatives each year, but this has not happened regularly everywhere. Generally, the cooperatives regard this support is as weak.
- The Kale Heywet church had long promoted apple in Chencha *woreda* using a community approach, at very small scale, and provided professional training and improved planting material to other stakeholders all over the country. The church has also chaired the extension coordination forums in Chencha. The two pineapple cooperatives have received support from ACDI/VOCA (an American NGO) for marketing and technical training. The SNNPR organized training on agricultural practices specifically for pineapple in 2009. JICA's

OVOP programme has contributed to the new mango farmers' group (members of Lante coop) to cover part of the investment needed for a solar dryer in the framework of a joint venture with Ecopia. Kifle Bulo nursery has recently received support from Spanish Aid to expand its business.

3.5 SUMMARY OF INSTITUTIONAL CHANGES IN THE SECTOR AND ACCESS TO SERVICES AND MARKETS

¹⁷¹ Collaboration between stakeholders of the three value chains has improved, where this was non-existent before. A key factor has been the coordination group (CG) for each value chain. Diverse and relevant stakeholders participate in the CGs, except for government decision makers and the financial sector who do not participate on regular basis. The interactions between stakeholders are effective during CG meetings but are rather weak in between meetings. The dynamics are more permanent for the apple VC where also a local coordination platform and a local taskforce on seedling market regulation are active. It remains difficult to get commitment from government institutions for coordination and investment. 'Natural leadership' has not yet emerged, and MSEDAs are not playing this role. Farmers' representatives have not been strengthened specifically to participate in discussions or to lobby the CGs. The priorities set in the CGs are not evaluated systematically against priorities of farmers.

- This collaboration between stakeholders has raised awareness about what the value chain approach for fruit can achieve. In particular, stakeholders have learned about innovative solutions for market arrangements with cooperatives, for input supply and technical innovations, and about the various roles they can play in the VC. Research institutions and specialized knowledge institutions have been involved. Stakeholders reflect jointly on the priorities for VCs.
- Bilateral cooperation between stakeholders in the VCs has emerged via the CGs, mainly between stronger cooperatives and the private sector and between knowledge institutions and cooperatives. These links did not exist before. Some bilateral institutional relations have also emerged between public agencies and knowledge institutions, but the commitment of public agencies is generally low when it comes to maintaining and extending the collaboration.

¹⁷² The CGs have allowed tests of some innovations for certain links in the value chains. This has led to the development of specific capacities of some of the stakeholders:

- The original mango and apple *cooperatives* with a strong business orientation have established sustainable relations with processors or other buyers and have made significant progress in developing their businesses: they have developed their capacity to explore markets, to raise awareness among members of the need to produce quality fruit, to lay the basis of quality systems and to use their capital more efficiently. The progress in capacity is only relevant for a very limited number of cooperatives and no other groups of farmers have developed (except one recent farmers' group for a joint venture in the mango sector). Increasing numbers of apple and mango farmers are members of a cooperative (mango by 70%, apple by 83%). The number of apple cooperatives has increased from 1 to 9. For pineapple there has been no significant increase in membership and the number of cooperatives remained stable. The capacity of two pineapple

cooperatives in the intervention area has not improved. There significant variations in the performance of the cooperatives. The stronger cooperatives have increased the number of stable market outlets. Mango cooperatives have developed contracts with processors, which have further strengthened their market position. Chenchu cooperative (apples) and Lante cooperative (mangoes) have increased traded volumes of apple and mango. However, all cooperatives also still have a good part of reactive sales, they lack appropriate storage facilities, they have found it difficult to convince members to sell to the cooperative and to produce better quality fruit, and they provide fragmented access to market information. The cooperatives have not succeeded in establishing joint ventures with processing units. The two pineapple cooperatives have almost no collective commercial activities. Outgrower schemes for pineapple have not been established.

- The success of changes in the *private sector* has been dependent on the scale of the support compared to existing growth trend of the business and is generally limited by their limited access to finance and by their own fragile market position (competition from subsidized government agencies, uncompetitive in the international market). If this support was embedded within an existing growth trend of the private sector, it has mostly been very effective.
- Technical innovations have been integrated in the *government's extension services* (regional ARD offices). A budget line for fruit has already been included at the agricultural department at the zonal level. Other elements have not changed: the budget for training farmers, the provision of training on fruit as a priority, or the organization of the extension system at the *woreda* level.

¹⁷³ **Enabling environment** – Some changes in the environment of the fruit sector and the VC approach have been achieved, because of the increased awareness of the importance of the sector and its challenges. For the national government, MSED (SNNPR) and the Ethiopian Horticulture Development Agency, fruits are now priority crops for poverty reduction. Public agencies (like MSED) have slowly but surely started to adopt the VC approach and are developing partnerships. More improved planting material is available although there are problems with guaranteed quality of the apple seedlings in Chenchu. Given that the VC approach and the promotion of fruits as cash crops started from scratch in Ethiopia, this is remarkable progress. Several gaps remain, and important initial constraints have not changed much yet and will need much more time and continuous effort. The following gaps have been identified:

- The government has not made significant additional investments in the fruit sector, except for their recent interest in bananas and strawberries for export, and has not developed a clear regulatory and policy framework, including regulations on the quality of fruit and planting material.
- There is no common understanding of the type of farmers' organizations that are needed to develop a business. It is clear that traditional cooperatives have their limitations in this respect and that the majority of farmers in the fruit sector remain unorganized.
- Despite progress, the requirements and products of the financial sector have not yet prioritized or been adapted to the fruit sector.
- Systematic market information systems are not yet in place.

- The efforts of the government for private sector development in the fruit sector are not straightforward; for example, the government continues to support a public marketing agency and public nurseries.
- The priority needs and constraints of small fruit farmers are not accurately known by the CGs.

¹⁷⁴ **Access to services** – More farmers and model farmers have been provided with specific training on fruit growing and farmers’ access to (improved) planting material improved (for apple, mango and pineapple). About 40,000 farmers received specific training on fruit tree and fruit management, including on improved varieties. This can be regarded as a significant trend, given that farmers did not receive any training on fruit before 2008. The number of farmers trained in apple tree management is especially impressive. Except for this specific and one-off training for farmers on fruit tree management, there is no specific budget for fruit and systematic meetings on fruit (or the fruit crops concerned) are not organized at the *woreda* ARD level. The further training and follow up of fruit farmers is done in an ‘integrated’ way by development agents and *woreda* ARD staff: they visit model farmers and farmers to ensure follow up of farming in general, but not fruit in particular. The improved planting material is usually distributed to farmers by the ARD offices. The quality of apple seedlings (compatibility between rootstock and scion, knowledge of varieties sold, etc.) continues to be a major challenge. Members of cooperatives were trained not only by *woreda* ARD offices but also by their cooperatives. Out of 18 apple cooperatives, 38% have provided technical training or information to their 1370 members since 2008 (all commodities).

¹⁷⁵ Based on the results of the household survey, the evaluators conclude that 20–30% of farm households have received training. Since in 2008 this was 0%, the increase is substantial. As many as 57% of the trainees were satisfied with the training, and the figure is even higher for farmers directly trained by LCBs. Almost all households have expanded their fruit production (replacing other crops) and have introduced new technologies. New varieties are currently used by about 20–30% of farmers in the intervention area. This is less than assumed in SNV’s reports, but can be considered as a positive result (compared with none in 2008). Further expansion of fruit production is hampered by limited land available and by the continuing need for food security crops such as false banana. Farmers are also reluctant to replace old varieties with new ones because of the loss of harvest for some years. This is also the case for mango and pineapple for which the transition time is about two years. The skills and professionalism of farmers to apply the techniques – those for apple are considered to be very complex – still need to be improved. Training and follow up needs to be intensified and systems to provide tools to farmers (to apply the introduced techniques) need to be developed.

Access to markets for farmers – Whereas the sale of bulk quality fruit (often unripe) was seen as a way for women to generate an income, the interventions have contributed to increased awareness of farmers of the potential of apples, mangoes and pineapples as sources of income, and of the need to produce *quality* fruit. For apple and mango there are more traders who buy fruit directly from individual farmers and this has slightly improved the market position of farmers. The new varieties of pineapple and mango also fetch higher prices on the market. Apple and mango farmers (mainly coop members but recently also non-members) have access to market information and better prices via the cooperatives but this is only true

for better quality fruit and for limited volumes.⁴⁹ Three mango cooperatives that have contracts with processors or Etfruit provide members with advance payments for part of their mangoes. More sales of fruit by smallholders are channelled via cooperatives (in total and per member) for apple and mango, but not for pineapple. Despite increased sales via cooperatives, most fruit is still sold in bulk by farmers. Direct selling of unripe fruit on the market continues, especially by poorer households.

⁴⁹ As cooperatives do not have proper fruit storage facilities and not all cooperatives are actively exploring new markets.

4 SNV's way of working

4.1 IDENTIFICATION OF CLIENTS

¹⁷⁶ Any relevant institution that participates in the value chain coordination groups can be supported in the BOAM programme and become a client, based on a project proposal, to contribute to the CG's strategic intervention plan (SIP). SNV actively looks for CG members/ participants and encourages them to submit project proposals. SNV had already selected some clients at the start of the BOAM programme in 2007, including cooperatives, ARD offices, MSEDA and the CGs. Following the mid-term review in 2008, the CGs themselves selected project concept notes submitted by any participant. Once a project concept note is approved by the executive committee, SNV starts the process of client intake, which includes the development of client profile and a capacity assessment. There is not explicit rationale explaining and guiding the choice of clients. This would conflict with the 'living SIP' document, which is continuously revised, and with the way clients are selected (based on their project concept notes). The evaluators could find no rationale explaining the balance between support at the meso, macro or micro levels, or for the allocation of primary process days (PPDs) and funds between public agencies, the private sector and cooperatives. The roles and types of institutions were not questioned by SNV or by the programme: the traditional fruit and vegetable marketing cooperatives, and the traditional ARD extension system were accepted as given.

¹⁷⁷ The SIP provides the guiding principles for the selection of concept notes, clients and projects. The SIP can be regarded as an impact oriented plan⁵⁰ that indicates how many farmers need to be strengthened (mostly by training) and what type of relations/ market arrangements between them and private actors are anticipated. The selection of activities and clients is thus based not on their organizational capacity (needs) but rather on how and to what extent they can contribute to achieving impacts at the farmers' level and can influence market arrangements between farmers and the private sector.⁵¹ Consequently, the organizational capacity analysis of clients remains superficial except for aspects that directly influence project implementation. For example, private sector companies are not screened for their capacity to deal with farmers and cooperatives, and in some cases, unforeseen capacity gaps have eventually influenced the results. In the case of Ecopia, its capacity to communicate with local farmers' groups was poor, so that farmers did not understand the concept/ model it was promoting. Since this was not assessed in advance, the company was not supported to improve the situation. In other cases such capacity gaps have limited further upscaling of innovations by the institutions involved.

¹⁷⁸ A strong point of the SIPs and the selection mechanism have been their focus on potential contributions to poverty reduction, on adapting innovations to the local context, on involving institutions at different levels, and on supporting existing dynamics (stakeholders have to submit project proposals themselves). Poverty considerations were taken into account in the

⁵⁰ The SIP was revised after the mid-term review (2008) and further on regular basis (by the CG) and an extension was written in 2011–2012.

⁵¹ The assessment of the clients' capacity and the link with set priorities is based on a self-evaluation and is generally incomplete, referring only to a few areas of capacity that will contribute to impact in the SIP philosophy.

SIPs (number of farmers involved, area of production, income from agriculture and fruit). Despite the fact that the BOAM was perceived as a private sector development programme, the cooperatives, ARDs and MSEDAs focused on small-scale farmers and entrepreneurs. For the project proposals, clients (including the private sector) have to provide a results chain with anticipated effects for the final beneficiaries.

¹⁷⁹ The main clients (2007–2011) thus identified are situated at three levels: (i) the CG level (national) and (ii) the meso and micro levels. Following the projects submitted to the CG, the focus was on cooperatives rather than unions (zonal level), *woreda* ARD rather than regional or zonal levels, and individual private actors rather than associations. SNV is gradually moving towards the meso level; it is increasingly supporting the GG union and the zonal ARD level in Asosa, for example. At the third level (iii) SNV also provided direct training of model farmers and cooperative members to complement the extension system of the ARD offices.

¹⁸⁰ The evaluators' comments on this setup are as follows: (i) the fact that during 2007–2011 the focus of the projects was at the level of local organizations was quite normal given the weak institutional framework and gaps at the farmers' level and the impact orientation of the SIPs, and this has contributed to adapting the innovations to the local context; (ii) the distance between CGs and the field is considerable, so that a more thorough analysis of the real situation at field level and continuous facilitation and coordination at the local level (for example, between private actors and farmers) proved to be necessary. (iii) SNV provided training for farmers (with LCBs) but it is not clear who will complement the extension system in future. The knowledge institutions do not have budgets that can be allocated to this, the TOT system of the *woreda* ARD offices has not changed and the cooperatives do not have a TOT strategy in place (but clearly show a potential to train members; e.g. Lante cooperative already distributes information to members).

4.2 CAPACITY DEVELOPMENT SUPPORT

Types of capacity development processes

¹⁸¹ This section considers two areas of capacity development (CD): (i) of the CG, mainly to bring together stakeholders, to set priorities for innovations, to share knowledge or to learn by doing; and (ii) of the clients that are awarded projects by the CG to test or replicate innovations.

- *For the CG*, it is mainly the 'capability to relate' and 'capability to achieve coherence' (coherent understanding of VC and mutual interests) that are strengthened. Information is brokered by SNV and also through the (distribution of) clients' activity reports. The institutional development has been significant, especially compared with the situation before 2008, when there were no links between stakeholders and no knowledge of the VC approach or of the potential of fruits as cash crops for farmers.
- The *projects* vary considerably. They may aim to strengthen private investors in order for them to increase their efficiency (to reach farmers), focus on business development of cooperatives, facilitate concrete market linkages (including training) between cooperatives and the private sector, promote products, etc. Most of them aim to contribute to the capability of clients to deliver, through investments, knowledge, training or better

understanding of how to upscale the VC approach. The projects have contributed to the capability of clients to relate, in particular to develop sustainable market linkages and to explore markets.

¹⁸² Priority activities/ innovations (for projects) for the VCs are set on a regular basis by the CGs in the form of strategic intervention plans. These SIPs promote training for farmers and market linkages, but they do not provide a roadmap for building the organizational capacity of the CGs or the institutions involved, beyond their competence to test innovations. The fact that SNV's capacity development support is channelled through the CGs and is combined with testing innovations for farmers and the private sector, has resulted in a fragmented set of interventions. There is no process approach for organizational development of the clients or the CGs. Tests of innovations have rarely been translated into organizational capacity development. For example, new market arrangements and contacts between private actors and cooperatives have not been facilitated on a continuous basis, and the CGs do facilitate learning by doing and broker knowledge, but the learning system as such is not well developed.

¹⁸³ The fact that the organizational development of clients is addressed in a fragmented way through innovations tested in a project approach was a basic, but implicit feature of the BOAM programme from the start. When considering the outcome indicators of the BOAM programme, however, it is difficult to imagine that these goals would be reached or would be sustainable without more organizational development activities. It should be taken into account that support for organizational development, as well as the capability to deliver, was not really something that was desired by public agencies. This was confirmed in interviews: public agencies regard SNV as a partner in development, supporting them where human resources, competences or financial resources are limited.

¹⁸⁴ The further development of innovations and of contacts between VC stakeholders has been hampered by the weak organizational capacities of VC actors that have not been systematically addressed or only through ad hoc interventions. The key organizational gaps of institutions received insufficient attention: the evaluators refer to the high staff turnover in the ARD offices, the lack of internal agreement in the ARD offices to prioritize fruit, the weak internal accountability in the *woreda* ARD offices, and gaps in the quality system of the cooperatives. Assumptions were not re-examined, formulated or justified, and a number of questions were not addressed, such as whether development agents and cooperative leaders would train farmers on regular basis, whether farmers would apply the skills they had learned, resulting in higher productivity and quality, and better market margins, etc.

Endogenous and exogenous capacity development

¹⁸⁵ The approach shows some strong and weak points concerning endogenous capacity development but the weak attention to organizational capacity development clearly dominates in the analysis. Efforts have been made to stimulate and strengthen endogenous dynamics, but a real endogenous capacity development process would require broader and deeper organizational capacity development processes, more continuous coaching and greater attention to constraining factors in the environment.

¹⁸⁶ The strong points of the approach include:

- The CGs, and the value chain actors themselves, set priorities for innovations and preselect clients (via project concept notes), based on the demands for support formulated by the clients themselves.
- The CGs were established as an exogenous intervention, but the ‘learning by doing’ aspect during the CG meetings has made them interesting learning and meeting platforms for stakeholders (the number of participants increased in 2010). But there are gaps – the leadership seems to be developing slowly and the commitment of the government to send representatives who are able to take decisions has not sufficiently developed. The dynamics of the CGs are positive and becoming more endogenous, but need time to become deeper.
- SNV has already succeeded in integrating the technical innovations into the government’s strategy but the priorities for extension services for fruit at the local level are not fully guaranteed. The gaps are that the organization and strategy of the TOT system itself have not improved.
- SNV tries to avoid shaping development processes, preferring to ‘trigger’ clients through new experiences (tests of innovations) and by facilitating contacts. Stakeholders do indeed see new perspectives and opportunities. But in reality most of the triggers, contacts and training efforts need to be deepened or further facilitation.

¹⁸⁷ Elements that are typical of an exogenous approach are also present. The capacity assessments of main clients are rather superficial, and tend to address aspects that will contribute directly to the SIPs, such as innovations with impacts at the level of farmers, marketing arrangements between farmers and the private sector, and business planning. Moreover, as explained above, it is difficult to arrive at a more continuous capacity development process through these loosely connected projects. Even for simple knowledge transfer through training, the stakeholders involved and the survey respondents point out that these are too fragmented and too short. Deepening of training and refresher courses have not yet been provided. The relation between private sector and cooperatives needs more continuous facilitation. The fragmented and narrow organizational assessments and capacity support hampers a number of aspects, such as:

- the ability of many clients to continue to deliver after the project stops because of the lack of funds and commitment (e.g. lack of budget and human resources, limited coherence within the *woredas* and between the *woreda*, regional and national levels on the importance of the extension services for fruit);
- the improvement of the TOT system (cooperatives, *woreda* ARD offices) apart from the new knowledge of fruit (which was completely new);
- the establishment of sustainable institutional relations based on contacts made during the CGs (especially with government institutions); and
- turning the knowledge gained into activities or outcomes.

Capacity development and LCBs

¹⁸⁸ Coaching of individual clients is done by SNV advisors,⁵² not by LCBs, and consists of regular monitoring visits to clients (three or four times a year) many of whom do not have a project. Especially for (stronger) cooperatives and *woreda* ARD offices, these visits have gone beyond monitoring, but are used to discuss financial issues, market challenges, internal communication with members, and quality systems.

¹⁸⁹ SNV does not use a fixed definition of local capacity builders. Sometimes these institutions are contracted to strengthen a cooperative or to train the staff of *woreda*, for example, but they may also be clients (when they are developing knowledge for the sector, when they develop new (processed) products or act as drivers in the CGs). Based on information from the field, the evaluators conclude that SNV has supported two types of LCB. The *first group of LCBs* includes business consultants/ consultancy firms contracted by SNV to provide business training for cooperatives, value chain analysis and CG facilitation as determined by the CG and SNV. SNV has monitored and supported them to adapt their services to the capacity of cooperatives or CGs. The LCBs have thus gained experience in this. This type of LCBs has also been supported by specific competency and professional internship programmes (with GIZ and ICCO), which has enabled them to build their knowledge and experience of the VC approach and business development. These LCBs have increased their clientele and deliver their services independently of SNV. The LCBs have not developed specific skills on cooperative development.

¹⁹⁰ *The second group of LCBs* include specialized knowledge institutions. As determined in interaction with the CG, they have been supported through projects to apply their knowledge/ technology/ planting material within the framework of the ARD TOT system or directly to cooperative members or model farmers. These institutions often pay for their own staff, while SNV contributed to operational costs only. The LCBs have learnt to integrate their knowledge in a VC approach and to upscale it to more farmers in a TOT system. They have developed the capacity to plan for scaling up. Moreover, they are active members of the CGs, have links to other institutions and information, and are now recognized for their knowledge. Most of them will have to reduce the volume of their support and services when funding from SNV/CGs comes to an end.

- The Arbaminch Plant Health Clinic (APHC) has been enabled to train model farmers on pest and disease management and to carry out ex-ante and ex-post assessments. The clinic has compiled a training manual for farmers (parts of which will be integrated in the national manual on pest and diseases), and has helped raise the awareness of stakeholders in the mango VC of the challenges posed by pests and diseases that affect the productivity and quality of mangos. It was the first time that SNV had trained farmers on such a scale (previously it was done on a case-by-case basis). However, the APHC does not have funds to continue the training, and has not developed institutional linkages with the ARD offices to keep each other up to date except via the CGs. This is also due to the weak capacity of the ARD offices.

⁵² For pineapple, SNV employed only one part-time advisor, and so relied on LCBs for monitoring and coaching clients.

- The Kale Heywet Church (KHC) is a recognized knowledge and service centre for apples in Ethiopia. Before being contracted by SNV, it supported apple production in Chenchu as part of a community approach. With SNV's support, KHC has promoted the VC approach and has upscaled its activities via the TOT system of the ARD offices. When SNV's support comes to an end, KHC will not be able to continue to work at this scale and will pull back to its usual intervention area, but it will continue to follow the VC approach and a driver of the apple CG.

¹⁹¹ Both types of LCB have been strengthened by SNV to apply and support a VC approach. The supported knowledge institutions have developed the capacity to plan and integrate their services within a TOT system for farmers. The LCBs for business development have gained knowledge and experience, but have not been strengthened much to improve their own approach to the organizational development of local actors, as this also was not the focus of the capacity development element of the BOAM programme.

4.3 ALIGNMENT AND HARMONIZATION

¹⁹² Coordination of the sector and actors is done via the CGs, with direct support from SNV. SNV invites other donors and stakeholders to participate in the CGs, and has succeeded in involving almost all relevant VC actors, although not all on a permanent basis (banks and donors are not permanent members, and government representatives change frequently). SNV has also contributed to the coordination and division of labour through its support to and facilitation of the local apple extension coordination forums. This started in Chenchu and was later upscaled to ten other *woredas*. SNV also facilitated the local taskforce in Chenchu concerning the regulation of the seedling market. SNV succeeded in forming bilateral partnerships with other donors to replicate or explore further the results of experiments.⁵³

¹⁹³ Together with other partners, SNV has developed competence programmes for LCBs and for the staff of NGOs, cooperatives, etc., including the creation of a pool of competence and a Young Professionals programme. SNV has launched several initiatives based on its interactions with other donors, such as the link between Africa Juice and the Lante cooperative, which is a direct result of an exchange with GIZ (which was instrumental in the establishment of Africa Juice). Another example is the replication of SNV's approach by World Vision in Asosa region, which was stimulated by SNV.

