

SDC Agriculture and Food Security Network

A+FS Network Newsletter 10/2014

Dear Agriculture & Food Security Network members

This newsletter is a bit different from the past ones. You – the members – have decided on and contributed to the topics. Four articles have made it into this issue:

- [Investing in fresh fruit & vegetable markets by Tanja Havemann](#)
- [Promoting climate resilient development within SDC programmes in E&S Africa by Daniel Maselli & Marco Lustenberger](#)
- [Seed Security for Food Security by Alex Carr](#)
- [Small Farmer Participative Innovation Project Impact Evaluation by Gino Catacora](#)

Congratulations to the contributors and let's continue this participatory style. Rahel welcomes your contributions for the next newsletter at any time.

Rahel Meier - our new colleague - will be an active member of the network organization including the facilitation of the newsletters. You will hear from Rahel frequently because she will encourage you to share your valuable experiences and knowledge. Rahel is replacing Simon Weidmann who will continue his career with a different organization. We thank Simon for his commitment and dynamic style of cooperation.

We cordially invite you to send any ideas, news or documents that might be relevant for our network. Your feedbacks and contributions will help to improve all network activities.

With Best Wishes
Felix Fellmann & Rahel Meier

Also in this Newsletter: [Subgroups](#) / [Further Information](#) / [Did you know that...?](#)

Investing in fresh produce markets to promote local agricultural development

Author: Tanja Havemann



Hon. Yusuph Mwenda, Mayor of Kinondoni, Dar es Salaam (Dar):

"As the East African Community, and Tanzania, continue to grow, it will become increasingly important to ensure that local and regional consumers are linked to producers to promote both rural and urban sustainable development. The East Africa Farmers Market initiative is an important step towards ensuring that this happens."

Why markets?

Markets enable communication between buyers and producers on price, volumes, and quality, including social and environmental aspects. In most emerging cities fresh produce is sourced through in-transparent regional value chains, supplemented by imports. A lack of functioning Fresh Produce Markets (FPMs) undermines local consumers' abilities to signal demands to producers, thereby limiting producers' capacity to effectively react. Lack of market access therefore undermines local development agendas and negatively impacts the health and wallets of local consumers. Without action, this situation will get worse, e.g. in East Africa, daily consumption of fresh produce is expected to increase by 3 - 5x between 2009 – 2025, from 525 tons to 2,670 tons per day.¹

¹ Calculations are based on WHO population data, current daily consumption, and WHO recommended consumption of 0.4 Kg per person per day. We believe that the projection for 2025 is conservative because this figure does not include losses due to waste and other supply chain inefficiencies. These estimates suggest that fresh produce demand will grow from 525 tons per day to 2,670.

Current system results in a ca. 200% increase in commodity cost from farm gate to retailer:

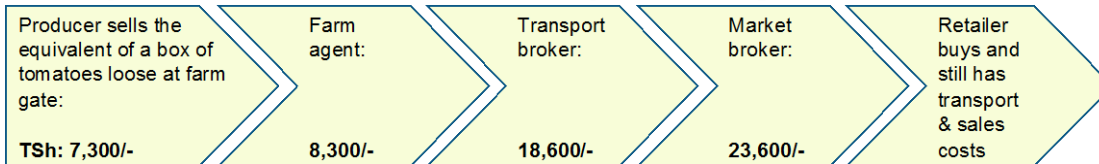


Figure 1: Price escalation on tomatoes from Iringa to Kariakoo (Dar es Salaam)²

FPMs and agricultural development

While much attention has been given to production issues (supply), relatively little has been given to demand, in particular domestic. Without access to professional markets there is little opportunity for development.³ Investing in FPMs provides opportunities for local producers, consumers, and intermediaries (traders), who play an important role in facilitating transactions.