¹⁹⁴ These partners see SNV as an innovator for the VC and as an agency that invests in the 'soft side' of capacity development (developing and brokering knowledge, facilitating relations, training on new technologies). SNV has not developed serious partnerships with other programmes that are investing in livelihood aspects of development, even though these aspects may limit the adoption of new varieties by farmers and especially their capacity to supply quality fruit to the cooperatives.

⁵³ These include World Vision (apple, replication of mango experiences in the Asosa region where mango is grown), JICA (investing in farmer groups to start a joint venture with Ecopia) and recently other agencies financing the SNV programme.

4.4 STRATEGIC POSITIONING OF SNV

- ¹⁹⁵ SNV's operations are of good quality. The government sees SNV as a reliable partner whose work is aligned with government strategies and is recognized for promoting operational innovations in the fruit value chains. The government is promoting 'access to markets for the poor' as way out of their dependency on 'cash for food' and food aid programmes ('graduating programmes'). SNV is recognized for its pioneering work with the VC approach. This was confirmed by MSED, the EDHDA and other donor agencies. There is now greater awareness of the importance of the fruit sector for generating incomes at the national, regional and local levels, and is now one of the top five priority sectors for poverty reduction. For the first time stakeholders have discussed with others possible approaches to develop fruit value chains. The national and regional governments have absorbed the technical parts of the innovations so far.⁵⁴
- ¹⁹⁶ However, the government's commitment in terms of policy making and investments in the fruit sector is still quite limited when looking at their representation and coordination efforts. For example, the organization of the extension system has not improved, there is no effective regulation to ensure the quality of fruit and seedlings, the cooperative model is not well adapted to business development, and public sector nurseries and marketing agency still exist, etc.
- ¹⁹⁷ SNV and the CGs have so far not been able to change some of the constraining conditions. SNV has not systematically addressed these issues. The evaluation finds that SNV's strategic choices regarding the type of clients and their role, and its own strategies and role, are not explicitly underpinned, documented or questioned on a regular basis.
- ¹⁹⁸ Some of SNV's choices have clearly been relevant and innovative. Examples include the provision of small funds to clients to test innovations in the VC in order to learn from them; the 'learning by doing' approach with the CG; the involvement of top knowledge institutions; the linking of mango cooperatives to processors; and encouraging processors to provide training and advance payments to cooperatives on a contractual basis.
- ¹⁹⁹ Other choices made by SNV seem to have been less relevant, implicit or have not questioned key external conditions. The government's traditional extension system, for example, was not questioned or changed. It was only supported with new technical knowledge and SNV complemented the system by facilitating LCBs to train farmers directly. The traditional marketing cooperatives were not questioned by the CGs as ways to promote the economic development of farmers. Only recently has SNV supported a farmers' group with a view to establishing a joint venture with Ecopia. The cooperatives were strengthened in their economic role but less so as advocates, and this also was not questioned. Processors were assigned a central role in the three value chains (including apple) while the interests and

⁵⁴ For mango, for example, the APHC's manual on pest and disease management, to which SNV contributed, will be used as input for a national manual. Training of DAs (and farmers) on apple tree management has become standard practice at the regional level (although in the *woredas'* view the quality of this training is not as good as that provided by SNV). Topworking for mango has become a standard part of extension services in two zones and is now being promoted at the national level.

possible margins of farmers were not guaranteed. The cooperatives did not focus on establishing fruit storage facilities as a way to strengthen the position of farmers in the market, even though they are crucial. The CG for mango was not complemented with local coordination platforms like the one for apple in Chenchu. SNV's and the LCBs' capacity for cooperative development was not much developed. SNV did not cooperate with livelihood programmes to complement the VC approach or to facilitate the integration of poor farmers into the VC.

²⁰⁰ SNV's intervention logic also includes many assumptions that have not been re-examined in the course of the programme. It was assumed, for example, that increased access to markets and higher prices paid by cooperatives would convince farmers to supply them with better quality fruit, regardless of their households' livelihood considerations. It was also assumed that farmers trained in tree management would apply the techniques, even though there were no mechanisms in place to provide access to tools, etc.

²⁰¹ SNV has not succeeded in supporting the CGs to question their strategic orientation or external conditions. SNV is also not leading this debate with other donors. A combination of diverse factors explains this. First, the outcomes of capacity development are not assessed in depth (with some exceptions), thus avoiding the confrontation with the real effects for farmers and their limitations. 'Second-order learning' is not taking place. Second, many of the strategic decisions were made by SNV advisors who are required to address many operational issues and are often personally linked to clients. Obviously, they cannot always guarantee full oversight of all VCs. It would also require a lot of extra effort, courage and diplomacy to discuss and re-discuss these basic issues with their clients. Third, SNV needs continuous access to finance for its programmes and thus puts most of its efforts into facilitating the replication of processes, without questioning the overall approach in depth.

4.5 GOVERNANCE FOR EMPOWERMENT

4.5.1 Poverty focus

²⁰² The support of SNV, even though framed in a private sector development programme, integrated a poverty orientation in its identification phase and in the process of selecting clients' projects. Poverty considerations were taken into account in the SIPs – in the choice of value chains, the number of farmers to be reached and areas of production. In their project proposals, clients – including the private sector – had to provide a results chain with the expected impacts on farmers. Cooperatives, ARDs and MSEDAs focused on small-scale farmers and entrepreneurs, and have been involved from the start. SNV has taken specific measures to reduce the risk of excluding poorer farmers, such as by promoting traditional pest and disease management, and introducing topworking of mango trees rather than grafting improved varieties in order to reduce the period without a crop. Also, SNV's success in persuading processors to make advance payments to mango cooperatives could be regarded as pro-poor.

²⁰³ SNV's approach to addressing poverty and steering interventions for poverty reduction also has some shortcomings. These are linked to a number of implicit assumptions that were made

in combination with weak monitoring of farmers' priorities, limited assessments of the risks and the effects of mitigation strategies from a livelihoods perspective, the limited accompanying measures for households (tools, credit schemes, etc.), the limited partnerships to integrate the various aspects of livelihoods, the limited attention paid to preparing farmers to participate in multi-stakeholder platforms and to bring them into contact with the private sector, the limited training for LCBs on cooperative development, and to cooperatives and processors with a strong business orientation.

4.5.2 Gender

- ²⁰⁴ Apple, mango and pineapple have long been crops of interest to women because they generate an income. The women sell the fruit in bulk and mix in unripe fruit to cover small (emergency) expenditures. As fruit has become a cash crop, control over the income from trade has shifted from women to men. This trend can also be seen in the cooperatives, where the leadership is mainly male. For pineapple, women have relatively more control over a guaranteed part of the income.
- ²⁰⁵ In the BOAM programme SNV does not have an explicit gender strategy. But in the identification of the value chains, gender aspects did play a role in the choice of value chains such as pineapple, and the focus on fruit processing. SNV is also aware of the gender challenge where men take over economic activities when integrated into a VC approach. SNV has tried to compensate for this by training women in fruit processing. SNV also promotes attention to gender issues during CG meetings, and always requests gender-disaggregated monitoring data on the outputs of clients such as the Chench *woreda* ARD office (pineapple), the KHC and the APHC (disaggregated data on training). But SNV has not followed up on the application of techniques by women or their access to markets.
- ²⁰⁶ The results of processing initiatives with farmers have been moderate so far, and have been insignificant or limited to a very small number of women. SNV has not been able to change the trend towards male leadership of the cooperatives. The CGs have not found a way to address limited access of women to the tools they need to apply some of the new techniques and for harvesting. No specific livelihood measures have been promoted to discourage women from selling fruit before it is ripe to cover immediate household expenses. No cooperation with livelihood programmes has been observed. It can be expected that a limited number of women will apply their new skills, adopt new fruit tree varieties, or become effectively integrated into the fruit market.

4.6 STRATEGIES AND PRACTICE FOR UPSCALING⁵⁵

- ²⁰⁷ During this evaluation, SNV clarified its upscaling strategy as one of 'increasing the productivity of farmers', which will have further effects on cooperatives and the value chains, and of 'reaching more farmers and more areas'. SNV does not have a formal strategy for upscaling its

⁵⁵ Upscaling refers to the transition to a situation when interventions or support services (initially provided by SNV and its LCB partners or others) are demanded on a larger scale and paid for from alternative (more or less sustainable/structural) sources, or when solutions or approaches are officially adopted and are enshrined in, enabled or promoted by formal policies, regulations and broader/other development programmes.

interventions or a roadmap showing how to replicate innovations. There is also no set of conditions that need to be in place to facilitate upscaling.

²⁰⁸ In retrospect, there are many examples of innovations and interventions that have been *replicated* to include more farmers and regions. This was done through the financing and/or introduction of innovations/ models/ improved plant varieties and through linkages with other donors. For example,

- Technical training in apple tree management (and new varieties) was first upscaled to seven other *woredas* (by KHC) where 4 to 5 cooperatives are active (but did not receive organizational support from SNV) and then to three more *woredas* (without active cooperatives). In 2012, SNV started replicating the approach in another 29 *woredas* (with technical training in apple tree management) in two new regions (Oromia and Amara).
- Topworking of mango was originally introduced to 1200 farmers in 10 *kebeles* of Arbaminch. SNV has upscaled this to eight *woredas* in the Wolaita zone where another 1500 farmers were introduced to topworking. The SNV approach for the mango VC was also replicated by World Vision in Asosa region. This included the topworking techniques and approach, the support to Asosa union, a regional CG, and links to Ecopia and Efruit.

²⁰⁹ Although these are positive results, SNV is supporting the replication of innovations or approaches before the results have been evaluated (including poverty and gender aspects) and validated. The replication by other donors has not been planned to the extent that they could replace SNV's support in the intervention areas and for the clients concerned.

²¹⁰ From the information collected during the evaluation, *upscaling* of the changes introduced by SNV is indeed observed for market exploration by stronger cooperatives, and for linkages between them and the private sector. Also, the traditional extension system has effectively absorbed the technical innovations. From the most important upscaling effects, it is clear that further organizational development and other accompanying measures are needed to ensure that they result in sustainable access to markets and training for farmers. It also appears that a number of external factors or constraints continue to undermine effective upscaling.

- Apart from integration of technical innovations, upscaling by the government at the national and regional levels has so far been limited to strategic intentions, without much concrete financial commitment or necessary policy and structural changes for private sector development in the rural fruit sector (apple, mango, pineapple);
- Although technical innovations have been upscaled in the extension system, they are hampered by the quality of the traditional extension system and the top-down policy at the regional and national levels, which affects the priorities set at the *woreda* level.
- The 'voice' of farmers has not been strengthened in multi-stakeholder dialogues, and this aspect has not been upscaled in developed systems.
- For cooperatives, translating the improved relations with processors into a sustainable improved market position would also demand improved storage facilities, which has not been the case so far.⁵⁶ The upscaling dynamics suffer from low commitment from farmers to deliver higher quality because of their livelihood security considerations. Accompanying measures are thus needed.

⁵⁶ In December 2012 Chenchu cooperative was planning to establish a coldroom with the support of SNV.

- Upscaling the activities of the knowledge institutions (LCBs) to train farmers will be very limited, as they do not have the funds to continue this mass farmer training. The APHC does not have funds to follow up on farmers/ diseases in the field. KCH will stop upscaling and applying of VC approach as soon as SNV's support ends, implying that that they will no longer organize refresher courses in these areas.
- Finally, even though the upscaling of relations between cooperatives and the processors is an achievement, the number of cooperatives involved remains limited and most of them are not fully adapted to what it takes to run an enterprise.

4.7 STRATEGY AND PRACTICE FOR KNOWLEDGE DEVELOPMENT AND LEARNING CAPACITY

4.7.1 Knowledge development and management

²¹¹ SNV has promoted several innovations (technical, introduction of improved varieties, market arrangements between coops and private sector) and is recognized by VC stakeholders and the government. Some of the innovations were already available, but were picked up and promoted by SNV to local institutions and to farmers⁵⁷ via the CG projects. SNV also developed information and knowledge of markets, as well as providing price information, market analysis, stakeholder analysis etc., to the CGs.

²¹² SNV has made considerable efforts to manage knowledge. This clearly affected the level of technical knowledge in the VCs and it triggered attention to the VC approach and market arrangements. The most important knowledge management strategy of SNV has been the CGs themselves as platforms for identifying relevant innovations, sharing knowledge and learning. The CGs do indeed encourage discussion, feedback and knowledge sharing on project progress and possible technical or institutional solutions (first-level learning) and market information. SNV also has launched a website where evaluation reports, minutes of CG meetings (including reports of the clients) are published. SNV has facilitated the publication of a book and an international workshop on the strategies and results of BOAM. SNV participates in donor groups and has bilateral meetings with ministries and public agencies (e.g. EHDA) at the national level where these actors share their experiences. Also internally, SNV advisors illustrate every report with operational but relevant lessons learnt. SNV advisors have a lot of knowledge of the project and the status of activities by monitoring clients in the field.

²¹³ In contrast with the promoted innovations and the mechanisms of sharing knowledge, the quality of the monitoring data of the projects, the quality and timeliness of information about the sector, and the continuous assessment of priority needs of farmers in the VC are rather poor.

⁵⁷ SNV's most important 'innovations' are: promotion of new varieties of apple to farmers and of apple tree management to *woreda* ARD staff and farmers; promotion of tissue propagation for pineapple; promotion of topworking for mango; promotion of disease and pest management to farmers on a large scale and based on traditional cultural methods; mist propagator for apple nursery; coordination groups with several value chain actors; linking cooperatives to private companies and processors and establishing joint ventures between cooperatives and processors (later with a farmers' group only); and facilitation of investors for pineapple to include an outgrower scheme for farmers.

- The quality of reporting of clients is variable and the guidelines and requirements of SNV and the CGs to evaluate outcomes and impacts for farmers are vague. They do not refer to impacts or the results of organizational development of clients. There is a focus on output level reporting.
- There is no clear test, evaluation and replication stage for the innovations identified by the CGs.
- Data on farmers originate from the *woreda* and are based on projections of the TOT system, and so cannot be compared with real data from impact or satisfaction surveys. This means, in effect, that there are no clear mechanisms available to the CGs to systematically follow up on trends and the needs of farmers at grassroots level. Information is based on fragmentary reports of activities of clients. Positive initiatives have included SNV's support to Chench *woreda* to set up a baseline on apple production, to be updated each year by the *woreda* ARD office. Also, APHC has been supported to conduct an assessment of their training on diseases and pest management by checking levels of infestation in certain areas before and after the training.
- The fact that information on the fruit sector is available to the CGs is a step forward. SNV collects and distributes any information it can find on market trends, innovations, other programmes, etc. The CGs have established a system for monitoring prices, diseases or markets, but not in a systematic way. Market studies and analyses of price setting mechanisms often arrive too late in the process or are not updated.

4.7.2 Learning organization

²¹⁴ Most of the information, monitoring, discussions and adaptations of strategies are based on first-order learning. Monitoring information, communications from the field and various studies did not lead SNV to re-examine some of its basic assumptions related to the ARD-TOT system, the trust between farmers and the private sector, or the types of farmer organizations. The learning is dominated by international terminology and concepts promoted by SNV such as 'impact investment', 'inclusive business', which sometimes makes it difficult for the various actors to understand the point. Failures are not mentioned in the lessons learnt. The lack of systematically collected and objective data on satisfaction and trends at farmers' level hampers objective decision making and re-examination of assumptions and constraining factors in the system. Part of this can be explained by the high level of innovation of the interventions. It is questionable whether the SNV advisors have sufficient time to invest in second-order learning. The support that SNV advisors get for that aspect is also quite divided; it is provided by an economic advisor and agricultural experts, but does not consider sufficiently and in depth its intervention mechanisms, external constraints and organizational capacity development approach of its clients. The reasons for the limited re-questioning of SNV's positioning are described in section 4.4.

5 The effectiveness of SNV's support

- ²¹⁵ **Summary** – SNV has made a significant contribution to the achieved capacity changes of the clients and has been a main driver for the development of fruit value chains. Few other projects or programmes were supporting fruit value chains and not on a comparable scale. Increased market demand, especially for fresh apples and apple tree seedlings, has also functioned as a major driver. SNV has contributed to the distribution of the results of the improved demand to more farmers. On the other hand, SNV has not addressed some limiting constraints in the institutional context of Ethiopia, several organizational weaknesses of its clients and has not prepared an exit strategy, all of which have had the effect of limiting the upscaling and the sustainability of results.
- ²¹⁶ **SNV's contribution** – SNV *contributed* to better connections between stakeholders for vertical integration of the VCs and for setting priorities, and to learning about the sector. It also contributed to the awareness of the potential and strategic importance of fruits as cash crops for rural households, and to practical experience in applying the VC approach. Together with the increased demand for fruit, these efforts have contributed to the intrinsic dynamics of the system. Moreover, all these changes have been accompanied by tests in the field. Farmers and cooperatives have realized that the quality of fruit needs to improve. Knowledge institutions are recognized for their possible contribution to VC development and have adapted their services to ensure their integration in a VC approach. VC stakeholders have had joint reflections on the most relevant innovations for the VC. The extension system for the first time included aspects of fruit tree management and addressed issues related to improved varieties. Bilateral relations between stakeholders have been established via the coordination groups (especially for apples and mangoes). Stronger cooperatives and processors (mangoes) and retailers (apples) have been successfully linked. These cooperatives have understood that direct contracts with legal private traders or retailers can reinforce their market position, and have increased their services, market outlets and prices for farmers. The trends have been strongest for the apple and mango VCs but are almost non-existent for pineapple. Changes in the environment are limited: the extension system has now integrated training on fruit tree management and other donors are supporting the fruit sector. Apart from these changes, other external context constraints ('the environment') and some crucial organizational aspects of the stakeholders supported have not been addressed.
- ²¹⁷ **Attribution** – Almost all changes in the fruit sector can be *attributed* to the increased demand for fruit (especially for apples), to SNV's support and to the existence of excellent knowledge institutions on fruit in Ethiopia. The fact that knowledge was available in these institutions but not applied in the fruit VCs, has had considerable influence on the quick impact. The most important achievements that can be attributed to SNV are:
- connecting VC stakeholders in the CGs (seeking out, inviting and motivating participants to attend CG meetings and to submit project proposals), providing market information, developing knowledge (market studies) and facilitating joint reflections on innovations (planning and results) and goal setting for the VCs;
 - the integration of knowledge and practices on tree/plant management and new varieties in the government extension services and for apples into the cooperative system. This has

been a necessary step forward and has been upscaled for mango and for apple in particular. Deepening is needed though: development agents and farmers need in-depth training on tree management and farmers need access to tools. Effectiveness also depends on the initial organizational capacity of the *woreda* ARD;

- training for model farmers, other farmers (apple, mango) and members of cooperatives via LCBs (access) to complement the extension TOT system;
- connecting the stronger mango cooperatives to processors (mainly mango) and to the market (mango, apple) and strengthening the cooperatives' capacity to develop their businesses and explore markets, and to collect fruit or tree seedlings from members;
- connecting cooperatives to knowledge institutions and nurseries (bilateral connections);
- SNV has contributed to the identification and availability of good quality planting material (apple, pineapple) by integrating this knowledge into the extension services, distributing improved planting material via the extension services, and supporting linkages between private nurseries and cooperatives, ARD offices and farmers.

²¹⁸ **Limitations** – SNV has not been able to change the trend for the pineapple VC or to make pineapple markets more predictable for farmers. The initial business orientation of the pineapple cooperatives was low, price setting mechanisms were not well known or absorbed by farmers and the existing monopoly was difficult to break without collective action by farmers. For the pineapple VC, progress is recent and remains at the production level so far. The introduction to farmers of a sweeter, more productive variety can be attributed to SNV's interventions. Its marketing has not been supported yet. SNV has not succeeded in establishing joint local processing units between cooperatives and the private sector.

²¹⁹ All of these changes have also been limited by external conditions that have not been addressed or have not yet been changed. Obviously, this would need a longer transformation period and more explicit questioning of basic assumptions by SNV. Examples include the limited commitment of government to introduce policies to promote and finance the fruit VCs. Regulations on the quality of seedlings at the regional level are still lacking. VC leadership remains weak and SNV has not been able to develop the leadership of the Medium to Small Enterprise Development Agency. Financial institutions do not yet regard fruit as an important sector. The farmers' understanding of market mechanisms and of joint ventures remains weak. The number of cooperatives remains limited and most do not have an adequate business orientation.

²²⁰ **Capacity development** – SNV focused on developing the capability of its clients to deliver by providing training for trainers, introducing improved varieties, training cooperatives on business planning, etc. It also focused on their capability to relate by providing meeting places, facilitating bilateral links between VC stakeholders and experience in market exploration. The development of both capabilities is to be seen as innovative in the Ethiopian context and thus the progress has been significant. This increased capacity has also contributed to a more coherent vision of the VCs among stakeholders, yet leadership in the VCs is limited and trust and communication between cooperatives and the private sector need to be deepened. The capability to learn and adapt has been strengthened by brokering knowledge in the CGs and by

developing new knowledge (market studies, technical innovations). The learning cycle is poorly developed and not linked to regular assessments at the farmers' level.

- ²²¹ Despite these improved capabilities, several organizational weaknesses persist. These gaps explain why the goals of the BOAM programme have been only partly achieved (for indicators, see Chapter 2). It must be noted that the BOAM programme budget is already thinly spread over many clients and that a more intensive organizational development process would need a larger budget per client and other intervention mechanisms (not only to test innovations via the CGs). The organizational and institutional capacity of SNV's clients is not strong enough to develop and replicate innovations without extra support. SNV has not formulated an exit strategy, and although the commitment of government and financial institutions is improving, it is still too weak to ensure their investment in the sector.
- ²²² Regarding the outputs of SNV's clients, again significant trends can be found in the number of farmers trained and in the linkages created between cooperatives, and between them and the private sector, which is strengthening their sales position. These are important trends for further structuring the VCs. But both need to be deepened, such as by providing tools for farmers, supporting livelihood programmes for farmers, improving the record keeping and quality systems of cooperatives and other farmers' groups, storage facilities, and improving the quality of dialogue with the private sector. In both cases, it is not clear who will support deepening of these effects after the BOAM programme. The trends have been strongest for the apple VC, followed by the mango VC. This is partly influenced by the fact that the Chenchaworeda ARD office and Chenchaworeda cooperative were already strong and because the demand for apples has risen more quickly than for other fruits.
- ²²³ With regard to access to services and markets, more farmers have gained knowledge of fruit management and this effect can be attributed to SNV. Also, there are more profitable marketing outlets available to farmers via the cooperatives, and more valuable new varieties on the market (especially pineapple). About 30% of farmers are applying innovative techniques and new varieties and 5–30% of farmers are selling their fruit to cooperatives. To further increase the application of new techniques and new market outlets, farmers need in-depth training, with refresher courses, and accompanying measures to ensure they have the tools they need to secure their livelihoods (e.g. savings and credit schemes).
- ²²⁴ Tables 8–10 present the results chains of SNV's interventions in the three fruit value chains: (i) technical innovations for farmers; (ii) business and market development of cooperatives; and (iii) the shared understanding and goals of the VC.

Table 8. Results chain for three fruit value chains supported by SNV in Ethiopia: SNV's contributions to the integration of knowledge in the extension system and technical innovations for farmers.

– Unintended result or few results; + some results; ++ acceptable results; +++ good results; ++++ very good and sustainable results.

Results chain	Achievements – knowledge integrated in the extension system	Apple	Mango	Pineapple	Gaps
Inputs SNV*	Identification and distribution of new varieties (facilitation of knowledge institution)	+++	+	+++	One apple nursery is supported and <i>woreda</i> ARD started nurseries All apple coops produce seedlings
	New technologies for grafting/ multiplication (facilitation of knowledge institution)	0	+++ (topworking)	++ (tissue propagation)	
	Support/links to private nurseries to produce new varieties	++	+	+ (Alaje and Dibabisch)	
	Training of <i>woreda</i> staff (and model farmers and cooperative members in some cases) on tree/ plant management (facilitation of knowledge institution)	+++	+++	+	
	Training on disease and pest management (facilitated by knowledge institution)	+ (resistant rootstock)	+++	–	
	Apple: Facilitation of local extension coordination forum (by SNV)	+++	–	+ (taskforce to facilitate investor)	
CD clients	Promotion and distribution of improved varieties	+++	++	+++	Training needs deepening and refresher courses Quality of training of new <i>woreda</i> staff by regional/ zonal level is weaker than that provided by SNV
	Knowledge of <i>woreda</i> staff on tree management and pest and disease management (and model farmers) – for the first time trained on these issues	+++	+++	+	
	Investments for private investors to produce seedlings more efficiently or to obtain seedlings	+	–	+++	
	Baseline information on fruit production	+++	–	–	
Outputs of clients	Training of farmers on fruit tree management and pest management (for the first time, including new varieties (less farmers than assumed, but innovative)	+++	+++	+	Farmers are trained only once, needs deepening <i>Woreda</i> ARD offices (mango, pineapple) show challenges for internal coherence: mango/ pineapple: not permanent priority. high staff turnover. No specific budget for fruit at the <i>woreda</i> ARD level
	Distribution of seedlings by local institutions and support/ linkage to nurseries	++		+++	
	Zonal ARD has separate budget for fruit				

Farmers	About 20–30% of farmers apply new varieties and improved management Farmers expand production	+	+	++	Not many farmers apply the techniques (but compared to baseline of 0%, there is a significant change). Training needs deepening to professionalize application of technology by farmers Farmers need tools for tree management and grafting Farmers need the income from fruit, cannot easily replace their fruit trees
		++	+	+	

* **Apple:** SNV has facilitated KHC to train *woreda* staff and TOTs of 11 *woredas* on tree management and new varieties (first Chench *woreda* and then replicated to seven and three other *woredas*). New varieties were distributed during this training. KHC paid for its own staff. SNV facilitated the local extension coordination forum of Chench (‘SNV’). SNV identified 12 new varieties, of which seven were introduced to farmers and adapted by the *woreda* ARD. SNV has contributed financially to a mist propagator for Kifle Bul nursery, has paid an LCB to train Kifle Bul on business management and to develop the business plan and has facilitated negotiations between Kifle Bul, SEAF and the Ethiopian Development Bank.

Mango: SNV has paid and facilitated APHC to train 220 TOTS on pest and disease management (traditional and cultural methods) and to follow up these 220 TOTS (and to give them extra training on sanitation and pruning of mango trees). APHC was also supported by SNV to implement an ex-ante and ex-post assessment of the situation. SNV paid Melkasa to train DAs and farmers on topworking and grafting (and distributed new varieties) and supported the *woredas* to install nurseries. SNV paid for tools for 40 DAs and farmers.

Pineapple: SNV has paid for 500,000 plantlets for SNNPR ARD and for the distribution of the plantlets to local nurseries (plantlets from Jimma and Alaje). SNV has linked SNPRS to Alaje and Jimma and facilitated initial agreements (‘SNV’). SNV has supported Dibabish for feasibility studies, a business plan, compiling a training manual for farmers, facilitating Dibabish to negotiate with financial institutions. SNV has paid for 135,000 pineapple plantlets from Alaje for Dibabish.

Table 9. Results chain for the three fruit value chains supported by SNV in Ethiopia: SNV's contributions to the business and market development of cooperatives.
 – Unintended or few results; + some results; ++ acceptable results; +++ good results; ++++ very good and sustainable results.

Results chain	Achievements – linking cooperatives to the market and business development	Apple	Mango	Pineapple	Gaps
Inputs SNV*	Facilitation of training and coaching of coop leaders on business management and business development	++	++	–	Only the strongest cooperatives are coached (with best initial business orientation)
	Facilitation of training on accounting for coop leaders	+	+	+/0	Only strongest cooperatives. For pineapple: not intensive
	Facilitation of training of coop leaders and members on post-harvest handling of fruit	+	+	–	
	Financing promotion of fruit for cooperatives	++		–	
	Facilitation of training of coop members and leaders on technical innovations/ tree management	+++	++	–	
	Contributed to costs to train members on fruit processing and setting up joint venture with private processor	+++	+++	+++	
	Linking cooperatives to processors or retail market (by SNV)	+	++	++	
	Local taskforce for regulation of quality of seedlings	+++	–	–	
CD clients	Improved business orientation and management	++	++	–	
	Understanding of market by cooperative leaders	++	++	–	Weak coherence in cooperatives, weak record keeping
	Improved handling of members for collective sales	++	++	–	Lack of appropriate storage
	Improved awareness on quality of members, start of quality system	+++	++	–	Subjectivity in quality system, only apple coops have written policy, mango coops don't have defined quality standards
	Linkages to processors (contract)	–	++	–	TOT system of cooperatives is rather weak Link with processors for pineapple did not work.
Outputs clients	More cooperatives (for apple), increased number of members (mostly for apple and slightly for mango, not for pineapple))	+++	++	–	Format of cooperatives not adapted for joint venture in SNNPR Pineapple cooperatives not functionally anymore
	Increased sales via cooperatives and market exploration by cooperatives, improved market position and more market outlets (especially apple and mango, not for pineapple)	+++	++	–	Only few processors linked to mango cooperatives and only buy small amounts of mango
	Improved services of private buyers to cooperatives (for mango)	–	++	–	Trust between coop and processors increases but needs permanent facilitation
	Slightly improved quality of products sold by cooperative	+	+	–	% of quality fruit sold is very limited. Private sector has problem with quality of the fruit sold by mango cooperatives

Farmers	Farmers get better price paid through cooperatives Farmers get better price in the market for new varieties (especially pineapple) Slightly more farmers produce quality fruit More farmers sell through the cooperative	+ +++	+ +	-	Few farmers sell quality fruit Lack of tools, lack of access to small saving and credit schemes, lack of tools limit changes in marketing attitude by small farmers
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* SNV facilitated the training of 90% of cooperatives in Chencha on: business management, cooperative management (leaders were trained) and accounting (for Chencha cooperative only). SNV contributed financially to training on post-harvest handling of fruit of coop members. SNV paid for the promotion of the 'Chencha apple' on TV, linked Chencha cooperatives to some niche markets in Addis (embassy, supermarkets) and is facilitating and paying for a coldroom for Chencha cooperative (ongoing) with Hawassa University. SNV contributed to the costs for Ecopia to train 600 cooperative members on harvest and post-harvest handling and to train 26 leaders on the processing of apples (and to develop products and basic equipment).

SNV facilitated the training for Lante cooperative on: business management, cooperative management and accounting (leaders were trained). SNV supported the development of their business plan. Also 3 other mango cooperatives were coached to develop a business plan and 4 other coops to develop a strategic plan (by LCBs). Cooperative members have received training on disease management and topworking to serve as TOTs.

SNV has linked Lante cooperative and the other cooperatives (first via the union) to Africa Juice and Etfruit and has facilitated a one-day workshop to kick start the cooperation. SNV contributed to the payment of costs for the training provided by AJ to members of the coop. SNV has contributed financially to the elaboration of the website of the union. SNV contributed to the costs of Ecopia to train leaders of Lante on processing of mangoes (and to develop products and basic equipment). This shifted to support and facilitation of a farmer group to engage in a joint venture with Ecopia.

SNV initially linked the pineapple cooperatives to an alternative processor (Kaleb) and later to Etfruit, Etflora and Africa Juice. SNV also supported women groups to process their products (Church groups).

SNV contributed to the costs of Ecopia to train leaders of Tesso and Dara cooperative on processing pineapple (and to develop products and basic equipment).

Table 10. Results chain for the three fruit value chains supported by SNV in Ethiopia: SNV's contributions to a shared understanding of VCs, priority innovations and new partnerships.

– not an intended result or few results; + some result; ++ acceptable results; +++ good results; ++++ very good and sustainable results.

Results chain	Achievements – shared understanding of VC and solutions by stakeholders	Apple	Mango	Pineapple	Gaps
Inputs SNV*	Organization, facilitation and preparation of the CGs (knowledge brokering, MSPs)	++	++	++	
	Support to SMEDA to train SMEs, to develop capacity on VC approach, and to equip SME centres with two incubators	++	++	++	
CD clients	Access to meeting place for VC stakeholders, new contacts Coherent coordination of priorities of the VC, joint goal setting via SIPs Selection procedures and sessions on priority projects Access to information on market, technologies and innovations for the VC	++	++	++	Learning system is not stronger, apart from presenting reports on projects (and some reports of organizations such as <i>woreda</i> ARD) Loose membership One donor only, dependent on SNV to act
Outputs clients	Meetings take place, SIP adapted regularly Improved understanding of the VC approach for fruit, and understanding of mutual interests Projects selected	++	++	+	Little interaction between CG meetings Decision makers (government) often absent Assessment at farmers' level lacks Plan for organizational development of CG and VC stakeholders is not available CG is 'far' from the field, also local coordination is needed (is there for apple, but not for mango and pineapple).
Enabling environment	Innovative knowledge integrated in the sector	++	++	++	Weak commitment of government and financial sector Leadership of VCs stays out Other form to organize farmers than cooperatives is not discussed yet Quality regulation and implementation for fruit and plant material
	Improved availability of plant material	++	+	+	
	Partnerships develop between stakeholders	++	++	+	
	New stakeholders get interested in the fruit VC	++	++	+	

* SNV has monitored (three to four visits a year) the clients. For the stronger cooperatives, this monitoring included coaching. SNV organized, facilitated and prepared CG meetings (with LCBs).

SNV supported MSED (all fruits) to train TOTs to support small processing enterprises, facilitated training and exposure visits for MSED staff to understand the VC approach, and contributed to value chain analysis studies.

6 Efficiency

- ²²⁵ This chapter describes SNV's input–output ratio (section 6.1), the output–results ratio for capacity development of the clients (section 6.2) and the factors that explain the level of efficiency (section 6.3). Data are based on primary process days (PPDs) and budget tables provided by SNV, on information from the client files and on the results of the capacity development discussed in Chapter 3.
- ²²⁶ **Summary** – Over the period 2007–2011, the fruit VCs of the BOAM programme were supported with funds totalling EUR 1,176,429 provided by the Netherlands embassy (90%) and Irish Aid (10%).⁵⁸ About half of the budget was spent on investments and inputs (a good part for seedlings) and on training for farmers by private and public agencies. The other half of the budget was spent on PPDs (3929 PPDs, EUR 608,179); the coordination of the programme and the value chains absorbed most of the PPDs. The financing of small projects (innovations to train farmers, small investments for private actors and for new market arrangements) has supported the 'learning by doing' in the coordination groups. In terms of the division of the budget over the various types of actors, most (31%) was absorbed by the CGs, followed by the ARD offices and other service providers (public agencies and NGOs), each of which accounted for just over 20%. These funds were mostly spent on training for farmers. Finally, cooperatives and private sector actors absorbed 14% and 12% of the budget, respectively. The budget was thinly spread over a large number of clients, which is in line with the approach of testing and experimentation through projects and the intervention mechanism of the CGs. The budget was too small to cover the organizational capacity gaps of the clients. The budget also did not reflect a phasing out of funding; this is consistent with the fact that SNV did not formulate an exit strategy.
- ²²⁷ The support to the apple VC can be regarded as efficient. Within the framework of a limited budget, relevant stakeholders were regularly brought together, the VC approach is better understood by stakeholders, essential knowledge has been integrated into the extension system, and knowledge and training were delivered to farmers at a scale never achieved before. Farmers were trained and some of them are already starting to apply the techniques. The business orientation and market exploration of the stronger apple cooperatives have improved. All these effects need to be deepened, but the basis for VC development has been laid. The fact that the apple market (fruit and seedlings) is booming, that the Kale Heywet church (KHC) was able to build on its past experience and recognition, and that Chenchu cooperative already had experience in trading seedlings when SNV started its interventions contributed to the efficiency.
- ²²⁸ The support to the mango VC can be regarded as efficient, although outcome levels are limited by the livelihood concerns of households and the poor organizational capacity of the *woreda* ARD concerned. Programme interventions have reached fewer mango cooperatives than the support for the apple VC.

⁵⁸ According to SNV, no core funding was used (discussion with SNV, January 2013).

- ²²⁹ The support to the pineapple VC can be described as inefficient because of delays (e.g. in production of plantlets), and the outcomes have been minimal so far. The recent introduction of an improved variety (developed using tissue propagation) can be regarded as efficient but has not yet been integrated within a VC approach, since that only happened towards the end of the BOAM programme.
- ²³⁰ The increasing market demand for fruit, the involvement of Ethiopian knowledge institutions and the involvement of a diverse range of actors from the start have contributed to the efficiency of the interventions. The following factors have had a negative influence on efficiency: the weak enabling environment in Ethiopia for private sector development and in rural areas; SNV's fragmented strategy, which focused on capacity development of the CG and on testing innovations that were not necessarily embedded in capacity development processes of the clients involved; and the (at times) unclear division of roles in the field, in particular between SNV, private sector actors and the cooperatives.

6.1 ASSESSMENT OF SNV'S INPUT-OUTPUT RATIO

Total budget, source and division over commodities

- ²³¹ SNV's budget for the BOAM programme and the three fruit value chains Ethiopia between 2007 and 2011 was EUR 1,176,429, funded by the Netherlands embassy (90%) and Irish Aid (10%, for mango and apple only). SNV supported a total of 25 clients, 12 of which were involved in the mango VC. The Medium to Small Enterprise Development Agency (MSEDA) and Ecopia, a fruit processor, were supported for the three value chains. SNV also budgetted the costs of the general coordination of the BOAM programme. The clients that received funding were (only) nine cooperatives,⁵⁹ four private actors, four public institutions, four ARD offices (*woreda*/ zonal/ regional), three CGs and one church organization (regarded as a knowledge institution). The pineapple VC received 39% of the budget, the apple VC 46% and the mango VC only 14% (see Figure 3).⁶⁰
- ²³² Of this budget, 52% was spent on support to clients (a total of 3929 PPDs, EUR 608,179), and 48% on 'costs other than PPDs to clients', which included grants for investments by private sector or cooperatives, inputs (mainly seedlings), fruit promotion activities and training for farmers provided by private and public agencies.⁶¹ These small project budgets for innovations supported the learning by doing in the CGs. The PPDs were equally spread over the three commodities (see Figure 2). Clearly, fewer results for capacity development were achieved for pineapple. Most of these 'other costs' (not presented as PPDs) were spent on pineapple (50%

⁵⁹ SNV supported a total of 18 relevant cooperatives in the intervention area. Some of the training to Chencha cooperatives was attended by other apple cooperatives, but these PPDs were not registered separately.

⁶⁰ These percentages are influenced by the fact that the coordination of the BOAM programme for apple and mango, and the support to Ecopia, were recorded under 'apple', even though they concerned all three commodities. MSEDA was included under 'pineapple', even though it provided services for all three VCs. Still, the pineapple VC accounted for the largest part of budget and mango the smallest.

⁶¹ These public agencies were the *woreda* ARD in Chencha, the Kale Heywet church (apples) and the Arbaminch Plant Health Clinic (mangoes), which received grants from SNV to train farmers or to provide TOTs. The grants were awarded according to different finance facilities of the BOAM programme: 100% subsidies for sector innovations, 80% subsidies for innovations related to business development or B2B services, and 20% subsidies for replicating innovations.

of BOAM programme grants), closely followed by the apple VC (43% of grants). For mango, almost no grants were awarded. Compared with the other two VCs, the results for the pineapple VC were mediocre.

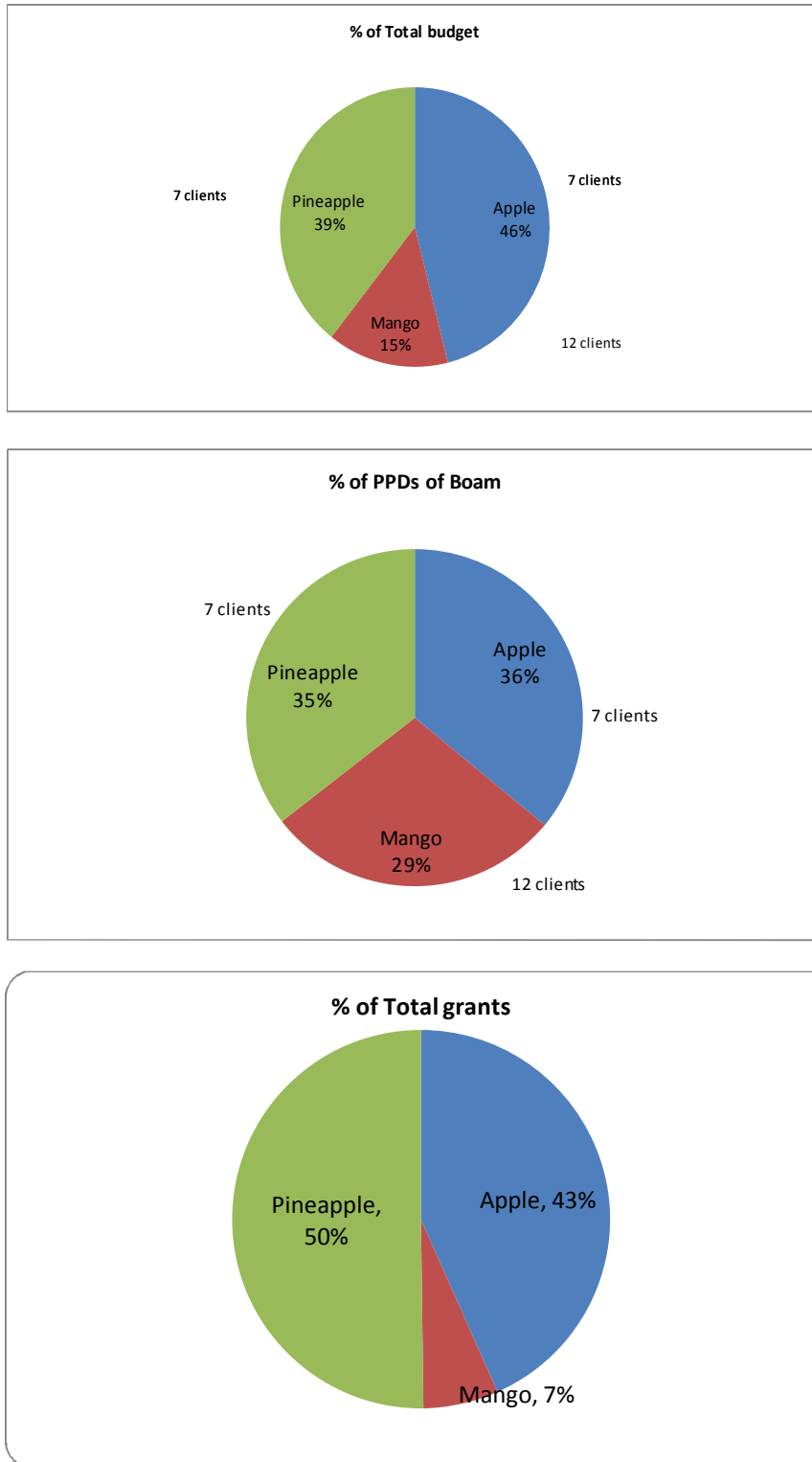


Figure 3. Division of the budget, PPDs and ‘other costs’ over the three fruit value chains.

Division of the budget over the various types of clients

- ²³³ As illustrated in the Figure 4, the coordination groups received most of the BOAM programme budget (31%), mainly as PPDs. This included the facilitation costs of the three CGs but also the overall coordination of the programme (recorded under PPDs for the apple VC).⁶² Based on the outputs of the CGs, the evaluators conclude that the execution of this part of the programme was efficient, despite weaknesses in leadership and commitment of the government and financial institutions, and that relevant dynamics, understanding and knowledge have been developed/ brokered.
- ²³⁴ The PPDs and grants for the nine supported cooperatives were low,⁶³ at 14% of the budget. This is quite surprising given the important capacity gaps noted at the level of farmers and cooperatives (see also section 4.1, identification of clients).
- ²³⁵ The support to ARD offices was moderate (21% of the budget), in line with the fact that they were regarded as the primary actors would 'push' farmers to engage in value chains and to include them in markets. However, considering the organizational capacity gaps, the budget should be considered as being too low. Moreover, a good part of the budget went to the Southern Nations, Nationalities and Peoples' Region (SNNPR) to source and distribute improved pineapple plantlets to farmers. The low level of inputs for cooperatives and ARD offices is explained by the 'test' approach of the CG/ BOAM and the VC facilitation approach. This pushed the attention to organizational weaknesses of clients to the background. The influence on the efficiency of inputs/outputs was limited, but the negative influence on the sustainability and the upscaling of the innovations should not be underestimated.
- ²³⁶ The budget for 'services' refers to the support provided to public agencies and NGOs to organize and provide TOTs (DAs) and to train model farmers, which accounted for 23% of the budget. This percentage was influenced by the allocation of funds to the investment in two incubators for MSEDAs (to be used by SMEs and processors, but are not yet functional).
- ²³⁷ Finally, the private sector received 12% of the budget.
- ²³⁸ 36% of the budget for grants was spent by the ARD offices, mainly for seedlings (see Figure 5). 33% of this budget was spent by service providers (mainly to train farmers and DAs and for the incubators of MSEDAs). 21% of all grants of the programme were spent by private sector actors. Cooperatives almost did not receive any grant or finance to train farmers, despite the fact that their services to members look promising and complement the ARD extension. This finding is based on focus group discussions and interviews with cooperatives and ARD offices.