Commission based FPMs change the status quo, so traders work as commission agents for farmers. This system has existed in South Africa since the 1860's. Over 30% of South Africa's fresh produce is traded through FPMs, and turnover is increasing.⁴ These are efficient fresh produce clearinghouses, enabling transparent price, volume and quality discovery between producers and their commission agents on one side, and wholesale buyers on the other. This means that local farmers can be empowered to better react to the needs of local buyers.

Current fresh produce market



- Lack of organization: Chaotic
- Lack of storage, including cold rooms
- Poor hygiene
- No food traceability and no Quality Assurance / Quality Control for buyers
- Un-managed access: Congestion, security
- No price and volume transparency to producers
- No product predictability for buyers
- No set packaging: High levels of wastage

Modern fresh produce market



- Organized
- Accessible, maintained storage space
- Controlled environment (hygienic)
- Ability to trace product
- Managed access
- Full price / volume transparency to producers
- Improved product predictability to buyers
- Reduced wastage from standardized packaging and professional centralized waste collection

Figure 2: Current versus modernized fresh produce market⁵

² *Ibid.*

³ This is echoed by Wageningen University and by an assessment of the Africa Regoverning Markets initiative, i.e. G. Meijerink, January 2010, Wageningen University, "Linking farmers to markets by improving domestic markets: the cash of fresh fruits and vegetables in Tanzania" in *Market, Chains and Sustainable Development*, Strategy & Policy Paper #23 and A. Louw, L. Ndanga and D. Chikazunga. February 2008. "Restructuring food markets in the sub-Saharan Africa region: Dynamics in context of the fresh produce subsector" (part of the Regoverning Markets study). University of Pretoria. Available from: <http://web.up.ac.za/sitefiles/file/48/2052/SubSaharanAfricaSynthesis.pdf>

⁴ Financial Mail, July 10 2013, "Online selling of fresh produce upstages markets", accessed from: <http://www.financialmail.co.za/fm/Features/2013/07/10/online-selling-of-fresh-produce-upstages-markets>

⁵ First picture (left) is of a market in Nairobi; second picture (right) is Johannesburg Fresh Produce Market © Tanja Havemann 2014

What do we mean by investing in markets?

This means investing in appropriate 'hard' and 'soft' infrastructure:

Hard infrastructure refers to market buildings, weighing and storage facilities, and may include modern cold stores.

Soft infrastructure refers to cash-less payment systems and mobile-accessible online databases tracking volumes, grades and prices of goods. It includes governance frameworks to enforce fair, transparent and professional management (market authority), and operating frameworks for commission agents who have fiduciary duties to service producers' customers (buyers), enabling daily trading and competition.



Cashier managing the cashless system



Cashier on market floor



Marked produce



On-site handling and cold store facilities



Market floor



Loading docks

Figure 3: Johannesburg fresh produce market images⁶

What are we doing about it?

The commission based FPM is a well-proven model that should be accelerated in East Africa. The model is spreading organically to new areas⁷, where informal markets are transforming into vibrant commission-based markets with rules, infrastructure and capacity to cater for local demands to the benefit of large and small producers and final consumers.

We have established the East African Farmers Markets (EAFM) initiative, an innovative cross-sector partnership established to develop efficient, professional and modern FPMs across the region for the benefit of consumers and producers – large and small. EAFM is being piloted in Dar-es-Salaam through the Soko Fresh Market. EAFM members include producers and agribusinesses (Tanzanian Horticultural Association - TAHA, Finlays, Syngenta, Mtanga Foods and Thirty Degree East), solution and service providers (FreshMark Systems, Unicool, RSA, IMASA and Clarmondial). EAFM members are investing their own resources in a pilot project, in recognition of the important leveraging role that such markets can have in enabling inclusive economic growth.

We believe that the pilot will have relevant lessons for urban centers in all emerging markets, and are seeking complementary partners to help make this pilot a reality.

⁶ ©Tanja Havemann 2014

⁷ Including new areas in South Africa and in neighboring countries such as Namibia. New Era, reported on All Africa on 3 March 2014, "Namibia: Fresh produce hub thrives", accessed from: <http://allafrica.com/stories/201403031920.html>



Figure 4: Hanoi fresh produce market⁸

About the authors & request from SDC community:

Authors: Tanja Havemann (Clarmondial, Switzerland), Rory Nightingale (Sasumua Holdings, Tanzania), Pete Veal (Syngenta, Switzerland) and Michael Cordes (Institute of Market Agents – IMASA, South Africa).

The authors represent EAFM, which is seeking complementary regional partners and supporters. In particular, we are seeking fresh produce growers, technology providers, and funders who can support development and implementation of the Soko Fresh Market and EAFM in a manner that leverages significant social and environmental benefits. We would welcome any advice, suggestions, references and contacts to make this market revolution a reality!

Report from the Workshop „Promoting climate resilient development within SDC programs in E&S Africa“

Authors: Daniel Maselli & Marco Lustenberger



Sub-Saharan-Africa (SSA) has been identified as being particularly vulnerable to the impacts of climate change (CC) such as extreme weather events like droughts and floods. Hazards related to climate change adversely affect the main assets upon which human livelihoods are based, including health, access to water, energy, and food security and may negatively impact or even reverse results achieved through development cooperation. The SDC East and Southern Africa Division organized a thematic workshop from 8-12 September 2014 in Nairobi in order to promote the mainstreaming of climate change adaptation (CCA) and disaster risk reduction (DRR) into development projects and programs. The objective of the workshop was to make the participants more familiar with climate change, its causes, risks and possible implications for development cooperation and humanitarian aid. In addition, a tool to help mainstream climate change adaptation, mitigation, environmental concerns and DRR was introduced and applied.

During the workshop which was facilitated by Nick Brooks (an independent UK based climate change scientist) the participants received an introduction into the scientific background of the climate change and disaster risk reduction context in the region, based on the latest IPCC Reports. They were also made more

⁸ ©Tanja Havemann 2014

familiar with different approaches to adaptation and climate resilient development and with mainstreaming CC adaptation and DRR into development activities as well as monitoring and evaluation of adaptation.

CEDRIG – an integrated tool developed by SDC for mainstreaming CC, DRR an environmental degradation

The 'Climate, Environment and Disaster Risk reduction Integration Guidance' or CEDRIG was introduced by the focal point of the SDC CC&E Network, Daniel Maselli, and applied by the participants on concrete projects from their work. The tool is an approach to support SDC staff and project partners in analyzing whether existing or planned cooperation strategies, programmes and projects are sensitive enough to the risks linked to CC, natural disasters and environmental degradation. On the other hand, the tool helps to assess whether a program or a project might drive maladaptation for example by contributing to CC through greenhouse gas emissions, by increasing vulnerability to disasters or by exacerbating environmental degradation. CEDRIG is currently being converted into an online version and the new beta version was presented as a recent innovation. This new interactive version will be online by early December 2014. It will enhance interaction and provide guidance to users through examples, geographical diversification and links to discussion fora. One of the principal aims of the further development of CEDRIG is to make the tool available online in a customized format that allows both practitioners and trainers to adapt the instrument to the different geographical contexts.

At present, food security is one of the most daunting challenges in SSA. The economies of the region are highly dependent on agriculture, with agriculture typically making up 20 to 40 % of gross domestic product. Agriculture in SSA is particularly sensitive to weather and climate variables, and increasing temperatures and changes in precipitation patterns are very likely to reduce cereal crop productivity in many parts of the region. The workshop therefore put a special emphasis on micro-insurance as a means to make farmers more resilient to CC.