⁶² For the pineapple CG, some of the PPDs for capacity development of clients were included under 'coordination', pushing the budget for the coordination upward.

⁶³ Indirectly, 18 cooperatives were reached, because nine young apple cooperatives also attended some training sessions, but they were not monitored by SNV.

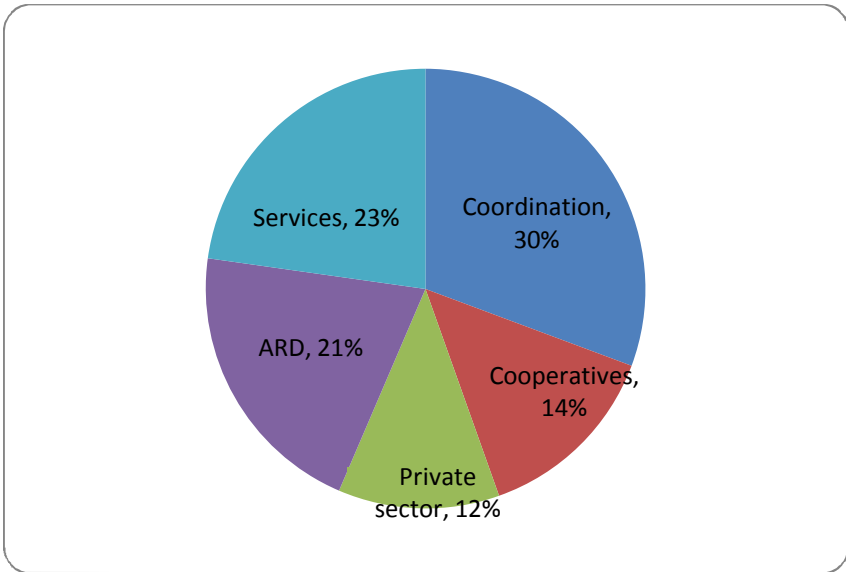


Figure 4. Budget allocations to the various types of actors and activities.

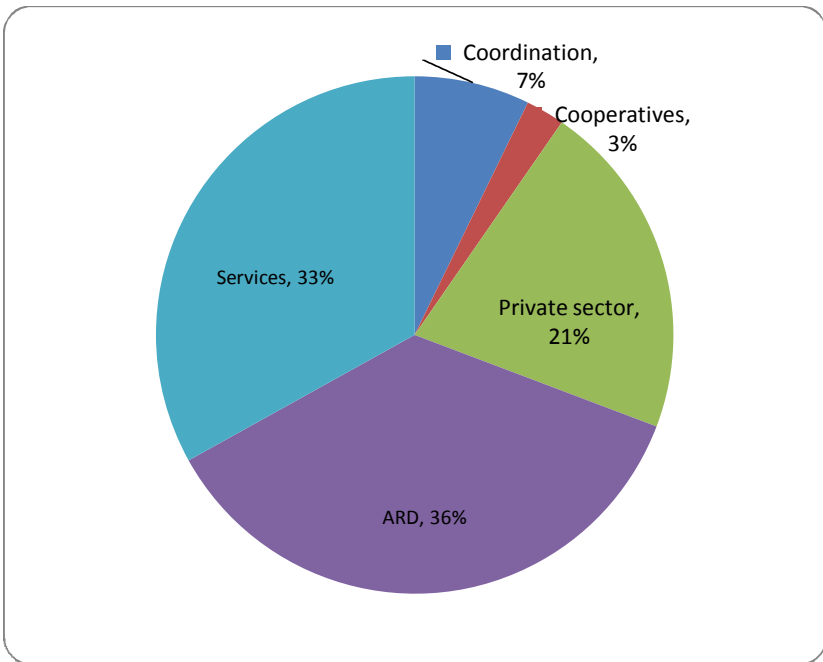


Figure 5. Division of grants over the different type of clients.

²³⁹ Concerning the division of the PPDs (see Figure 6), the coordination of the VCs accounted for most of the PPDs (54%, including the facilitation of the three CGs). For pineapple, the facilitation of the CG also included some PPDs to advise clients. Cooperatives accounted for 21% of the PPDs and private sector only 2%. The low percentage of PPDs for the ARDs is remarkable, since they are traditionally the drivers of capacity development for farmers in Ethiopia. The programme paid little attention to several organizational capabilities (internal coherence, human resources management or the capacity to relate). Clearly, the ARDs did not demand increased attention to these capabilities. The programme devoted few PPDs to

organizational development of private sector actors, such as enabling them to train farmers or to improve their communication with cooperatives).

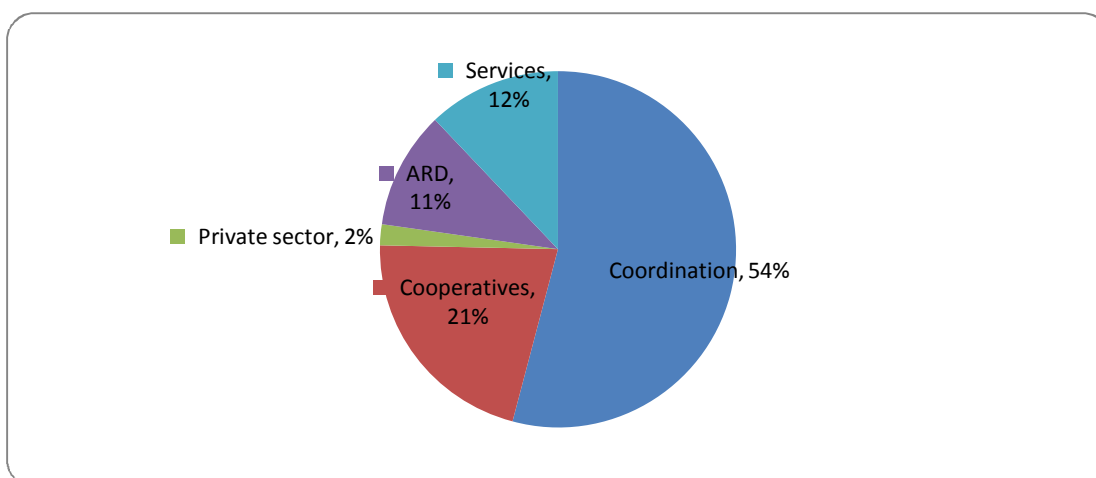


Figure 6. Division of PPDs over the various types of clients

SNV advisors and LCBs

²⁴⁰ As shown in Table 11, between 2007 and 2011, 31% of the PPDs were implemented by LCBs (1316 PPDs) and 69% by SNV (2613 PPDs). There was a peak of 54% of PPDs delivered by LCBs in 2009 but this decreased to 20% in 2011. When SNV faced the end of the BOAM programme fewer projects were awarded grants and thus fewer LCBs were involved⁶⁴ and SNV spent more PPDs on facilitation. The involvement of the LCBs, whether they supported business development and value chain analysis, or acted as knowledge institutions to train farmers (TOT on technical aspects) enabled them to develop their role in the VC: they can now provide new professional services and can contribute to VC coordination without further capacity development support from SNV. The knowledge institutions do not have the budget to replicate the knowledge transfer to more farmers or *woredas*.

Table 11. PPDs provided by SNV and LCBs for the three fruit value chains, 2007–2011.

	2007	2008	2009	2010	2011	Total
SNV	87 %	70%	45 %	58%	79 %	69 %
LCB	12.4 %	30%	54 %	42%	20 %	31 %

²⁴¹ Over the period 2007–2011 the average cost of the PPDs provided by SNV was EUR 220.29,⁶⁵ compared with only EUR 29.29 per PPD for the LCBs, as some LCBs who were financed a high number of PPDs are not supported by SNV to pay their staff (or only partly) (Ecopia, Africa

⁶⁴ Most of the PPDs of LCBs were absorbed by three clients: (i) Chenchu *woreda* (with LCBs ‘Target’ and KHCchurch), (ii) the mango CG (by BCAD, Bafana Bafana, MSED, Scientific Development Services); and (iii) the pineapple CG (by BCAD mainly, but also a lot of smaller and looser contracts, one with Ecopia). Most of the supported cooperatives also received a limited number of PPDs by LCBs for business training.

⁶⁵ This reflects a divergence in the costs of PPDs in 2012 of EUR 165 for local advisors (2 to 3) and EUR 600 for international advisors. The latter includes overhead costs of national and regional SNV offices (this is claimed by SNV Ethiopia).

Juice, MSEDA, Kale Heywet Church).⁶⁶ The support to the LCBs can thus be regarded as efficient. The clients do not pay for capacity development services of the SNV staff and are not aware of the PPDs invested by SNV for coaching and coordination. The services delivered by the LCBs and the grants are based on project proposals to the CG and are approved by the CG, so the clients are aware of this budget. Whenever possible the money is transferred to the bank account of the client or LCB in order for them to manage the budget for project implementation. The clients had to ensure a financial contribution for realizing the project if the innovations or projects concerned a business or were aimed at replication. This did not appear to be a problem.⁶⁷

SNV's management of efficiency

²⁴² Each SNV advisor takes notes of the PPDs provided to each client (expressed in hours per week). The resulting PPDs give an accurate picture, according to SNV, of the PPDs provided. The figures are not checked in the field by SNV managers. The evaluators found evidence of a certain bias in the PPD tables: one indicator is the fact that some clients received exactly the same number of PPDs.⁶⁸ PPDs for internal SNV coordination are recorded separately in the consolidation table, in the planning of each advisor and under the registration of coordination costs in the table with PPDs. The PPDs finally provided are systematically higher than the number planned. The number of PPDs performed per client are not evaluated with the client but are evaluated in discussions between SNV advisors and their managers on a yearly basis. Although this cannot be regarded as a real monitoring tool, this practice contributed to more consideration of efficiency, especially in terms of the amounts of time spent by advisors on SNV coordination and support to clients. In general, the consciousness of efficiency within SNV has recently increased, since it is applying for more external funding.

²⁴³ Budget data have not been analyzed or used by SNV as information to feed strategic reflections or decisions of SNV or the CGs on priorities, gaps, etc. The fact that most of the budget is used to test innovations has contributed in the past to a low level of expenditure tracking related to outputs/outcomes.

Capacity of advisors SNV

²⁴⁴ The number of advisors that SNV used to support the BOAM fruit VCs varied during the evaluation period but most of the time has been 2.5 FTEs – one advisor on mango, one advisor on apple and a part-time advisor on pineapple. The support to the fruit VCs also benefited from the cross-cutting support services provided by SNV, such as knowledge management, the availability of an advisor on economic development and an agriculture portfolio coordinator. However, SNV was not able to ensure follow-up of the ongoing dynamics within the VC and the capacity development process of each client. The advisors are above all VC facilitators, with sound economic and technical knowledge of VCs, the challenges and the actors. They invested less time in the organizational capacity development of clients and possessed less specific

⁶⁶ The evaluators were unable to obtain prices of services by other donors or consultants (who could not calculate the exact cost per day). SNV itself claims that their PPD rate, especially that of international advisors, is higher than the cost of staff from other international agencies.

⁶⁷ Only for the training sessions of Ecopia, the cooperatives have complained that they had to deliver the pineapples for processing and have not been paid for that.

⁶⁸ Also, PPDs of Ecopia were registered as LCB for the CG, PPDs to advise clients under the CG pineapple, etc. At the start of the VC support, relatively more PPDs were recorded under the *woreda* ARD offices and Chencha cooperatives that were in fact meant for coordinating actors and for training more than one cooperative.

expertise on cooperative development. It should be noted that the number of advisors (2.5 FTEs) is quite small compared with the number of contracts and clients involved (25), the capacity of clients and LCBs, and especially the ambition of introducing a completely new approach in the fruit sector in Ethiopia.

Conclusions on the efficiency of inputs /outputs

²⁴⁵ SNV's budget has been spread over many clients, reflecting the approach of 'testing innovations' and facilitating the VC. The grants were intended to strengthen the process of learning by doing for the clients/CGs. This is important since the VC concept and fruit VCs were new. The budget (PPDs and grants) contributed to capacity development in terms of knowledge transfer (technical), establishing partnerships between VC stakeholders, setting up market arrangements and realizing a common understanding of the VC approach. This has been less the case for the pineapple VC, even though this received three times as much as the mango VC. For the apple and mango VCs, the inputs have been efficiently translated into outputs. The CD of LCBs has been efficient. The limited attention to other organizational capacity development interventions, and the limited budget available for further organizational development, poses a risk for future upscaling and strengthening the sustainability of results by local institutions.

6.2 ASSESSMENT OF THE COSTS RELATED TO THE CAPACITY DEVELOPMENT OUTPUT

²⁴⁶ **General** – When comparing the budget to the number of farmers and clients reached, the level of understanding on the VC achieved, and the increased sales of the cooperatives, the evaluators can conclude that the support for apple and mango was efficient but much less so for pineapple. Relatively small budgets were allocated to each of the three value chains, rather than according to the number of farmers involved, the initial capacity of farmers and cooperatives and their access to services, the weak commitment of government, the number of clients and the initially weak institutional linkages between actors.⁶⁹ Looking at the need to deepen the effects already achieved (see Chapter 4) and to strengthen organizational capacity in order to sustain effects or to ensure their upscaling, the evaluators conclude that the budget was too thinly spread over too many interventions, activities and clients. In advocating this approach, SNV's argument was that that the interventions were related to 'tests' and innovations, which in principle they are, but the setup of the intervention itself was not a test. Often the intention was to involve large groups of farmers, and results at farmers' level have not been evaluated in depth.

²⁴⁷ The outputs of clients are compared with the PPDs and costs per client in Table 12. From the table it can be concluded that the support to the apple and mango VCs has generally been

⁶⁹ Even if only the farmers are considered which can be directly reached in the intervention areas of directly supported clients, then only EUR 30 per farmer household has been spent over the 5 years of intervention, which is relatively low (EUR 6 per year). IFAD projects spend at least USD 100–200 per farmer reached in the VC. The budget was spread over 25 clients who all received small budgets (including PPDs) of less than EUR 169,000 over 5 years (except for Dibabisch, a private investor in pineapples, which received EUR 472,000). 20 clients received less than EUR 80,000, of which 13 received less than EUR 30,000 and eight less than EUR 10,000.

efficient,⁷⁰ while the support to the pineapple VC was not. Looking at specific clients, it can be observed that some of them received relatively large budgets compared with the changes in their outputs: the support to Dibabisch in particular, MSED, Ecopia and mango cooperatives can be regarded as inefficient, as explained below.

Pineapple value chain

²⁴⁸ The pineapple value chain in general demonstrates few tangible results when assessed against the steady investments in the value chain over the evaluation period. The main result by 2011 was the introduction of large-scale tissue propagation for a new variety (Smooth Cayenne), which included the distribution of 500,000 pineapple seedlings (representing 35% of the SNV budget spent on pineapple). The support to marketing did not result in any tangible changes. The absence of initiatives to test the appropriateness of types of farmers' groups other than cooperatives, and of investments in proper storage facilities for pineapple cooperatives or farmers has hampered progress. The production of pineapple plantlets by Jimma (a public agency) contributed to the delays. The long support process to Dibabisch, the private investor, eventually only resulted in a 2 ha pineapple plantation where access to water was a constant problem.

²⁴⁹ **MSED** – The support to MSED has not yet resulted in concrete changes. This is acceptable given the level of innovation of the VC approach in Ethiopia. The weaker aspects of support to MSED are the following: (i) MSED is not yet playing a proactive role in coordinating the value chains or CGs. It was noted that their knowledge of value chains remains theoretical and not specifically relevant to horticultural value chains; (ii) MSED has trained over 200 SMEs but the organization has not provided coaching;⁷¹ and (iii) the two incubators paid for by SNV to be used in the enterprise centres have not yet been installed. MSED cannot explain how the financial sustainability of the incubators will be ensured.

²⁵⁰ **Ecopia** – The support to Ecopia did not result in concrete and functional processing units, or a workable model for small processing units, or a trusting relationship between Ecopia and the cooperatives.⁷²

²⁵¹ **Mango cooperatives** – The support to the seven mango cooperatives cannot be regarded as efficient, since only four are currently specializing in mango, and banana remains their main sales product. One of these four cooperatives is no longer functional, and only two of them are really exploring mango markets.

⁷⁰ SNV's support to the KHC to organize and provide TOTs and training for farmers, and to the Arbaminch Plant Health Clinic for the provision of training and assistance for diseases and pest management to model farmers can be regarded as efficient. However, SNV did not invest further in the APHC to deepen the training and the system. The support to the Kifle Bulu apple nursery has been efficient using only a small investment (innovative technology); the nursery initiated a series of initiatives, including training to farmers and searched for alternative sources of finance. The creation of linkages between Efruit (a public marketing agency) and mango cooperatives was efficient. With limited facilitation efforts by SNV, this has become a stable link between the coops and the processor. Efruit is very flexible towards the coops and not too demanding in terms of quality, yet it buys more bananas than mangoes from the coops.

⁷¹ During the field visits, some trainees were interviewed. The evaluators noted that several of them were proactive and young but did not have access to specific services, in particular (financial) services, that would allow them to start a small business.

⁷² In SNV's budget tables, Ecopia is also put under the CG as LCB (320 PPDs).

Table 12. Overview of the support provided by SNV to clients in the three fruit value chains (apple, apple, pineapple).

– Unintended or few results; + some results; ++ acceptable results; +++ good results; ++++ very good and sustainable results.

APPLE value chain	PPDs	Grants/other costs to train farmers (ETB)	Outputs	Level of efficiency 0,+,++,+++,++++
Cooperatives				
Chencha highland fruit marketing cooperative	345	10,060	<ul style="list-style-type: none"> • Business orientation and market exploration has improved • Record keeping improved but still not used sufficiently to take decisions • All members trained (as TOT) on apple tree management • Increased sales of members via the cooperatives, seedlings AND apples • Increased number of members and cooperatives for apple • Advertisement and promotion of cooperatives products, Chencha apple is better known by consumers • Start of quality system is in place, sales of quality standard via cooperative has improved but remains limited 	+++
Public agencies				
Chencha <i>woreda</i> ARD office	296	27,742	<ul style="list-style-type: none"> • Integration of apple tree management in extension services (farmers did not have access to this training before) • At least 4000 farmers trained (and at least another 10,000 in other <i>woredas</i>) and starting to apply tree management. Needs deepening/ refresher as complexity of products is high. Farmers also need tools. • KHC has also directly trained model farmers. • Woreda extension providers forum coordinates service providers for apple farmers through regular meetings, Woredas system for monitoring apple production in place and used for planning • <i>Woreda</i> taskforce on seedling market regulation established and agreements reached between cooperatives, more seedlings sold via cooperatives • Budget for extension on fruit at the zonal level (was not like that beforehand), but not systematically turned into priority at the local level, high staff turnover. 	+++
Holeta Research Centre	9	44,111	<ul style="list-style-type: none"> • Assessment of current status of highland fruit production in the country and identification of adapted apple varieties to be promoted to farmers (seven varieties have been adapted and integrated into local nurseries and in extension system) • Establishment of a model nursery and research on woolly apple aphid resistance and rootstocks for farmers 	+++
Alliances and coordination groups				
Coordination group highland fruits (apple): CG	206	27,742	<ul style="list-style-type: none"> • Three meetings per year of the CG, including preparations, collection of information, monitoring implementation of the SIP • Bilateral partnerships developed • Shared understanding of the VC and of mutual priorities, whereas the VC approach was not known and stakeholders did not meet before • Weak commitment of government in policy making and to invest in the sector • Weak leadership, weak follow up by members of CG between meetings, still dependent on resource and initiatives of SNV • Limited involvement of financial sector (despite much effort by SNV) 	++

General coordination of the BOAM programme, also with the Irish Embassy	323		<ul style="list-style-type: none"> • SNV coordination activities (apple, mango) • Acceptable in a programme approach to facilitate VC stakeholders 	++
Private sector and LCBs				
Kifle Bulo apple seedling producer enterprise	27	43,725	<ul style="list-style-type: none"> • Purchase of mist propagator for apple seedling production (innovation for Ethiopia), and improved efficiency of apple seedling production, steep increase of sales • Training on apple husbandry to neighbouring farmers (clients) and delivering guaranteed quality seedlings to woreda ARD • Business plan development and linkages to financial institutions (bank and social fund) but no successful linkage yet to financial institution. Kifle Bulo has found finance from Spanish Aid 	+++
Ecological Products of Ethiopia (also for pineapple and mango)	35	55,342	<ul style="list-style-type: none"> • Training to farmers on fruit processing, introduction of small processing units for apple, mango, pineapple (not successful), • Development and test of new products, establishment of joint ventures with cooperatives and 1 farmer group (mango), scale of intervention is small, capacity of farmer group to find market too. • This was good to learn from, but no concrete outcome and resulting negative perception of processors by cooperatives 	0
Kale Heywet Church, southwest zone	123	36,687	<ul style="list-style-type: none"> • Promotion of apple production, tree management techniques and improved varieties: replication to 10 new woredas in the GG zone (training of <i>woreda</i> staff and DAs and monitoring of them to train other farmers, seedling distribution, establishment of local extension coordination groups): at least 10,000 farmers trained. • This training was once only, deepening and refresher courses for DAs and farmers are necessary • KHC has developed competence to upscale its technical knowledge, has become a driver for VC coordination but does not have a budget to upscale further. 	+++

MANGO value chain

	PPDs	Grants/other costs to train farmers (ETB)	Outputs	Level of efficiency 0,+,++,+++,++++
Cooperatives				
Lante Fruits and Vegetables Marketing cooperative	88	247	<ul style="list-style-type: none"> Improved business orientation and managing of members to increase sales via the cooperative Lante cooperative has developed and uses business plan(but not a marketing plan), record keeping improved but still weak Market linkages between cooperative and processors are successful, including services and advanced payments from private companies (Africa Juice, Efruit) Increased sales via cooperative but quality is still low. Lante explores markets now (by itself). Increased number of members Problem of storage (coldroom) continues 	++
Silesira and Kolashele, Abaya Mille, Chano Dorga, Chanochalba Erze Fruits VM Coops	336		<ul style="list-style-type: none"> Three other cooperatives have increased sales on mango and developed contracts with processors but quality and volumes of sales still rather limited. They have improved business orientation but very weak record keeping. Slight increase of members. The other cooperatives have in fact decreased their focus on mango. 	+
Public agencies				
Arbaminch Zuria <i>woreda</i> ARD office	90		<ul style="list-style-type: none"> Integration of mango topworking and tree management in extension services (farmers did not have access to this training before) At least 1000 farmers trained and applying topworking. Tree management still relatively low because of lack of tools, lack of importance paid to mango. Budget for extension on fruit at the zonal level (was not like that beforehand), but not systematically turned into priority at the local level, high staff turnover. 	++
Wolaita area (via zonal level): scaling up of topworking via zonal level	16	6944	<ul style="list-style-type: none"> Integration of mango topworking and tree management in extension services (farmers did not have access to this training before) At least 1.400 farmers trained and applying topworking. Tree management still relatively low because of lack of tools, lack of importance paid to mango. Budget for extension on fruit at the zonal level (was not existing beforehand), 	++
Arbaminch Plant Health Clinic	33	16,175	<ul style="list-style-type: none"> 220 model farmers (10 kebeles) and DAs trained on traditional mango diseases and pest management and these TOT train other farmers (about 7000 other farmers are trained, but they do not all consider this as training, is a refresher of endogenous knowledge). Increased reporting to DA and <i>woreda</i>, but weak reaction of them. APHC cannot continue the training or give refresher courses because it does not have access to funds. Elaboration of manual and pre- and post-training assessment of the situation regarding diseases and pests in the intervention area, will be adapted at the national level. Topworking has become part of national priorities for extension of mango 	+++
SARI Areka research centre	13	5618	<ul style="list-style-type: none"> Study of mango harvest and post-harvest measures to be trained to DAs and farmers, 150 harvesters were distributed among farmers (tested and adapted tool) but generally, not introduced at farmer level, farmers do not have access to tools for harvest. 	• +

Alliances and coordination groups				
Coordination Group Mango	484	6588	<ul style="list-style-type: none"> • Three CG meetings per year, incl. preparation, collection of information, monitoring of the implementation of the SIP • Bilateral partnerships develop, but not with public agencies • Shared understanding of the VC and of mutual priorities, whereas the VC approach was not known and stakeholders did not meet before • Very weak commitment of government in policy making and to invest in the sector • Weak leadership, weak follow up by members of CG between meetings, still dependent on resource and initiatives of SNV • Limited involvement of financial sector (despite much effort by SNV) 	++
Private sector and LCBs				
Africa Juice Tibila SC	10	10,827	<ul style="list-style-type: none"> • For Africa Juice: linked to coops and experienced with contracts (including services). For Africa Juice, this business with coops is small, compared to their other sources and business • Cooperative members (four mango coops) trained on harvest and post-harvest management at collection centres and fair trade registration of farmers' products (in process) • Link between AF and GG union and mango cooperatives successfully established (some tensions exist between coops and AJ) and AJ desires more quality fruit. 	+
Ecological Products of Ethiopia	(budgeted under apple)		See apple VC	0

PINEAPPLE value chain

	PPDs	Grants/other costs to train farmers (ETB)	Outputs	Level of efficiency 0,+,++,+++,++++
Cooperatives				
SAFA cooperative	9	1641	<ul style="list-style-type: none"> Assessment of institutional/ organizational capacity of coop (focused on hardware and on marketing) and leaders trained on cooperative management and business planning (by LCBs), (the cooperatives do not have collective sales and not updated business plan) Facilitation of the partnership establishment with Ecopia and other processors 	0
Tesso cooperative	16	1641	<ul style="list-style-type: none"> Assessment of institutional/ organizational capacity of coop (focused on hardware and on marketing) and leaders trained on cooperative management and business planning (by LCBs), (the cooperatives do not have collective sales or updated business plans) Facilitation of the partnership establishment with Ecopia and other processors 	0
Public agencies				
SNNRP Agricultural and Rural development	279	169,949	<ul style="list-style-type: none"> Purchase and transportation and distribution of 500,000 plantlets from Jimma and Alaje to Dara and Chuko woredas, nursery management (payment of Alaje to produce plantlets for SNNPR and two <i>woredas</i>). Continue to train Budget to buy more? 	++
SNNPR Micro and Small Enterprise Agency (SNNPR MSEDAs) (not only limited to pineapple)	2	84,718	<ul style="list-style-type: none"> Exchange visits, coaching, training for staff of MSEDAs on the VC concept and coaching to facilitate the CGs (no leadership of CGs yet). Staff that was participating in the trips is not working with MSEDAs anymore. MSEDAs has developed VC strategy papers, but still rather theoretical. MSEDAs confronted with high staff turnover and weak understanding of operationalization of the VC concept Purchase of two incubation centres for SME actors in fruit processing (all fruits) (not installed yet), not functional yet Training of staff of MSEDAs as TOTs for BDS for small processors of mango and pineapple (MSE): training of 220 SMEs took place, no experience in incubation centre yet. Proactive role in support to SME is still weak. 	+
Alliances and coordination groups				
Coordination group pineapple: CG	1043	6588	<ul style="list-style-type: none"> Three meetings per year of the CG, incl. preparation, collection of information, monitoring of the implementation of the SIP The CG has been committed to start, monitor and inspire a local taskforce (multi-actor) for the process of the investors for pineapple (for outgrower schemes). Little risk analysis has been done (ex-ante). The CG has learnt a lot of the process with the investors, but do not really have a shared understanding or vision on what could be another successful way of strengthening the market position of farmers. Very weak commitment of government in policy making and to invest in the sector Weak leadership, weak follow up by members of CG between meetings, still dependent on resource and initiatives of SNV. 	+

Private sector and LCBs				
Dibabisch PLC (private investor for pineapple)		19.572	<ul style="list-style-type: none"> Investors were attracted to start outgrower schemes, land was identified and appointed by government, government convinced to make additional roads to the identified plots, business plan developed with SNV for the investor (but not updated), linked to bank (but not successful), manual elaborated to train farmers, 135,000 seedlings delivered and planted (but problem with water) Eventually, plantation of 2 ha of land, no outgrower scheme. Dibabisch could not get access to bank loan and expected SNV to pay all. Ex-ante risk assessment was poor and the division of roles and responsibilities unclear. 	0
Ecological Products of Ethiopia	(budgeted under apple)		See apple	0
Alaje	No capacity assignment or technical assistance to Alaje by SNV and thus not registered as a client. Alaje produced plantlets for the clients of SNV (SNNPR ARD and Dibabisch PLC) and were linked to these clients by SNV. They have gained experience on how to produce a big assignment of plantlet (tissue propagation). Unfortunately Dibabisch could not buy the plantlets (could not access to finance) and therefore Alaje had to find another market (which only partly succeeded). Alaje certainly gained experience and the plantlets were produced, but weak communication and division of role and responsibilities (SNV coops Alaje) made the process inefficient			+



6.3 FACTORS EXPLAINING THE LEVEL OF EFFICIENCY

²⁵² The increasing demand for fruit, and the involvement of top knowledge institutions and some private actors have contributed to the efficiency of the inputs/ capacity development/ outputs ratio. Factors that contributed to the inefficiencies include the following:

- the innovative aspect of the interventions and the approach in the Ethiopian context (value chain, private sector development). Every intervention/ project/ client in fact implies an innovative process in itself;
- frequent staff changes at public agencies, especially MSEDAs and ARD offices;
- public agencies in Ethiopia are not very open to organizational capacity development so in that sense some efforts were not efficient (e.g. MSEDAs);
- the fact that financial institutions and the government were not and still are not prepared to invest in the sector meant that there was little choice but to invest in some inputs for stakeholders from the BOAM budget;
- there are no positive indications that SNV maintained time management and supervision of the implementation of projects by its clients or LCBs. Often contracts were extended or when contracts were not fully implemented, there was no real response from SNV. There was no problem for the contractors being awarded grants for another project in the CG even if the previous contract had not been fully implemented;
- the relations between the private actors and SNV and between private actors and other clients were not optimal (Dibabisch, Ecopia, Africa Juice). A lot of frustration and inefficiencies occurred because of the lack of adequate and clear communication, a division of roles and joint risk analysis; and
- risk analyses (ex-ante) that could have limited inefficiencies were not conducted.



7 Overall conclusions

Input of SNV

- ²⁵³ SNV's budget for the three fruit value chains in Ethiopia between 2007–2011 was EUR 1,176,429, funded by the Netherlands embassy (90%) and Irish Aid (10%). The apple VC received 46% of the budget, the pineapple VC 39%, and the mango VC 14%, although the results achieved were better for the apple VC and weakest for the pineapple VC. About half of the funds were spent on investments and inputs (mainly seedlings) and on training for farmers by private and public agencies. The other half of the budget was spent on PPDs by LCBs and LCBs (3929 PPDs, EUR 608,179). LCBs provided 31% of the PPDs (1316 PPDs, EUR 38,545) and SNV 69% (2613 PPDs, EUR 569,634).
- ²⁵⁴ SNV has established and facilitated three coordination groups, one for each commodity, and has financed and coached individual clients to test innovations in the field (about half of the funds were spent on testing innovations). Financing small projects has supported 'learning by doing' in the CGs. In terms of division of budget over the different types of actors, most was absorbed by the CGs (31%), followed by the cooperatives and private sector actors. A limited number of cooperatives received support, focusing on those with a strong business orientation.
- ²⁵⁵ SNV's capacity development strategy focused on the implementation of and learning from innovations in the value chains, on facilitating cooperation between stakeholders to create and strengthen market linkages and on the integration of technical knowledge and skills in the VC. The main roles played by SNV included (i) facilitating contacts between stakeholders and of joint reflection of VC stakeholders in value chain coordination groups; (ii) brokering knowledge, market information and market linkages mainly via the coordination groups; and (iii) providing finance and coaching for specific innovation projects by selected clients in the VCs (limited in size).
- ²⁵⁶ The capacity development support provided by SNV to its clients focused on their capability to deliver (training of trainers, improved varieties, training of cooperatives on business planning, etc.) and the capability to relate (meeting place and bilateral links between VC stakeholders, experience in exploring markets). Their capacity to learn and adapt was strengthened by brokering knowledge in the CG and by developing new knowledge (market studies, technical innovations). The budget was thinly spread over 25 clients, and was too small to cover further their noted organizational capacity gaps.

Changes in capacity and performance in the fruit sector

- ²⁵⁷ Collaboration between stakeholders in the VCs was established where this was non-existent before, mainly through the creation of a coordination group (CG) for each value chain. Diverse and relevant stakeholders participate in the CGs, although government decision makers and the financial sector do not attend on a regular basis. The interactions between stakeholders have been strong during CG meetings but rather weak between meetings. Dynamics are more permanent for the apple VC where a local coordination platform and a local taskforce on seedling market regulation are also active. It remains difficult to get commitment from government institutions for VC coordination and investment. 'Natural leadership' has not



emerged yet and MSEDAs has not assumed this role. Farmer representatives are not supported to participate in discussions or lobbying the CGs. The priorities set in the CGs are not systematically evaluated against the priorities of farmers.

²⁵⁸ Collaboration between stakeholders has raised a common awareness of what a VC approach for fruit can be. Research institutions and specialized knowledge institutions have been involved. Stakeholders reflect jointly on the priorities for the VCs. Bilateral cooperation between stakeholders in the VCs has improved via the CGs, in particular between the strongest cooperatives and the private sector and between knowledge institutions and cooperatives. These links did not exist before.

²⁵⁹ The CGs have also discussed and approved small innovative projects involving and strengthening certain links in the value chain. This has resulted in the development of specific capacities of some stakeholders, the four most important of which include:

- A limited number of the original mango and apple **cooperatives** with a stronger business orientation have established sustainable relations with processors or other buyers and have made significant progress in developing their businesses and in increasing their membership. They have developed their capacity to explore markets, to raise the awareness of members of the need to produce quality fruit, to lay the basis of quality systems and to use their capital more efficiently. No other farmers' groups, except one, have developed. There remains an important difference in the performance of the cooperatives. The stronger cooperatives increased their market outlets. Mango cooperatives have developed contracts with processors and these processors have further strengthened their market position. But all cooperatives also still have a good part of reactive sales, sales of mixed quality fruit decided upon at the last moment. They lack appropriate storage facilities and they have found it difficult to find ways to convince members to produce better quality fruit, and for mango farmers to sell to the cooperative. They have fragmented access to market information. The cooperatives have not succeeded in establishing joint ventures with processors to establish local processing units. The capacity of the two pineapple cooperatives has not developed and they have almost no commercial activities. Outgrower schemes for pineapple have not been established.
- The capacity development of **private sector actors** has been generally hampered by their limited access to finance and their own fragile market position (competition from subsidized government agencies, uncompetitive in the international market). SNV's support to private sector actors was successful only when these organizations had their own clear capacity development plan.
- Technical innovations have been integrated into the **government extension services**. A budget line for fruit has already been included at the agriculture and rural development offices at the zonal level. At the *woreda* level, however, ARD offices do not have the budget or give priority to training farmers on fruit production, and the organization of the extension system has not changed, both of which are key for realizing change on the ground.
- **Local capacity builders** have gained experience in adapting their business development services to local actors and knowledge institutions have developed their capacity to plan and execute mass training for farmers.



²⁶⁰ Some changes in the *enabling environment* for the fruit sector and VC approach have been achieved. For the national government, MSED (in the Southern Nations, Nationalities and Peoples' Region) and the Ethiopian Horticulture Development Agency, fruits are now ranked among the priority crops for poverty reduction. Public agencies (like MSED) have slowly but surely started to adapt the VC approach and to build partnerships in the VC. Given that the VC approach and the promotion of fruit as a cash crop started from scratch, this is remarkable progress. Gaps remain because important initial constraints have not been addressed or have not changed much and will need more attention and time. For example, (i) the government has not made significant additional investments in the fruit sector and has not developed a clear regulatory and policy framework; (ii) there is no shared view of the form of farmers' organizations that are needed for business; (iii) the requirements and products of the financial sector are still not prioritized or adapted to the fruit sector; (iv) there are still no systematic market information systems in place; (v) the government continues to support public marketing agencies and public nurseries, instead of giving priority to private sector development; (vi) the coordination groups are not sufficiently aware of the priorities, needs and constraints of small fruit farmers; and (vii) specialized local service providers to support cooperative development are not available.

Farmers' improved access to services

²⁶¹ Farmers have effectively been provided with specific training on fruit husbandry and farmers' access to (improved) planting material has improved substantially (for apple, mango and pineapple). About 40,000 farmers have received training on fruit tree and fruit management via the *woreda* ARD and directly via LCBs. Also seven of the 18 cooperatives involved have provided technical training or information to their 1370 members since 2008. The 40,000 farmers that received training indicates a significant trend, given that they had received no training on fruit before 2008. The number of farmers trained in apple tree management is especially impressive. The household survey found that 25–30% of apple farmers received training on tree management and new varieties or had been followed up in one way or another for fruit tree management. As many as 57% of the trainees were satisfied with the training, mainly those trained by LCBs.

²⁶² Except for this unique training for farmers on fruit tree management (once for each farmer), no specific budget or systematic meetings for *fruit* exists at the *woreda* ARD level (focused on the concerned fruit crops). Further training and follow up of farmers on fruit are provided in 'integrated' way by development agents and *woreda* ARD staff (they visit model farmers and other farmers to follow up on the farm, not fruit in particular). Most of the improved planting material is distributed to farmers by the ARD offices. The quality of apple seedlings continues to be a major challenge.

²⁶³ Households have expanded fruit production (replaced other crops) and introduced technologies and varieties are already being used by about 20–30% of the farmers in the intervention area, but at the expense of their food security crops. The level of application is lower than reported by SNV, but can be regarded as a positive result. Despite the progress,



fruit holdings remain small and unspecialized, combining several crops on a small scale. The skills and professionalism of farmers in applying the new techniques – which they consider very complex – are yet to be improved, including training and follow up and systems to provide the tools they need. Expansion of fruit production is hampered by the limited land available and by continued need to produce traditional crops such as false banana for food security. Farmers are also reluctant to replace old varieties with new ones because of the loss of harvest for some years.

²⁶⁴ *Poverty focus* – Poor farmers and women participate in the training, but the factors limiting the application of new technologies and varieties (like the lack of tools, complexity of the techniques against one training only) affect the poorest and women in particular. It is expected that they will be less likely to adopt the new varieties and technologies or will adapt later.

Outcomes – improved access to markets

²⁶⁵ Whereas in the past selling fruit was regarded as a way to generate side income for women, now both women and men are aware of the potential of fruit and the need to produce quality fruit. For apple and mango more traders have entered the market to buy fruit directly from individual farmers and this has slightly improved the position of farmers in the market. The new varieties of pineapple and mango also fetch higher prices.

²⁶⁶ Apple and mango farmers have access to market information and better prices via the cooperatives. However, this is the case only for better quality fruit and for small volumes,⁷³ and for a limited number of cooperatives. Positive developments are that: (i) between 2008 and 2012, the membership of apple cooperatives increased by 83%, from 600 to 3516, and that of mango cooperatives by 70%, from 270 to 588. The number of apple cooperatives increased from 1 to 9. The number of mango cooperatives decreased from 13 in 2008 to six active mango cooperatives in 2012, but only four of them really focus on mango (for the others mango is a side business apart from bananas). In Chenchaworeda (apples) about one in seven rural households are cooperative members. In Arbaminch woreda (mangoes) about 1 in 20 households are members. For pineapple there has been no significant increase in membership, or in the number of cooperatives. (ii) Three mango cooperatives that have contracts with processors or Etf⁷⁴ give advance payments to members. (iii) Smallholders sell more apples and mangoes via cooperatives than before. This is not the case for pineapple.

²⁶⁷ Despite increased sales via cooperatives (for members and non-members), most fruit is still sold in bulk by farmers because; (i) they need cash, (ii) they lack the tools and knowledge required to produce quality fruit. (iii) Other reasons are that farmers prefer to invest in other, more profitable products, like apple seedlings and bananas, or do not understand the price setting mechanisms and market arrangements with the private sector.

²⁶⁸ *Poverty focus* – Poor households and women can in principle profit from price increases and poor farmers are more aware of the potential of fruits as cash crops. However, need for cash is for these families a main reason to continue selling unripe fruit directly in the market. A limitation for women's participation is that trade income and control has moved from women

⁷³ As cooperatives do not have proper fruit storage facilities and not all cooperatives are actively exploring markets.

⁷⁴ Etf is public marketing agency for fruit in Ethiopia - subsidized by the government.



to men. Poor families tend to be excluded because successful cooperatives are increasingly targeting more progressive farmers who are prepared and ready to go for aggressive and more risky trade. Other limitations for poor farmers are that they do not understand the complex market mechanisms, which is in particular the case for the pineapple VC. Remarkably, cooperatives and farmers have not been strengthened to participate in VC regulation bodies or in the CGs to make their voices heard. The CGs do not continuously assess the progress and needs of poor farmers.

Factors influencing the results

269 Some external conditions have influenced the development of the fruit value chains (conditions not directly influenced by SNV or existed before SNV started its interventions).

- Increased market demand (local, national, international) for the three fruit commodities, especially for apples.
- Ethiopia has an extensive local agricultural extension network, based on a cascade system of training of trainers (TOT). The system functions in a top-down way. Extension on fruit production was not part of the system before the BOAM programme.
- 'Access to market for the poor' is a priority for the Ethiopian government to limit dependency on food and income safety programmes. The government is promoting fruit and vegetable marketing cooperatives as market outlets for farmers. In reality, the transition to a market economy and the creation of a supportive investment climate in rural areas are not straightforward.
- Because of the strong top-down policy setting in Ethiopia, the government and public agencies do not favour donor support for organizational development.
- Unions and cooperatives have had serious problems in the past with financial accountability and transparency to their members.
- Rural households are unable to expand their production because of the very limited land available, soils are generally exhausted, and part of their land is used to grow food crops.
- The three value chains have received little support from other agencies in the SNNPR.

SNV's contribution

270 Almost all changes in the sector can be attributed to the increased market demand for fruit (especially apples), to SNV's support and to the existence of excellent knowledge institutions in Ethiopia. The further development and sustainability of the results achieved have been limited by external institutional factors that have not changed much. This would need a longer transformation period. The most important achievements that can be attributed to SNV are:

- connecting VC stakeholders in the CGs, providing market information, developing knowledge and facilitating joint reflection on innovations and goal setting for the VCs;
- the integration of knowledge of fruit tree management and new varieties in the government extension services and for apple into the cooperative system. This has been a necessary step forward and has been upscaled for mangoes and especially for apples. Deepening is needed and effectiveness depends on the initial organizational capacity of the *woreda* ARD offices;
- training of model farmers and farmers (apple, mango) and members of cooperatives via LCBs (access) to complement the extension TOT system;



- connecting stronger mango cooperatives to processors (mainly mango) and to the market (mango, apple) and strengthening cooperatives' capacity to develop their business and to explore markets;
- connecting cooperatives to knowledge institutions and nurseries (bilateral connections);
- SNV has contributed to the availability of good quality planting material by identifying improved fruit varieties, integrating this knowledge into the extension services, distributing seedlings, and by supporting linkages between private nurseries and cooperatives, ARD offices or farmers.

Analysis of SNV's effectiveness and way of working

²⁷¹ SNV has contributed to better connections between VC stakeholders, the awareness of the potential and strategic importance of fruits as cash crops for rural households, and the awareness of the potential of the VC approach for fruit. Together with the increased demand, this has improved the dynamics of the system. All these changes have been accompanied by tests in the field. Farmers and cooperatives have realized that the quality of fruit needs to improve. Knowledge institutions are recognized by VC stakeholders for their possible contribution to the VC development, they have adapted their services in order to integrate them in a value chain approach and towards more farmers. VC stakeholders have joint reflections on the most relevant innovations for the VC. The extension system has for the first time included aspects of fruit tree management and issues on improved varieties. Stronger cooperatives and processors (mango) and retailers (apple) have been successfully linked. Stronger cooperatives have increased their services and market outlets and prices for farmers. More farmers have been trained on fruit management and this effect can be attributed to SNV. There are also more and more interesting marketing outlets available for farmers via cooperatives and for new varieties also directly in the market (especially for pineapples). About 20–30% of farmers are applying the new techniques and new varieties, and 5–30% sell fruit to cooperatives (which can be considered to be successful results). SNV has not addressed sufficiently some initial limiting constraints in the institutional context of Ethiopia, or the organizational gaps of its clients, it has not monitored the outreach to poor, and has not prepared an exit strategy, all of which have resulted in limited sustainability and fragile upscaling.