Kilimo Salama – a project to protect farming investments against extreme weather events

During the workshop the participants visited the [Kilimo Salama](#) project, which is an innovative micro-insurance program, designed for Kenyan farmers. The project offers a weather index based insurance, a product designed to provide compensation for farmers when the rainfall during a crop growing cycle is insufficient to realize good yields. During the field visit the participants spoke to the beneficiaries of the project as well as to [ACRE](#) (Agriculture and Climate Risk Enterprise Ltd.), which is the newly funded company implementing the project. The visit revealed the strengths of the project i.e. more knowledge, higher production due to use of certified seeds, more security and better planning ability of the smallholders but also some shortcomings including limited access of farmers to markets. Micro-insurance is a very important topic for SDC. Only recently the 'Employment and Income Network' published a report entitled: [Insurance for smallholder farmers and vulnerable households against catastrophic events](#).

About the authors

Daniel Maselli (MSc Biology, PhD Geography) is Senior Policy Advisor to the Global Program Climate Change GPCC and the Focal Point of the CC&E Network. He has worked extensively on natural resource management in semi-arid mountain ecosystems and lectured at the Universities of Bern, Vienna and Bishkek. He has a special interest in extensive) agro-silvo-pastoral land use systems and likes to explore the interface of CC, livelihoods and food security.

Marco Lustenberger (MSc Geography) studied geography at the University of Berne with the focus on sustainable development. In his master thesis he analyzed the cultivation spectrum of small-scale farmers in Kenya and the reasons for shifting from subsistence crops to cash crops in the region around Chogoria, Kenya. Now he works as a backstopper for the CC&E Network. His interests in the A+FS Network is primary the impacts of climate change on agriculture and options for adaptation measures.



Photos: Laura Johnson, ACRE (p.4 below) / Katharina Jenny, SDC (left)

Seed Security for Food Security in Southern Africa

Author: Alex Carr



Chronic food insecurity across Southern Africa continues to be a problem for many people, with the SADC Regional Vulnerability Assessment (2014) reporting that an estimated 14 million people out of a total population of 277 million are food insecure. Against this background, the Swiss Agency for Development and Cooperation (SDC) through the Regional Cooperation office in Southern Africa has been funding a range of 'seed security' interventions which include support to the harmonization of seed policies, research into new drought and disease tolerant varieties and a markets based project called the Seeds and Markets Project (SAMP), implemented by GRM International, which aims at enhancing food security by improving the access to high quality seeds.

Using the definition of seed security where 'all farmers at all times have access to sufficient quantities of seed of adapted crop varieties, irrespective of seed sources, both in normal and disaster years, for continuous and sustainable crop production' (Spelling 2009) as a guide, the inception phase of SAMP revealed that many small holder farmers were highly 'seed insecure'. Seed was often not available in local shops on time for planting and were of varieties that were not suitable to local agro-ecological conditions as well as being very expensive. Improved legume seeds, such as sugar beans (an important contributor of protein in the diet) were particularly scarce.

To address these issues, SAMP has adopted a multi-pronged approach, a key component of which is the facilitation of the establishment of Community Seed Enterprises (CSE's). Realising that CSE's could not compete with some of the larger seed companies, the CSE's identified 'niche' markets for Open Pollinated Varieties (OPV) of maize and legume seeds, which were unattractive to larger seed companies and therefore did not compete. Linking with International Research centres such as CIMMYT and CIAT, the CSE's receive improved 'breeders' seed that is multiplied by small holder farmers and sold through a network of agro-dealers to local farmers. This seed has proved very popular with local farmers for several reasons. It is adapted to local conditions (short growing period without compromising yield). It is also cheaper than other (hybrid) varieties sold by large seed companies (by 50%), but most importantly, it is grown in the local area. This gives local farmers confidence by demonstrating that seed is grown in their own area by farmers known to them.

The increased access to improved seed is having an impact on yields-between of 15 to 18 percent, as well improving the grade of produce for commodity buyers as it is closer to the parent material. A good example of this is the production of a new Sugar bean variety NUA45 (fortified in Zinc and Iron) in Zimbabwe and Swaziland. The high quality grades obtained by farmers using locally produced 1st and 2nd generation seeds has allowed farmers to access commodity markets for the first time, providing an important source of income as well as food for home consumption – all of which supports the SAMP motto "No Seed Security, No Food Security".