²⁷² The further development of innovations and further institutional capacity development of the VCs are hampered by the weak organizational capacities of VC actors that have not been systematically addressed. This is in particular the case the capacity of cooperatives and the public extension services. The fact that SNV's capacity development support has been channelled through the CGs and is combined with testing innovations by individual clients, has resulted in a fragmentary set of interventions that were supposed to catalyze further institutional and organizational development of clients and systems. SNV has not developed a comprehensive organizational capacity development support strategy for its clients or the CGs.

²⁷³ Some crucial external conditions have not been sufficiently addressed or questioned, or have not changed much yet and need a longer transformation period and more explicit questioning of the basic assumptions of SNV's intervention logic and client choice. Whereas SNV's operations are of good quality and the government regards SNV as a reliable partner, SNV has



not succeeded in supporting the CGs to (re)question these strategic orientations or external conditions. SNV is also not engaging in this debate with other donors, for a combination of diverse reasons. First, the outcomes of capacity development support are not assessed in depth (with some exceptions), thus avoiding the confrontation with the real effects for farmers and limitations. 'Second-order learning' (asking 'are we doing the right things?') does not take place sufficiently. Second, many strategic decisions were taken by SNV advisors who also have to tackle many operational issues and cannot have a continuous strategic overview of all VCs. They are also personally linked to the clients, it would need a lot of time, courage and diplomacy to question these basic issues. Third, in its search for programme funding, SNV has tended to speed up replication processes without first questioning the approach in depth.

Poverty focus – SNV's support, even though framed in a private sector development programme, had a poverty orientation in its identification phase of the VC. SNV has also promoted specific measures to overcome some of the risks for poorer farmers. SNV's approach also demonstrates some shortcomings for addressing poverty and gender, which are linked to: (i) the combination of implicit assumptions in the intervention logic and the weak monitoring against farmers' priorities; (ii) the limited risk assessments, and accompanying measures to ensure livelihood security of households; and (iii) the limited attention paid to developing farmers' voice to participate in multi-stakeholder platforms and to facilitating contacts between farmers and the private sector. As a consequence of these shortcomings, poor farmers can access services and markets but they are not always able to apply their skills and use the new, more rewarding market outlets. This is accentuated by the fact that SNV has focused its support on those cooperatives with a stronger business orientation.

Sustainability

²⁷⁴ The limited attention paid to organizational development of SNV's clients at the meso level, the fact that achievements have not been deepened or combined with livelihood measures, and the fact that has SNV trained farmers directly, means that most effects cannot yet be regarded as sustainable yet. Important external constraining factors continue to exist and are not questioned in the coordination groups' strategic intervention plans (SIPs). It must also be noted that the duration of the BOAM programme (2007–2012) was too short to achieve a full sector transformation and the budget was too limited to deepen the organizational development of the stakeholders involved. But SNV has not prepared an exit strategy for the BOAM programme even though it has been the most important promoter and supporter of the fruit VCs.

²⁷⁵ The developed capacity of SNV's individual clients is sustainable as far as the developed market links and knowledge are concerned, but these are not sufficiently embedded in a full organizational development process that will guarantee continued improved performance:

- The CGs as groups of VC stakeholders have not developed sufficient leadership to continue, or to finance meetings and further tests/ innovations for the VC. The CG has not developed systems for collecting market information or for distributing the results of tests or innovations to all stakeholders.
- The capability of cooperatives to explore markets, to access new market outlets may be sustainable but they remain limited in number. The cooperatives also face challenges



regarding financial and commercial transparency and several governance issues, and they are not sufficiently capable to enter into joint ventures for local fruit processing.

- The ARD departments have integrated the training on fruit into the extension system, and the extension staff of the ARD offices have developed competence on fruit VCs but this needs to be deepened. Other conditions of the extension systems have not been addressed structurally and which will limit the translation of this capacity into improved performance.
- The sustainability of the developed capacity of private sector actors varies and is hampered by their limited access to finance and of their own fragile market situation.

²⁷⁶ With regard to the sustainability of the created access to services and markets for farmers:

- The training of model farmers provided by LCBs will not be continued. These service providers have not been able to access funds other than from SNV in order to deepen or replicate the training.
- Training and follow up to farmers by the *woreda* extension system will continue but will not focus on fruit only but will be integrated in general follow up of farms (development agents will visit farmers twice each year). The quality of this training needs to be improved, and the capacity development of DAs on fruit VCs needs to be deepened.
- The training and follow up that farmers receive via their cooperative (and sometimes from the private sector) is promising for the stronger cooperatives but the cooperatives do not have an extension system in place.
- The sustainability of the farmers' access to new markets, established by the cooperatives, will depend on the quality of the fruit that farmers can deliver, which in turn will depend on whether the cooperatives will be able to provide direct or advance payments to farmers and accompanying livelihood support, both of which are currently weakly developed.
- The apple seedling market still faces challenges such as low quality and related capacity gaps at the level of young apple cooperatives and willingness of the government to implement a quality regulation system.



8 Approach and methodology

- ²⁷⁷ The evaluation began with interviews with SNV staff in Ethiopia and at the regional level about their VC intervention logic and strategy, and a document review. Apart from country strategy papers, SNV reports and knowledge products, several external evaluation reports were consulted. The evaluation of the pineapple CG (and MSPs for value chains in general in Ethiopia) was very useful. Secondary impact studies were also consulted. In 2012 SNV organized an external impact assessment that included surveys of about 30 households per fruit commodity (mostly model farmers). SNV has also supported the Arbaminch Plant Health Clinic to do a post-training assessment for mango with about 50 households (related to training on disease and pest management). The results of these surveys were used to the extent possible but had some shortcomings: (a) the questionnaires concerned members of cooperatives or model farmers only; (b) the analysis of the impact assessment did not provide answers to the questions and indicators of this evaluation; and (c) the variables and analysis were directly related to impacts (e.g. diseases in the orchard, income from fruit) rather than to outcomes and processes (training received, changes in attitude, applied skills, tree management, etc.) making it difficult to test effectiveness.
- ²⁷⁸ Overall, and despite the availability of some recent impact studies, the availability of reliable and objective data on outputs, outcomes and impacts was very limited. Also factual information from the stakeholders was difficult to find. The result chains had to be completely reconstructed. Both SNV and the evaluation team had to invest a lot of time in this. Moreover, it proved difficult to persuade stakeholders to participate in the evaluation. This was partly due to the character of the multi-stakeholder approach (where all stakeholders are beneficiaries, and the benefits not owned by separate stakeholders), the Ethiopian context (public agencies do not easily participate in evaluations) and the private sector also due to the difficulties they have had with SNV.
- ²⁷⁹ The data were collected in the field in two phases. First, qualitative data were collected on the developed capacities of SNV's clients and their outputs (improvements in service delivery, the relations between value chain actors, business for private actors) and on the consistency of SNV's approach in relation to inclusiveness and poverty reduction. This issue had already been addressed in focus group discussions with farmers and members of cooperatives to assess their access to services and their appreciation. This phase also included the evaluation of two CGs (one of them had been evaluated during an external evaluation in 2011). In the second phase a quantitative household survey was conducted for the apple and mango VCs.

First phase: capacity and performance of clients

- ²⁸⁰ Specific indicators were formulated to guide the process of data collection and analysis (as described for each of the evaluation questions in Annex 2 of the inception report). With regard to the assessment of changes in the capacity and improved service delivery of LCBs, specific attention was paid to SNV's capacity development strategy for the LCBs.



- 281 For all VC actors and supporters included in the evaluation (see Table 13) changes in capacity were assessed using the framework of 5 core capabilities as well as SNV's specific contribution and the internal and external factors that had influenced on the changes in capacity. Timeline exercises were conducted to gain insight into the factors that had influenced these changes. Statements regarding changed capacities of the different stakeholders were triangulated with those of other interviewees, so that some clients were contacted repeatedly (the *woreda* ARDs, Arbaminch Plant Health Clinic, Ecopia). Specific attention was paid to the relationships between all VC stakeholders.
- 282 The intention was to use **semi-structured interviews** of about one day to assess the capacity of SNV's clients, including the key participants in the CGs. The cooperatives, the Kale Heywet church and the APHC were very cooperative. Since most of the clients did not have a permanent relation with SNV, they were reluctant to give that much time to the evaluation team, especially some of the public agencies (Jimma, Arbaminch ARD). Also some private actors were reluctant to spend sufficient time on the evaluation (Dibabisch, Ecopia, Africa Juice). Dibabisch refused to participate in the evaluation, even after several attempts, so that information was obtained from client files and institutions from the pineapple CG and the local taskforce.
- 283 The semi-structured interviews were complemented with a **questionnaire survey** of 18 cooperatives and two coordination groups.
- For the cooperatives, the questionnaires eventually took the form of a guided interviews, since most were unable to complete the questionnaires themselves. Moreover, the records of the cooperatives were found to be incomplete, so that their responses regarding their commercial capacity were poor. For that reason, the strongest cooperatives (one for apples, one for mangoes) were contacted again to ask for sales data per quality standard, but they were not able to provide consolidated data.
 - The CGs were interviewed by phone, based on a list of predefined questions that were added to the regular interviews with other selected clients.
- 284 The **focus group discussions** were held during the first phase for the three commodities. For each commodity, two *kebeles* were visited (in the same *woreda* per commodity). For mango and apple, it concerned one *kebele* with a strong cooperative and one with a weak cooperative (for pineapple, there were no strong cooperatives in the intervention area). In each *kebele*, the focus group included a mixture of members and non-members of the cooperative. A second session was organized with specific groups of key informants. In some cases these were women (if women were not heard sufficiently during the focus group discussion), elderly people or development agents.
- 285 The **selection of stakeholders** to be included in the evaluation was made taking into account the sufficient presence of the three value chains in the sample. Table 13 gives an overview of stakeholders involved in the first phase of the evaluation.



Table 13. Overview of stakeholders, evaluation topics and methodologies to assess the fruit VC programme in Ethiopia

Stakeholders	Methodology
Cooperatives (18): these are all cooperatives active in the GG zone for apple, pineapple and mango	Questionnaire for leaders Semi-structured interviews with leaders of three coops
Unions (1): the GG union – the only one in Goma Gofa zone	Semi-structured interview with leaders and manager
Processors (2 – Ecopia, Africa Juice): processors linked to mango and Ecopia also to pineapple and apple	Semi-structured interview
Other private sector organizations: <ul style="list-style-type: none"> • Apple nursery, small mango nurseries. • Alaja research centre: private lab for tissue propagation (involved for pineapple plantlets) • 1 investor in pineapple (the only one) refused to participate. • Efruit was interviewed but this is public marketing agency (linked to cooperative mango) 	Semi-structured interviews
Woreda ARD (3 for each commodity the <i>woreda</i> that has been involved)	Semi-structured group interviews
Cooperative Promotion Office (2 = Chench (apple), regional GG (three commodities))	Semi-structured interviews
Coordination Groups (2 – apple and mango; the pineapple CG was evaluated externally by Maastricht School of Management in 2011 – data are available).	Semi-structured interviews with at least four key members Questionnaires for other members replaced by guided interview, including questions on the CG to all SNV's clients interviewed.
LCBs (4 involved in CD of CGs and cooperatives of the three commodities) and Kale Heywet church (apple)	Semi-structured interviews
Small-scale farmers (apple, mango and pineapple)	Focus group discussions (#6 and additional discussions with key informants in the visited <i>kebeles</i>)
Public research institutions (1: APHC – mango, Jimma – pineapple, by phone only)	Semi-structured interview
MSEDA (Medium to Small Enterprise Development Agency), regional and national levels	Semi-structured interviews
External stakeholders: Ethiopian Horticulture Development Association, EHDA), ICCO, GIZ, National Value Chain Network, World Vision	Semi-structured interviews
Netherlands Embassy	Semi-structured interview

Household questionnaire

286 The household survey examined indicators concerning evaluation questions 2.3 and 3 (see inception report) related to outcomes at the farmer level. In particular, the survey was used to



test whether this indirect TOT system, and SNV's improvements to the local TOT system, has really been effective in reaching thousands of farmers in an convincing way, and to what extent this has led farmers to change their attitudes, operations for tree and pest management, application of new varieties, and eventually to better quality products and indirectly to improved marketing operations.

²⁸⁷ Another point of interest is whether SNV's support to cooperatives has complemented these effects at the farmer level (so whether the pull function has complemented this push function at the farmer level). The latter question is difficult to study within the scope of quasi-experimental research, because there is probably covariance between the variables of interest (applying new techniques, growing more fruit trees (not seedlings only), being more proactive in marketing), membership of a strong cooperative or the existence of strong cooperatives. But strong cooperatives have spillover effects in their *kebele* (as noticed during the qualitative research): they buy fruit and seedlings from non-members and even from weaker cooperatives (quality fruit only), provide additional training to members (which may be formal or informal model farmers to other farmers in the *kebele*), etc. The consultants therefore opted to survey two *kebeles* for each commodity (apple and mango): one with a strong cooperative and one with a weaker one.

²⁸⁸ For mango and apple, household surveys were organized in two *kebeles* in the same *woreda* (one *woreda* for apple, one for mango). One of the two *kebeles* selected (per commodity) was influenced by a relatively weaker cooperative (still functional and specialized in the concerned commodity, receiving less intensive support by SNV) and one *kebele* influenced by a stronger cooperative (and receiving more intensive supported by SNV). The selection of cooperatives was based on the ranking of their capacity from the results of the cooperative questionnaire. For apple, 60 farmers per *kebele* were selected (120 in total), for mango 50 farmers per *kebele* (100 in total). Stratified sampling was not used: any type of farmer could be selected with a probability based on their relative representation in the *kebele*. The households were selected at random (all types of farmers) based on lists provided by the *kebeles* (the *woredas* were asked to prepare updated lists with the DAs well in advance). The survey analysis identified different types of farmers (model farmer/ ordinary farmer) and *kebeles* with a strong or relatively weak cooperative but did not compared them statistically (as explained above, this would be difficult within the scope of quasi-experimental research, because of the high level of covariance between the researched variables and the fact to have become a model farmers or member of a cooperative).

²⁸⁹ The questionnaire compared the adoption of new varieties, techniques and sales by farmers over time (2008–2012) and used recall moments. The questionnaire was implemented as an interview. It was difficult to obtain quantitative information on production and sales from the past. Apart from the comparison over time, there was no control group. Possible control *kebeles* or *woredas* are influenced too much by other variables. The comparison over time was based on the perception of the households but was tested by the enumerators (e.g. based on what they could see in the farm, and on what households had said previously). The enumerators had been trained on this and the test questionnaires included this aspects. Also, the *woreda* experts and DAs of the *kebele* were included during the training of the enumerators for them to recognize certain situations and apply techniques to the trees and to



provide them with information of the cooperative to cross-check with the farmers (e.g. if a farmer said he or she sells quality grade fruit to the cooperative, the enumerators knew what this implies and deepened this out. Similarly, if a farmer said he knew how to prune his trees, the enumerator could ask how he did this, when, using which tools, now and in the past). During the interview, the households were asked to do the interview with man and wife together, but this was difficult, despite many efforts from the field team and DAs, and despite the fact that the questionnaires were in the local language and in morning and evening. For mangoes, in 42% of the questionnaires, women were present (including 19% of respondents from female headed households). For apples, in 62% of the questionnaires, women were present (including 34% of the respondents from female headed households).

²⁹⁰ Apart from the household survey, additional interviews were organized with agricultural development agents (11) and model farmers (26) in the four *kebeles*. They explained the way they were trained and train (model) farmers.

²⁹¹ Pineapple was excluded from the household survey because the outcomes of the support to the pineapple VC at the farmer level is still rather limited and predictable – the introduction of a known number of improved varieties (500,000) to a known number of farmers (4500 of the 7500 households producing pineapples in the intervention area), some of whom had been trained (2300) (directly by SNNPR). Only farmers who received the first batch of 50,000 plantlets could have harvested the improved variety. The improved variety, Smooth Cayenne, produces larger, sweeter and smoother fruit that can sell at a relatively higher price (ETB 10–15 each, compared with ETB 3–5 each for a traditional variety in 2012). A household survey would not have delivered more information. The cooperatives were not involved in collective marketing, so individual farmers continue to sell their produce to local collectors.

²⁹² For the pineapple value chain, two additional targeted focus group discussions were held in two *kebeles* in the two main project areas where SNV has supported cooperatives (Tesso and Chuko). The participants were asked detailed questions about whether they apply good management practices, their appreciation of the new variety (pest and disease resistance, the workload required) and on the marketability of the pineapple. The participants included members and non-members of cooperatives and model farmers who had received plantlets from Jimma [Agricultural Research Centre?].



Annex 1: List of documents consulted

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Bekele, G., Bogale, S. Eshete, T. and Gululat, W. (Participatory Research and Evaluation Consultancy, PRE), *Support to Business Organizations and Their Access to Markets, Impact Assessment of Pineapple, Mango and Apple Fruits Sector Value Chain Development Project of SNV in Sidama and Gamo-Gofa Zones, SNNPR*, 2012.

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Helmsing, A.H.J. (Bert) and Vellema, S., *Value Chains, Inclusion and Endogenous Development Contrasting Theories and Realities*, Routledge, February 2011.

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- Woreda* Abaraminch, Inventory of apple production in the *woreda*, 2010.



Annex 2: Institutions and individuals consulted

Institution	Persons	Other information and contact	
SNV	Jan Vloet, country director Genzeb Akele, Portfolio coordinator agriculture Tigist Dagneu, Timoteos Hayesso, GB Banjara, fruit value chain advisors SNV Germa Woldigeblel, Bruck Arejai, and Paulos Desalegn Mrs. Sabdyo Dido (regional strategy advisor ESA-SNF) and Mr. coffie Reuben, senior advisor value chain ESA-SNV		
Partners of SNV (national and local levels)			
Embassy of the Netherlands in Ethiopia	Geert Geut		
ICCO	Ato Tarekegn Garomsa (ICCO, Business Development Adviser)		
GIZ	Ato Yared Fekade (executive programme officer GIZ),		
EDHA	Ato Sisay Hailu, Haileab Atsbeha, Horticultural experts		
CG			
Mango CG member	Negash Belete Chengere Tsla Muluaem Mersha Teodros Getachew Anteneh Asfaw Tamirayehu Mersha Muluneh Mengesha	A/Minch <i>woreda</i> ARD V/head A/M Plant Health Clinic, head A/M Plant Health Clinic, Expert A/Minch <i>woreda</i> ARD, Horticulturalist A/Minch <i>woreda</i> ARD, Deputy GGFVMU Manager AMPHC	0910524211 0916831077
Apple CG	Gota Goda Tomas Amde Tafesse Gila Shenka Salbe Afewerk Lambebo Meskob Mamushe Anjulo Alemu	– CHFVMC Deko Shiye FVMC Mafona FVMC Deko Tordaga Cooperatives Promotion Officer Cooperatives Promotion Work Processor head Deko Kale derbobe	0467760201; 0916853235 0910005564 0913436234 0910465342 0925139697 0913186667
LCBs			
LCB, Kale Heywot Church	Theophlos Tesfaye Belay Bekele	Dev't coordinator	
LCB, Gugie Business and Consultancy Services Plc.	Yeshitila	Consultant	0911746399
Bafana Bafana	Tesfaye Girma	Consultant	
Target	Mr. Getnet Haile		
Yonat	Mr. Mergia Bekele		
Processors and private sector			
Kifle Bulu nursery	Kifle Bulu	Manager	0911742595
Ecopia	Ms. Lidet Ylake, muluget Nega, Hredin Nur, representatives of ECOPIA; Shewit Zeray	Staff	
Ecopia	Dr. Mthelale	Manager	
Etfuit	Mr. Mengistu Kebede, Sisaay Kebede, Lakew Wacharo		
Africa Juice	Dr. Abayneh		



Local government and public agencies			
A/Minch woreda ARD	Teodros Getachew Anteneh Asfaw	Horticulturalist Deputy	0910524211
Chencha Woreda ARD	Kebede Gibo Addisu Gurma Teshome Wonbera Biru Adere Lemma Wolde	Extension Communication Expert V/Head Head of expert expert	0924442227 0913389573 0926570393 0910998575 0911572760
Chencha Woreda Coops Promotion Office	Alemayehu Mamo	auditor	0920673856
Gamo Gofa Cooperatives Promotion Office	Abtie Ama	Officer	
Chuko woreda Agr. Dev't Office	Dejene Berhanu	Agr. Extension Agr. Extension	0916851577 0916064550
Dara woreda ARD	Debebe Kidan Yohanes Hankomo		
Chuko woreda ARD	Brehanu Tunisisa		
MSEDA	Araya		0916133654
Enterprise Development Agency	Mr.Solomon Assefa from FeMSEDA		
Arbaminch Plant Health clinic	Chengere Tsla Mulualem Mershu		
Mekelle Institute of Technology	Henok Debesay	Production Coordinator	0912379949
Cooperatives and union (workshops)			
Ocholo Lante Kursheto Processing project	Marrie dama Amsalu Ama Melakamu Odo Eyasu Golgie Berhanu Melkamu	Purchaser V/Chairperson sales Chairperson Member Secretary	
ChenchaFVMC	Gota Goda Charkas Chato Berhanu Molla Tsehati Feleke Girma Altei Alemayehu Ambuko Adane Dola Ammanuel Sama Tadesse Bota Gebbru Bekele	Chairperson Accountant Secretary manager Chairperson V/chairperson Secretary Chair for control Committee treasurer Finance	0916853235 0916702853 0916880911 0926570394
GGFVMUnion	Tamirayehu Mersha	Manager	0916831077
GGFVMUnion	Alemayehu Borago Mulugeta Dejene Melaku Dercho Tamirayehu Mersha Girama Altie Adane dadi Petros Malmasie	Board Chairperson Marketing Officer Accountant Manager Lante FVMC Ocholo Lante Secretary Board Treasurer	0912319649 0916832257 0911963268 0916831077 0910652678 0916852745 0913069404
Tesso, Dibicha and Gambella FMC	Abera Kutcha Tessema Yirdaw Alazar Fegie Ejigu Wubie	Chairperson Secretary of Control Committee Accountant Secretary	0912428029 0913237006 0916403530 0916103888
Questionnaire to 18 cooperatives			

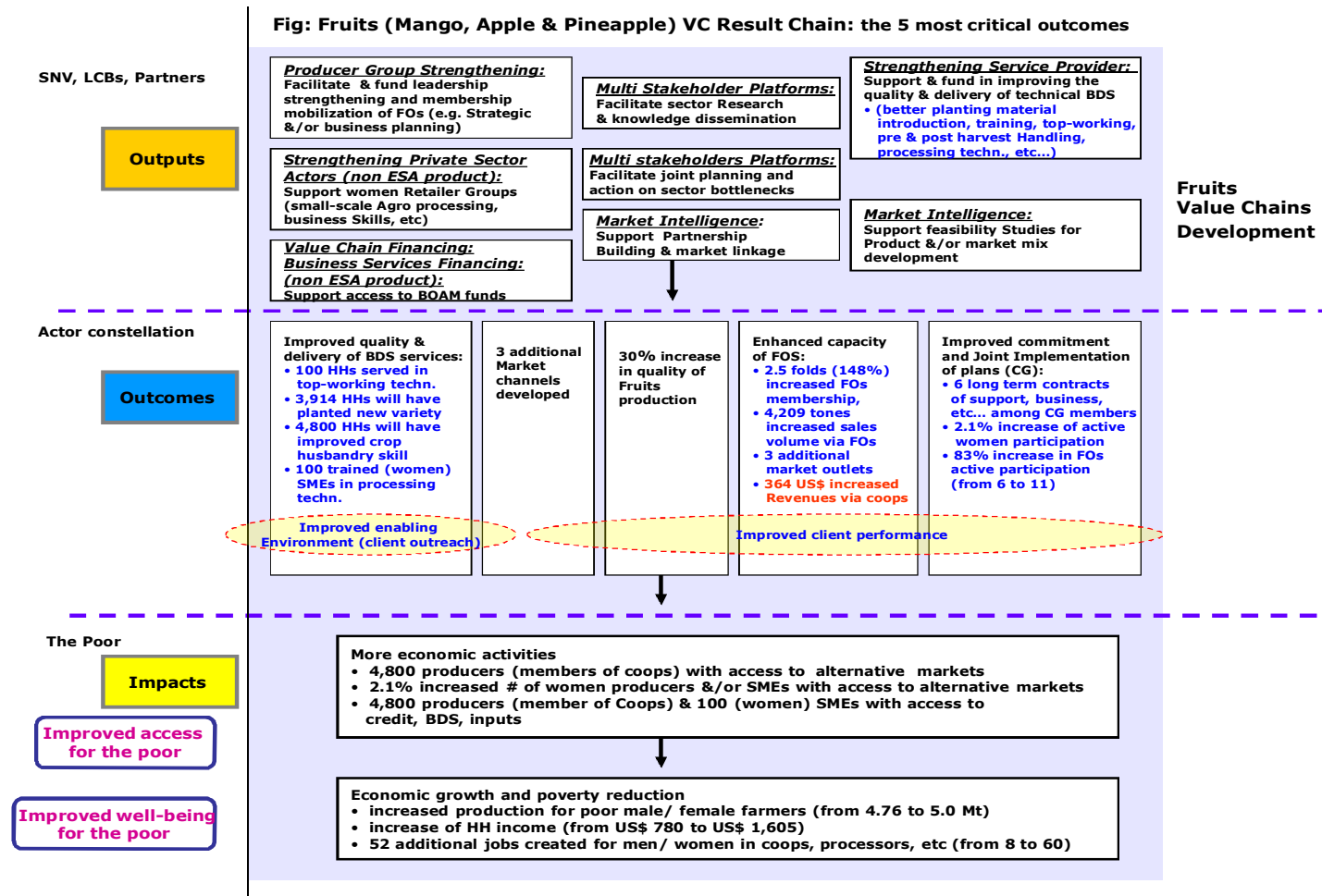


Focus group discussions			
Apple – Chench, <i>kebele</i> : Lasho	List of participants: see report FGD		
Apple – Chench, <i>kebele</i> : Maffona Zola	List of participants: see report FGD		
Lante Resident	Zelalem	Private nursery,	
Mango – Arbaminch, <i>kebele</i> : Lante	List of participants: see report FGD		
Mango – Arbaminch, <i>kebele</i> : Chano Choleba	List of participants: see report FGD		
Pineapple – Dara: Saffa <i>kebele</i>	List of participants: see report FGD		
Pineapple – Chuko: Debecha <i>kebele</i>	List of participants: see report FGD		
DAs interviewed in Chench and Arbaminch Zuria			
Chench – apple	Solomon Safa Lukase Gesa Dawite Duba Etagegn Kelecho Tewoderos Getahun Tassew Khasahyn Tsehaye H/ Micheale		
Arbaminch Zuria – mango	Jima Adame Abonesh Worku Getanesh Simeon Dole Gida Hatise Hambissa Yakob Keta Esatu Fikere		
Sidama Zone – pineapple Ganbela <i>Kebele</i>	Eyassu Ledamo Tadese Yonak Yiteru Kinbicha Solomon Betaye		
Sidama Zone – pineapple Safa <i>Kebele</i>	Samuale Adato Mesefen Kurke Mekonen Legese		



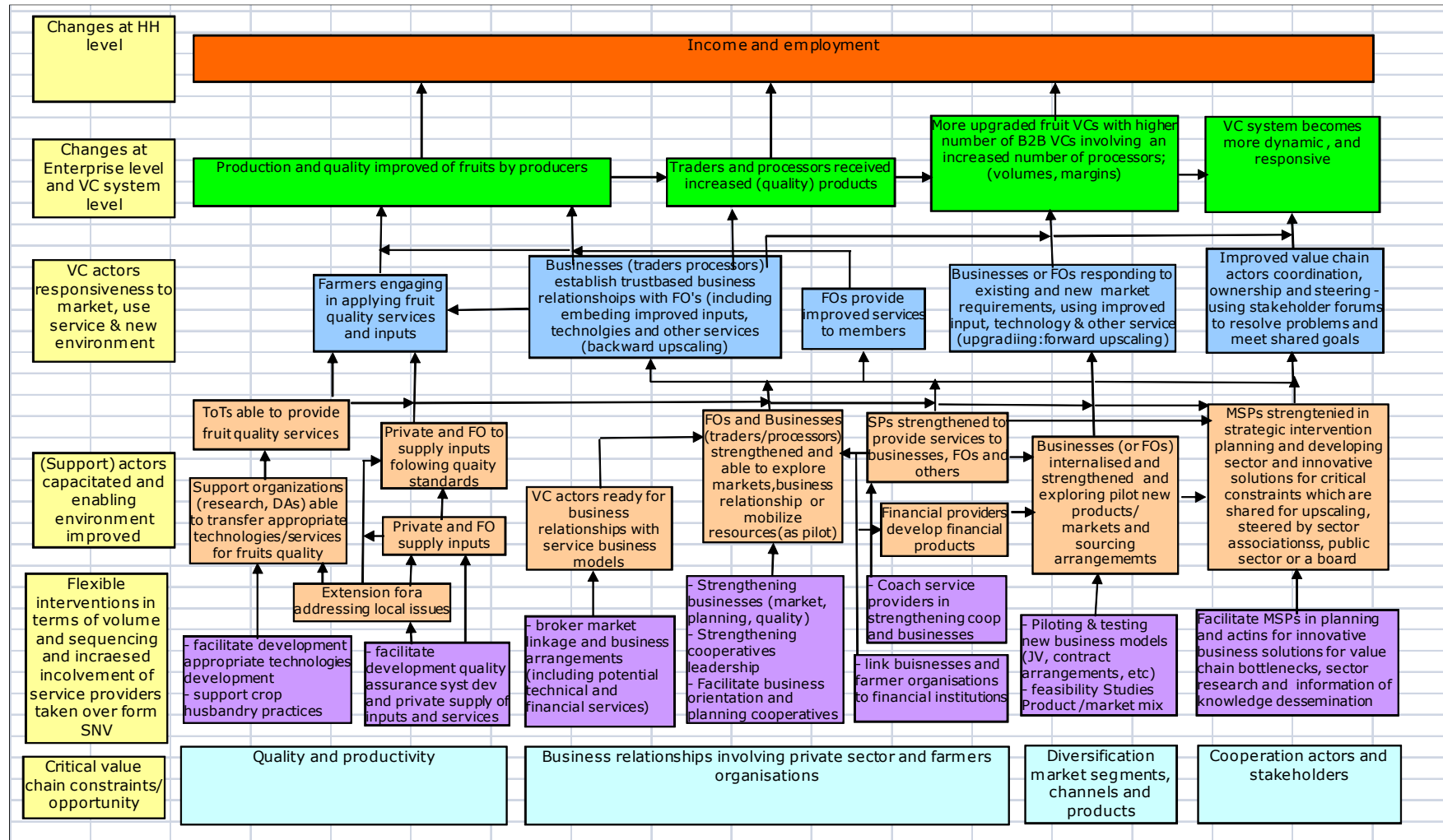
Annex 3: SNV's intervention logic

Intervention logic as presented by SNV, 2006–2008





Intervention logic as presented by SNV, 2009–2011





SNV's intervention logic, as reconstructed by the evaluation team

Results levels of SNV's support to fruit value chains in Ethiopia, 2007–2011.

IMPACTS	Income and employment of farmer households									
	Improved quality and production of fruits by producers	More farmers employed in outgrower schemes and processor units			Legal processors and traders receive increased volumes of quality products and new processors and traders emerge			Enabling environment, policy, knowledge and investment in the sector		
OUTCOMES	Farmers engaging in applying improved tree/ plant management, fruit quality measures services			Businesses and farmer organizations responding to existing and new market requirements and developing new market outlets and products		Private nurseries provide new plant material in a financially sustainable way, investors provide employment via outgrower schemes		Improved value chain actors coordination and steering, VC becomes more dynamic and responsive and is considered as a priority for income generation by government		
	TOTs of <i>woreda</i> ARD able to provide services on new technologies for production, harvesting, post-harvesting, processing		FOs provide improved services to members (information, training, advance payments) and pay for quality fruit		Financially sustainable FOs and investors	FOs and businesses able to explore markets, business relationships		Small processing units have developed sustainable supply and output markets	MSPs and their members are more aware of key constraints in the VC, of strategic intervention planning and developing sector solutions	
OUTPUTS	Research institutions, ARD and private sector supported to develop, promote or transfer appropriate technologies and planting material	FOs strengthened for business planning and management, quality systems and cooperative leadership		Market linkages and arrangements between buyers/ processors and coops tested and strengthened to embed services to farmers.	Small processing units tested, established and strengthened. New products developed.	Service providers to business development in VC are strengthened	Business, investors and FOs linked to financial institutions and financial providers developed financial products	MSPs attended by all relevant stakeholders, strengthened for planning and actions in innovative solutions for shared critical constraints in the VC	Sector research, information and feasibility studies elaborated	Public agencies improved strategic leadership in VC development



Annex 4: Participants in the coordination groups for the three value chains

Participants in the CGs for all three fruit value chains

	Name of Institution	Telephone	Fax	Name of participant	No. of participants
A	From Arbaminch area (mango + apple)				
	Gamo Goffa Zone Agricultural development office	0468 – 810175/145 0916 83 4736	0468 810143	Matewos Bundo, Deputy for crop extension	1
	Gamo Goffa Zone cooperative desk	046 881 0555/175		Zekarias Dode	1
	Gamo Goffa zone Trade & industry office	0468 812947/ 046 8810127	0468 812282	Tsegaye Bekele	
	Gamo Goffa Fruit & Vegetable Marketing Union	0468 811445	0468 811445 0468 810143	S. Dawit Desta (BOD)/ Tamirayehu Mersha (GM)/ Mulugeta Dejene (mkting)	3
B	From Hawassa				
	SNNPR bureau of agriculture development	0462 206367/0916 864593	046-220-57-16	Fekadesilassie Beza 1 agronomist (horticulturalist)	2
	SNNPR BoFED	046 220 39 57	0462203957	1 relevant person	1
	SNNPR president's office	0913 474185		Anesa Malko	1
	Southern agricultural research centre -SARI	0462202050/4392	0462 – 204521	1 researcher responsible for fruits/horticulture	1
	Regional cooperatives and marketing bureau	0911 723808 (Abraham)	By hand	Ato Abraham / Gebriel Bokansa Coops development section head	2
	Jitu			1 relevant person	
	Elfora (malge-woldo agro industry) – Awassa	0462 – 210058/ 210017		Dagne Tefera	1
	IPMS (lives)	0916 834826/ 0462-251530		Ketema Yilma	1
C	From Addis and other regions				
	Ministry of Agriculture development	0913 17 46 45			1
	Ethiopian Horticulture Development Agency			1 representative	1
	Ministry of Trade and Industry (Agro processing department)	0115 – 153209	0115 – 514288 0115 – 515411	1 representative	1
	Upper Awash Agro Industry Enterprise	0911 148947/0221122704		1 representative	1
	World Vision Ethiopia	011 629 33 50/ 0911632654	011 6293346	Belay Hadis & Kebede W/Giorgis	2
	Ethiopian chamber of commerce	0115-518240	0115-517699	1 representative	1
	Ethiopian Horticulture producers & exporters association (EHPEA)	0116 636751/0911255672	011 663-6753	Ato Tilaye Bekele (GM)	
	Etfruit	0115 – 5519192	0115 – 516483	Mengistu Kebede (GM)	1
	Kiber fruits and vegetables marketing centre	0114 162356/ 0913 512294		Seife G/Mikael (GM)	1
	Ecological Products of Ethiopia	0913421625		Dr. Mithlhal Kifle-Yesus	1
	Addis Ababa mango wholesalers	0911 609805/ 0911 433880	By hand	Solomon Bireda & Sebsebe Zergaw	2
Total					27



Participants in the mango CG

1. Arbaminch Area

	Name or Institution	Telephone	Fax	Contact person	No. of participants	Remarks
	Gamo Goffa Zone ARD office	0468 – 810175/145 0916 83 4736	0468 810143	Matewos Bundo and one agronomist (horticulturalist)	2	
	Gamo Goffa Zone cooperative desk	046 881 0555/175		Zekarias Dode	1	
	Arbaminch zuria <i>woreda</i> Cooperative Desk				1	
	A/minch zuria <i>woreda</i> agri. Development office	0468810122/812181 0910925375/0910524211		– Anteneh – Tewodros	2	
	Arbaminch plant health clinic (APHC)	0911040022/0912184495 or 0468811887	0468814554	Chengere Tsala Yemane Mulualem aphc@yahoo.com	2	
	Gamogofa zone marketing and coops department	0468 812947	0468 812282			
	A/minch zuria <i>woreda</i> marketing and coops office					
	Gamo Gofa Fruit & Vegetable Marketing Union	0468811445/0916831077	'	– Alemayehu Bote (BOD) – Tamirayehu Mersha (GM) tamirayehu@yahoo.com	2	
	Lante Fruits & Vegetables Marketing cooperative	046 3380136/0910 652678	'	– Girma Olte	1	

2. Hawassa Area

	Name or Institution	Telephone	Fax	Contact person	No. of participants	Remarks
	SNNPR Bureau of Agriculture Development	0462 206367/0911957435	046-220-57-16	Ato Germame Wolde(d. Head) (horticulturalist)	2	
	SNNPR BoFED	046 220 39 57/ 0916829393	0462203957	Birhanu Eshetu	1	
	SNNPR president's office	0913 474185		Anesa Malko/Shigute Tiyite	1	
	Southern AGRICULTURAL RESEARCH CENTRE (SARI)	0462202050/4392	0462 – 204521	1 researcher responsible for fruits/horticulture	1	
	Regional cooperatives and marketing bureau	0462 202016/7213 0911 723808	0462 210346/ 0462 207214	Ato Abraham Demisie Coops development section head	2	
	Gitu			1 relevant person		
	Elfora (malge-woldo agro industry) – Awassa	0462 – 210058/ 210017		Dagne Tefera	1	
	IPMS (lives)	0916 834826/ 0462-251530		Ketema Yilma	1	

3. Addis and others outside the region

	Name or Institution	Telephone	Fax	Contact person	No. of participants	Remarks
	Ministry of Agriculture development	0913 17 46 45		1 representative	1	
	Ethiopian Horticulture Development Agency			1 representative	1	
	Ministry of Trade and Industry (Agro processing department)	0115 – 153209	0115 – 514288 0115 – 515411	1 representative	1	
	Upper Awash Agro Industry Enterprise	0911 148947/0221122704		1 representative	1	



World Vision Ethiopia	011 629 33 50/ 0911632654	011 6293346	Belay Hadis & Kebede W/Giorgis Kebede_woldegiorgis@worldvision.com	2	
Ethiopian chamber of commerce	0115-518240	0115-517699	1 representative twoubbie@gmail.com (Tamiru Wubie)	1	P.O.Box: 436
Ethiopian Horticulture producers & exporters association (EHPEA)	0116 636751/0911255672	011 663-6753	Ato Tilaye Bekele (GM) ehpea@ethionet.et		Confirmation is important
Etfruit	0115 – 5519192	0115 – 516483	Mengistu Kebede (GM)	1	Selamawittesfaye@hotmail.com
Kiber fruits and vegetables marketing centre	0114 162356/ 0913 512294		Seife G/Mikael (GM)	1	
Ecological Products of Ethiopia	0913421625		Dr. Mithlal Kifle-Yesus MKmatschie@aol.com	1	
Addis Ababa mango wholesalers	0911 609805/ 0911 433880	By hand	Solomon Bireda & Sebsebe Zergaw	2	
africaJUICE Tibila S. C.	0911 463129		Dr. Abayneh Esayas a.esayas@africajuice.com	1	
Genet Agricultural Development Plc	0911 469546		Genet w/Giorgis	1	
Segel General Trading Plc.	(0911) 204373	0111 571692	Seifu W/Michael	1	
Awash Melkaasa Research Center	(0911) 853946	0221- 114623	Lema Ayele lemmayele@yahoo.com Tadele Aytenfesu	2	

Participants in the pineapple CG

Organization	Name	# of Participants	Telephone	Fax	E-mail	Remarks
EECMY – CFSOP	Abraham Tiramo	1	0916823263			
Development Bank of Ethiopia	Addisu Amona	1	0916864537			
Dara Agriculture office	Debebe G/kidan	1	0916042194			
Dara Agriculture Office	Yohannes Hankamo	1	0916105439			
Chuko Agriculture office	Dejene Endeshaw	1	091685157			
Chuko Agriculture office head	Bezabih	1	0916 851762			
Pineapple Cooperative	Egigu Wubiy	1	0916103888			
Pineapple Cooperative	Mekuria Kebede	1	0916170062			
Safa Cooperative	Melese Mekurria	1	0916328410			
Safa Cooperative	Solomon Dukamo	1	0916176422			
Etopica OFCaM agro processing PLC	Tamiru Hariso	1	0916 504172			
Mekele tissue culture lab.	Henok Debesay	1	0912379949	0344417491	henokdbsy@gmail.com	
Sidama zone administration	Alemu Kelikay	1	0911003277			
Sidama zone agri. Office	1 representative	1				
Sidama zone trade & industry office	1 representative	1				
Sidama zone coops & marketing office	1 representative	1				
Dibash PLC	Yilma Nadew	1	0916822692		abeicabaib@yahoo.com	
Haji (private commercial farm)		1				
Total		18				



Participants in the apple CG

	Name or Institution	Telephone	Fax	Contact person	No. of participants	Remarks
	From Arbaminch and Chencha					
	Chencha <i>woreda</i> Marketing and Cooperatives Office	046 776 0007 0913 416610	046 776 0025	Assefa Aga	1	
	Chencha <i>woreda</i> Agriculture office	046 776 0155		– Teshome Wonbera – Head of extension – Lemma Wolde	3	Head, Deputy & Mktg
	Chencha Highland fruits Marketing Primary Cooperative	046 776 0201 (0916) 853235	046 776 0559	Gota Goda	1	Chairman
	Kale Hiwot Church, Chencha area	046 776 01 58	046 776 0559	One representative	1	
	World Vision Ethiopia, chencha	046 776 00 23	046 776 0559	– one representative	1	
	Kale Heywet Church, South west zone	046 881 16 73 0912 01 93 31	0468 811673 hicodep@ethionet.et	– Belay Bekele – Theophlos Tesfaye	1	
	Mafo & Zolo Yetigist Firie F/V/M/C	046 776 04 16	046 776 0559	Chairman	1	
	Ezo H/F/M/Coop.	046 776 01 80	046 776 0559	Chairman	1	
	Kogo H/F/M/C	046-884 01 21	'	Chairman	1	
	Darbuse H/F/M/C		'	Chairman	1	
	Doko Shaye H/F/M/C	0910 00 55 64	'	Chairman	1	
	From Addis and others outside the region					
	Dr. Hans Bauer VLIR	0914 721 541	bauer@casema.nl negash aregay (negash20@yahoo.com)		1	
	KBASPE	0911742595	kifle_bulo@yahoo.com kiflbul@yahoo.com	Kifle Bulo	1	Seedling producer
	Holeta research center	913860025	bayeh65@yahoo.com	Dr. Bayeh Mulatu & Teshalech Gizaw	2	Apple Project coordinator
	SLM	0911 230150	hailemariam.tefera@giz.de Karasa Kajela 'gltbjga@gmail.com'	Hailemariam Tefera	1	
	Oromia Bureau of Agriculture	0912 228508	girmalema@gmail.com girmalem@gmail.com	Girma Lema	1	
	ORDA	0115504455	0115517244	Addis Hailemichael	1	
	Total				24	



Annex 5: Survey questionnaires

This annex presents the questionnaires used in the household surveys (apples and mangoes), coordination groups and cooperatives.

Household survey questionnaire – apples

QUESTIONNAIRE PROCESSING INFORMATION

ITEM	NAME	CODE
WOREDA		
KEBELE		
NAME OF RESPONDENT		
NAME OF INTERVIEWER		
Checked by(NAME OF SUPERVISOR)		
DATE OF INTERVIEW		
Field Checked date		
Verification date		
Data Entry Date		
Household ID		

Universal special codes (to use only in exceptional cases)

-99= Not Applicable

-88=Refuse to respond

-77=Do not know

1. HOUSEHOLD INFORMATION

1.1. Sex of the HEAD []

Male = 1

Female = 2

1.2. Household members present in the interview []

Male only = 1

Female only = 2

Both = 3

Spouse=4

1.3. Age []

1.4. Type of farmer []

Ordinary Farmer = 1

Model farmer = 2

1.5. Member type []

Member of cooperative = 1

None member of any cooperative = 2

1.5.1. If you are member of cooperative, which cooperative? []

Chencha=1

Maffo na Zolo=2

1.6. Name of development center

1.7. Do you produce apple trees? []

Yes = 1

No = 2

Used to produce in the past but stopped now = 3

1.8. If no or used to produce but stopped (to 1.7), what is your reason for not engaging in apple tree production or for stopping?

.....



1.9. Do you produce apple seedlings? []

Yes = 1 No = 2 Used to produce but stopped know=3

1.10. If no to 1.9, what is your reason for not being engaged in apple seedling production?

.....
.....
.....

2. APPLE PRODUCTION AND PRODUCTIVITY (APPLE TREES TO PRODUCE FRUIT)

2.1 For how long have you been growing apple trees? []

1. Last year (2004ETC) 2012
2. Two years ago (2003 ETC) 2011
3. Three years ago (2002ETC) 2010
4. Four years ago (2001ETC) 2009
5. Five years ago (2000ETC) 2008
6. Six years ago (1999 ETC) 2007
7. Longer (before 1999 ETC), 2007

2.2. Where did you get the old apple seedlings (old varieties), if any? []

Woreda office = 1 Church /world vision = 2 Cooperative = 3
Another farmer= 4

2.3. How many apple trees do you have currently? (Total number) []

2.4. Did you increase the number of apple trees for fruit since 2008 ? [] (we decrease the codes in to 4 ,because 7 codes for 100 and 120 questioner is not appropriate)

1= One to Three 2 = four to ten 3 = 10 to 15 trees 4 =More than 15

2.5. Do you have any of the new variety of apple tree? []

Yes = 1 No = 2

2.5.1. How many trees of the new variety (apple) do you have ? []

2.5.2. When did you start to use the new variety apple tree? []

1. Last year (2004ET) 2012
2. Two years ago (2003 ET) 2011
3. Three years ago (2002ET) 2010
4. Four years ago (2001ET) 2009
5. Five years ago (2000ET) 2008
6. Six years ago (1999 ET) 2007
7. Longer than 6 years ago (before 1999 ET)- 2007



2.5.3. Where did you get the majority of the new variety apple trees? []

Woreda office = 1 Church /world vision = 2 Cooperative = 3
 Another farmer = 4

3.APPLE SEEDLING PRODUCTION

3.1. For how long have you been producing apple seedlings? []

1. Last year (2004ET) 2012
2. Two years ago (2003 ET) 2011
3. Three years ago (2002ET) 2010
4. Four years ago (2001ET) 2009
5. Five years ago (2000ET) 2008
6. Six years ago (1999 ET) 2007
7. Longer than 6 years ago (before 1999 ET)- 2007

3.2. How many apple seedlings do you have?

3.2.1. Total number you currently have: []

3.2.2. Total number you had in 2008: []

3.3. Where did you get the new variety apple seedlings? (please fill the next table line by line)

SOURCE OF APPLE SEEDLINGS	3.3.1 Do you get the seedlings from.....? Yes=1 No=2	3.3.2.If yes for 2.5.1 How many do you get from.....?	3.3.3. How many of the seedlings have survived?
Woreda office If no go to the next line			
K. Hewote/ world vision If no go to the next line			
Cooperative If no go to the next line			
Another farmer If no go to the next line			
Other Specify.....			
	<i>To complete by enumerator</i>	Total=	Total=

3.4.Please name the new varieties apple seedlings you have



3.4.1.

.....
.....
.....
.....

3.4.2. to be completed by supervisors: this farmer knows his apple varieties well :

[]

1 = Yes, they know well the varieties he is growing = 1

2 = No, they don't know more than one variety = 2

3 = Partly, they know at least two varieties in a detailed way = 3

4. PLANTING SCHEME OF APPLE TREES AND SEEDLINGS

4.1. Where do you plant apple tree/seedling? []

1 = Homestead 2 = Farmland 3 = Both

4.2. Do you know which variety root stock is compatible to which variety of apple? []

Yes=1 No=2

4.2.1. If yes, Please explain which rootstocks and varieties you have and their compatibility

.....
.....

4.2.1. To be completed by supervisors /coordinator: []

1 = this farmer knows very well about compatibility

2 = this farmers knows somehow about compatibility

3 = this farmer doesn't have an idea about compatibility

4.3 . Do you know which variety of apple is suitable to which ecological zone (chilling)? []

Yes=1 No=2

4.3.1. If yes Please explain which varieties you have and their chilling requirements

.....
.....

4.3.2. To be completed by supervisor/coordinator []

1 = yes, he knows very well 2 = he knows for some apples and not much detail 3 = no, he doesn't have an idea

4.4. Did you have to uproot other plants to be able to plant the apple trees (Enaset, coffee etc) []

1 = Yes 2 = No

4.5. Do you want to expand the number of apple trees and seedlings ? []

Yes=1 No=2



4.6. What factor is the most determining for this expansion, which factor do you depend on the most? []

1 = Land 2 = Finance(Money) 3 = Training 4 = Market 5 = Other

5. TRAINING FOR APPLE TREE AND SEEDLING MANAGEMENT

Type of techniques	5.1 Did you receive training/Advisory on.....? Yes = 1 No=2	5.2 Which type of service did you receive? Training=1 Supervision=2 Both=3	5.3. From whom did you receive it? USE CODE A	5.4. How many times...? USE CODE B	5.5. When was the most recent training/supervision ? USE CODE C	5.6. How useful was it? USE CODE D
Seedling production If no go to the next Line						
Summer pruning If no go to the next Line						
Winter pruning If no go to the next Line						
Harvest and post-harvesting						
CODE A 1. Woreda 2. DA once but not continuously 3. Church once continuously 4. Model farmer		CODE B 1.ONCE 2.More than 3.more than		CODE C CODE D 1. Last year (2004ETC) 2012 1.VERY USEFUL 2. Two years age (2003 ETC) 2011 2.SOMEHOW USEFUL 3.Three years age (2002ETC)		



5. Other farmer	2010	3. I DIDN'T FIND IT USEFULL
6. Other.....		4. Four years ago (2001ETC)
	2009	
		5. Five years ago (2000ETC)
	2008	
		6. Six years ago (1999 ETC)
	2007	
		7. Longer than 6 years ago

6. IMPROVED TOOLS AND TECHNIQUES FOR APPLE SEEDLINGS AND TREES

TECHNIQUES	6.1. Do you have the necessary tools for...? Yes = 1 No = 2	6.2. Where did you get the tool for...? 1. Woreda 2. DA 3. KALE HIWOT/WORLD VISION 4. Borrowed from a neighbor 5. Bought from market 6. other.....
Grafting If no go to the next Line		
Pruning If no go to the next Line		
Harvesting If no go to the next question		

6.3. Do you find the tools that are available in your area are of good quality? []

Yes = 1 No = 2 Some are good = 3

6.3.1. Do you have special tool for grafting? [] (If yes go to 6.5)

Yes=1 No=2

6.4. If you don't have special tools for grafting what do you use ?

6.5. Do you have special tool for Pruning? [] (If yes go to 6.6)

Yes=1 No=2

6.5.1 If you do not have special tool for pruning what do you use?

6.6. Which technique do you practice yourself or do others do for you yearly:

6.6.1. Winter pruning: []

1 = yes , myself = 1 2 = not done on my farm = 2 3 = somebody else is doing it for me =3



6.6.2. Summer pruning: []

1= yes, myself =1 2 = not done on my farm = 2 3 =
 somebody else is doing it for me =3

6.7. Did you prune in a professional way ? []

(If no go to 7.1)

Yes=1 No=2

6.7.1.If yes, Please explain how you are pruning and how timing has been decided

6.7.2. To be completed by supervisor/ coordinator: []

Yes applies very good pruning practice=1 2= Knows a little bit how to
 prune (some elements on the techniques and timing, but not complete)
 4= Doesn't know how to prune or doesn't apply well, does it in Traditional
 way = 3

7. INCOME AND MARKET OUTLET OF APPLE FRUIT

	7.1. Do you sell...?	7.2. Total kgs you sold per type of fruit last harvest ? FOR MAN (if necessary, he can recall several sales of bulk and then add them up)	7.3. How much did you get paid in total for each type of fruit (Man)?	7.4. Total number you sold per type of fruit last harvest ? FOR WIFE (if necessary, she can recall several sales of bulk and then add them up)	7.5 How much did you get paid in total for each type of fruit (wife) ?	4.6. Price per kg for Man sale (by supervisor/ coordinator)	4.7. Price per kg for Wife sale (by supervisor/ coordinator)
Type of fruit sold	Yes = 1 No = 2						
Bulk							
Grade 1							
Grade 2							



Type of fruit sold	7.9. How do you compare your sales from this harvest to sales from previous harvest for each type of fruit? see code below	7.10. How do you explain this evolution? Why?	7.11. How do you compare your sales to sales of your harvest in 2008 ? See code below	7.12. How do you explain this evolution? Why?
Bulk				
Grade 1				
Grade 2				

- 1 = Sold more fruit than previous harvest /2008
- 2 = Sold less fruit than previous harvest /2008
- 3 = Sold almost the same fruit with previous harvest/2008

7.13. To whom do you sell the majority of the apples ? []

- 1.Trader 2.Cooperative 3.Consumers 4.Other farmer 5.
- Other.....

7.14. When do you get paid? In advance, on the spot, sometime after the sales only? []

Type of fruit sold	How do you get paid mostly for.....? 1. completely in advance 2. partly in advance 3. Fully on the spot 4. Sometime after the sale only
Bulk	
Grade 1	
Grade 2	

7.15. Did any changes in outlet for apples occur since 2008? (please first ask this as an open question to the household). Than the enumerator can indicate the answer that fits the best, you can indicate several choices)

7.16.First choice[] 7.17 Second choice[]

- 1 = No major changes, we sell to the same type of people/ institutions as in 2008
- 2 = We sell more to bigger traders
- 3 = We have a lot more choice of traders
- 4 = We sell a lot more to the cooperative
- 5 = Other?



7.18. Can you choose better when to sell the apples than in 2008? []

1= yes I know to choose the better time

2 =it is the same

3 = I have to sell the apples when we need the money

4 = I have to sell apples whenever a trader is coming to the village

7.18.1. Why? Please explain.

8. INCOME AND MARKET OUTLET OF APPLE SEEDLINGS

	8.1.D Do you sell... ? Yes= 1 No = 2	8.2.Total number of seedlings you sold per type of seedling last year FOR MEN (if necessar y, he can recall several sales of bulk and then add them up)	8.3. How much did you get in total per type of seedlin g last year (men)	8.4. Total number of seedlings you sold per type of seedlings last year FOR WIFE (if necessar y, she can recall several sales of bulk and then add them up)	8.5 How much do you get in total per type of seedling ? (wife, last year)	4.6. Price per kg for Man sale (by <u>supervisor/</u> <u>coordinato</u> r)	4.7. Price per kg for Wife sale (by <u>supervisor/</u> <u>coordinato</u> r)
Bulk							
Grade 1							
Grade 2							



8.8 How do you compare your sale to sales from previous year for each type of seedlings?

Type of fruit sold	8.9. How do you compare your sales of seedlings from last year to the previous year for each type of seedling ? See code below	8.10. How do you explain this evolution?	8.11. How do you compare your sales of seedlings last year to your sales of 2008? See Code below	8.12. How do you explain this evolution? Why did it evolve like this?
Bulk				
Grade 1				
Grade 2				

Type of fruit sold	How do you get paid mostly for.....? 1. completely in advance 2. partly in advance 3. Fully on the spot 4. Sometime after the sale only
Bulk	
Grade 1	
Grade 2	

8.13. To whom do you sell the majority of the seedlings ? []

- 1.Trader 2.Cooperative 3.Consumers 4.Other farmer 5. other

8.15. Did any changes in outlet for apples occur since 2008? (please first ask this as an open question to the household)

8.15.1.First choice[] 8.15.2. Second choice[]

. Than the enumerator can indicate the answer that fits the best, you can indicate several choices)



No major changes, we sell to the same type of people/ institutions as in 2008 = 1
We sell more to bigger traders = 2
We have a lot more choice of traders = 3
We sell a lot more to the cooperative = 4
Other? = 5

8.16 Can you choose better when to sell the seedlings than in 2008? []

8.16.1. [] 1= yes 2 = the same 3 = no, I have
less choice, I have to sell the apples when we need the money 4 = No, I have less
choice, I have to sell apples whenever a trader is coming to the village

8.16.2. Why? Please explain.

.....



Household survey questionnaire – mangoes

QUESTIONNAIRE PROCESSING INFORMATION

ITEM	NAME	CODE
WOREDA		
KEBELE		
NAME OF RESPONDENT		
NAME OF INTERVIEWER		
Checked by(NAME OF SUPERVISOR)		
DATE OF INTERVIEW		
Field Checked date		
Verification date		
Data Entry Date		
Household ID		

Universal special codes (only to be used in exceptional cases)

-99= Not Applicable

-88=Refuse to respond

-77=Do not know

1.HOUSEHOLD INFORMATION

1.1. Sex of the HEAD []

Male = 1

Female = 2

1.2. Household members present in the interview []

Male only =1

Female only = 2

Both= 3

1.3. Age []

1.4. Type of farmer []

Ordinary Farmer = 1

Model farmer = 2

1.5. Member type []

Member of cooperative = 1

No member of any cooperative = 2

1.5.1.If yes, in which cooperative?

1 Chano Dorga cooperative

2.Lantae cooperative

1.6. Do you have mango trees? [] (if yes go to 2.1)

Yes = 1

No = 2

Used to produce in the past but stopped now = 3

1.7.If no or stopped producing mango trees (to 1.6), what is your reason for not engaging in mango production (anymore) ?

.....

2. MANGO PRODUCTION

2.1.How many mango trees do you have? []

2.2. Did you uproot mango trees during the last two years ? []

2.2.1. Yes = 1

No = 2, go to section 3 please



2.2.2. How many mango trees have you uprooted? []

2.2.3. Why did you uproot the mango trees? []

To replace by more productive mango trees = 1 To gain light for the surrounding crops = 2 To gain space to plant bananas = 3 To improve spacing of mango trees to prevent pests and diseases = 4

2.3. Did you increase your number of mango trees since 2008 ? []

(we decrease the codes in to 4 ,because 7 codes for 100 and 120 questioner is not appropriate)

1= I have added One to Three 2 = I have added four to ten 3 = I have added 10 to 15 trees 4 = I have added more than 15

2.4. Where do you plant mango trees? []

1 = Homestead 2 = Farmland 3 = Both

2.5. Did you have to uproot other plants to be able to plant the mango trees in the last 5 years?

[]

1 = Yes 2 = No

2.6. Do you want to expand the number of mango trees? []

Yes = 1 No = 2

2.7. What does this expansion mainly depend on, what are crucial but quite limiting elements ?

2.7.1 First choice:[] 2.7.2 Second choice :[]

1 = Land that can be used for mango (and not cultivated with another important crop)

2 = Access to finance or to saving and credit schemes to prevent early sales of immature mango

3 = Training on mango tree management 4 = Better prices for *bulk* quality mangoes

5 = Finding good seedlings

6 = Knowing and controlling pest and diseases 7 = having access to the cooperative in our kebele

2.8. New variety mango's

2.8.1. Do you produce the new variety of mango...? [] if yes continue with the tables below please

Yes = 1 , No = 2

Technique	2.8.2. How many trees do you have	2.8.3. Since when are you applying this top-working or grafting ?	2.8.4. Do you have any tools for this (grafting	2.8.5. Did you get any training on this (grafting	2.8.6 From who did you get the training ?
-----------	-----------------------------------	---	---	---	---



	using.....? (Total number)	8. Last year (2004ETC) 2012 9. Two years ago (2003 ETC) 2011 10. Three years ago (2002ETC) 2010 11. Four years ago (2001ETC) 2009 12. Five years ago (2000ETC) 2008 13. Six years ago (1999 ETC) 2007 14. Longer (before 1999 ETC), 2007	or top-working) ? Yes = 1 No = 2	or top-working) ? Yes = 1 No = 2 , go to 2.6.7	Woreda and DA = 1 Melkesa institute= 2 Other farmer = 3 Other = 4
Top working					
Producing seedling by grafting					
Total		-		-	-

SOURCE OF NEW VARIETY MANGO TREE	2.8.7. Do you get the new variety from.....? Yes = 1 No = 2	2.8.8. How many do you get from.....?	2.8.9. How may have survived?
Woreda office or kebele nursery			
Support program or organization			



Cooperative			
Another farmer with a mango nursery			
Another ordinary farmer			
Other? What.....			
	<i>To complete by enumerator</i>	Total=	Number: Percentage:

2.9. Do you have the necessary tool for grafting? [] (if yes go to 3.1)

Yes=1 No=2

2.8.10 If you don't have the necessary tool for grafting what do you use ?

.....

3. APPLICATION OF TREE MANAGEMENT AND DISEASE CONTROL

MEASURES

3.1. Did you apply compost to your mango trees last year ? []

Yes = 1 No = 2 Sometimes but not regularly or only to some trees = 3

3.2. Have you cut back the crown of your adult mango tree last year/ limited the size of the adult mango trees? []

Yes, I regularly do this = 1 No = 2 Sometimes but not regularly or only to some trees = 3

3.3. What are the main pests for trees in this area (please name three) and how can you recognize them

	3.3.1. Main pests or diseases of mango trees in this area	3.3.2. How can you recognize these diseases or pests ?
1.		
2.		
3.		

3.3.3: To be completed by the supervisor/ coordinator: this farmer knows and can recognize the major diseases in this area:

[]

1 = Yes, he knows the three most important diseases/ pests and knows main aspects of how to recognize them 2 = No, he doesn't know more than one disease and vague characteristics to recognize this pest or disease

3 = Partly, he knows two diseases and some characteristics but not all.



3.4. What are the traditional pest and disease control methods ?

3.4.1.

.....

3.4.2. to be completed by the supervisor/ coordinator: this farmer knows the traditional pest control measures in this area: []

- 1 = Yes (they know well the most important method)
- 2 = No (they doesn't know more than one method)
- 3 = Partly (they know at least two methods in a detailed way)

3.5. Do you practice traditional pest and disease control, as named below

Technique	3.5. 1 Do you know about.....? Yes = 1 No = 2	3.5.2. .Did you take any measures related to these traditional pest and disease control methods, during last production season? Yes = 1 No = 2
Smoking		
Thinning		
Spacing		
Cleaning		

3.5.3. Do you apply more of these measures compared to 2008 ? []

- 1.Yes More
- 2.Almost the same
- 3.No it is Less

3.5.4. Why? Please explain you answer on 3.5.3

.....

3.6. Do you know any *new* pest control methods? [](if no go to 3.6.2)

- Yes=1 No=2

3.6.1.If yes, What are the new pest control methods, can you please name them?

.....

3.6.2. To be completed by the supervisor/ coordinator: this farmer knows new pest control measures in this area: []



- 1 = Yes, they know the most important new methods = 1
2 = No, they don't know more than one new method = 2
3 = They know at least two new methods in a detailed way = 3

3.6.3. Who taught you about the new pest control? []

Woreda agriculture office = 1 Model farmer = 2 Ordinary farmer = 3

DA = 4 Other.....= 5

Nobody = 6, go to 3.7 please

3.6.4. When was this? []

1. Last year (2004ETC) 2012
2. Two years ago (2003 ETC) 2011
3. Three years ago (2002ETC) 2010
4. Four years ago (2001 ETC) 2009
5. Five years ago (2000ETC) 2008
6. Six years ago (1999 ETC) 2007
7. Longer (before 1999 ETC), 2007

3.6.5. Did you get a refresher course ? []

Yes = 1 No = 2

3.7. Do you ever report diseases or pests to the woreda / DA/ other institution? []

Yes=1 no=2

3.7.1.If yes, How do you compare your practice with the 2008 practice?[]

- 1 = More frequently than 2008 2 = Less frequently than 2008
3 = Almost the same with 2008

3.8. What kind of response do you get when you report symptoms of disease or pest to the DA or woreda or another institution ?

3.8.1. []

- 1 =Useful and timely response 2 =Useful response but not timely
3= Not useful response 4= We don't get any response

3.8.2. Compared to 2008, this response of woreda/ DA/ Institution is []

1. Useful and faster than 2008 2. The same with 2008 3. Not better than the 2008

3. 9.Compared to 2008, how do you measure effect of harm of pests and diseases with last year production ? []

- 1 = Less trees were affected, but More fruit loss than 2008
2 = Less trees were affected and Less fruit loss than 2008
3 = More trees were affected and More fruit loss than 2008
4 = More trees were affected but Less fruit loss than 2008
5 = The same as 2008



3. 10. Do you use the necessary tools for harvesting? [] (if no go to 3.12)

Yes = 1 No = 2

3.11 From where do you get the harvesting tool?[]

1.I have my own 2.I borrowed from my neighbor 3.I rent from renters

4.other.....

3.11. Do you find the tools that are available in your area of good quality (to graft, prune, harvest) ? []

Yes = 1 No = 2 Don't know = 3

3.12. If you don't use the necessary tool for harvesting what do you use ?

.....

4. MARKET OUTLET FOR MANGO

Type of fruit sold	4.1. Do you sell...? Yes = 1 No = 2	4.2. Total kgs you sold per type of fruit last harvest ? FOR MAN (if necessary, he can recall several sales of bulk and then add them up)	4.3. How much did you get paid in total for each type of fruit (Man) ?	4.4. Total number you sold per type of fruit last harvest ? FOR WIFE (if necessary, she can recall several sales of bulk and then add them up)	4.5 How much did you get paid in total for each type of fruit (wife) ?	4.6. Price per kg for sold by husband (by <u>supervisor/ coordinator</u>)	4.7. Price per kg for Wife sale (by <u>supervisor/ coordinator</u>)
Bulk							
Grade 1							
Grade 2							



Type of fruit sold	4.9. How do you compare your sales from this harvest to sales from <u>previous</u> harvest for each type of fruit ?	4.10. How do you explain this evolution ?	4.12. How do you compare your sales to sales of your harvest in <u>2008</u> ?	4.13. How do you explain this evolution ?
Bulk				
Grade 1				
Grade 2				

- 1 = Sold more fruit than previous harvest /2008
 2 = Sold less fruit than previous harvest /2008
 3 = Sold almost the same fruit with previous harvest/2008

4.13. To whom do you sell the majority of the mangoes ? []

- 1.Trader 2.Cooperative 3.Consumers 4.Other farmer 5. other

4.14. When do you get paid?

Type of fruit sold	How do you get paid mostly for.....? 1. completely in advance 2. partly in advance 3. Fully on the spot 4. Sometime after the sale only
Bulk	
Grade 1	
Grade 2	

4.15. Did any changes in outlet for mangoes occur since 2008? You can give two answers

4.16.First choice[] 4.17 Second choice[]

- 1 = No major changes, we sell to the same type of people/ institutions as in 2008
 2 = We sell more to bigger traders
 3 = We have a lot more choice of traders
 4 = We sell a lot more to the cooperative
 5 = Other?



4. 18. Can you choose better when to sell the mangoes than in 2008 ? []

4.18.1. [] 1= yes 2 = the same 3 = no, I have
less choice, I have to sell the mangoes when I need the money 4 = No, I have less
choice, I have to sell mangoes whenever a trader is coming to the village

4.18.2. Why? Please

explain.....
.....