About the author

My current post is Team Leader for the [Seeds and Markets Project](#) employed by GRM International for the past four years, based in Harare Zimbabwe. Although my background is in soil and water conservation, I have been working in different aspects of rural development for the past 20 years in Africa and Asia. In keeping with current trends, I have focused recently on market development for small holder farmers. I have been a participant in the A+FS Network for a number of years as I feel it is important to be aware of other projects being implement by SDC around the world as well as gaining insight into particular technical areas such as market development.



Left: Mr and Mrs Makwara showing locally grown Sugar beans seeds for sale at their Agro-Dealer shop in Rupike, Zimbabwe
Right: OPV Maize seed being prepared for Zaka Super Seeds, Zimbabwe

Small Farmer Participative Innovation Project Impact Evaluation: evidence on effects on income, employment and territory capitals

Authors: R. Arteaga, G. Silva, M. Panozo, J. Quiroga, C. Figueroa, G. Catacora⁹



Introduction

Bolivia remains among the poorest and most unequal countries in Latin America. Poverty incidence is 64% in rural areas and 41% in urban sites (2009). Rural livelihood depends mainly on traditional agriculture, carried out by approximately 775,000 small farming families¹⁰. To generate additional income and to reach out food security, farmers need to improve productivity, diversify production and effectively collaborate with other actors of the value chain¹¹. To help achieve these goals, SDC has supported Bolivian agricultural innovation processes over 3 decades.

The latest example of this attempt is the “Continuous Innovation Project” (PIC by its Spanish acronyms) that since 2007, with a CHF 6.95 million SDC grant¹², implemented a new bottom-up, farmer demand based, *Systemic Innovation Model*. PIC was clearly oriented at improving life and work quality for small farming families, combining new and traditional knowledge to create easy-to-adopt solutions. In 2013, an External Impact Evaluation was conducted¹³, identifying evidence on effects on income, employment and overall changes in territory capitals.

Methodology

The Methodology was innovative to combine quantitative and qualitative methods under a fully-participative approach. It considered a COMPREHENSIVE ASSESSMENT MODEL which combined 3 models frequently used in project assessments: a) Ex-post evaluation (CELAC-ILPES), b) Assessing livelihood capital (DFID and FAO) and c) Financial project evaluation (private and social).

The process started by prioritizing project indicators, that were ranked within the five livelihood assets. Four data collection techniques were applied: a) 1,114 farmer survey, b) “Cost and Yield” Workshops, c) In-depth interviews, d) Focus groups with institutional actors.

Data processing was carried out under rigorous independent conditions. SPSS statistical software was used to estimate changes, error level and *P-value* to determine significant change attributable to PIC. A mathematical model was developed to assess farm financial status: Net Present Value (NPV), Return on Investment (ROI), Benefit-Cost Ratio, etc. Stochastic means estimation considered scenarios of uncertainty based on probability distributions.

Results and Findings

A target group of about 9,900 small farm families along with participating organizations in 31 municipalities (figure 1), plotted, tested and co-developed technologies (first pillar), adopting several *hard* and *soft* innovations along the value chain for 7 crops¹⁴ (i.e. pest control best practices, certified seed use, varieties and species introduction, product and market diversification, etc.). They also posted local organizational, institutional and commercial new arrangements (*innovation platforms*), fostering a strong attitude change towards innovation, as a second pillar -key factor- to drive the expected *bottom-up* effects.

⁹ SDC - Programa de Innovación Continua staff and co authors. G. Catacora is the Project M&E responsible.

¹⁰ Instituto Nacional de Estadística - Bolivia (2008). Encuesta Nacional Agropecuaria - ENA 2008

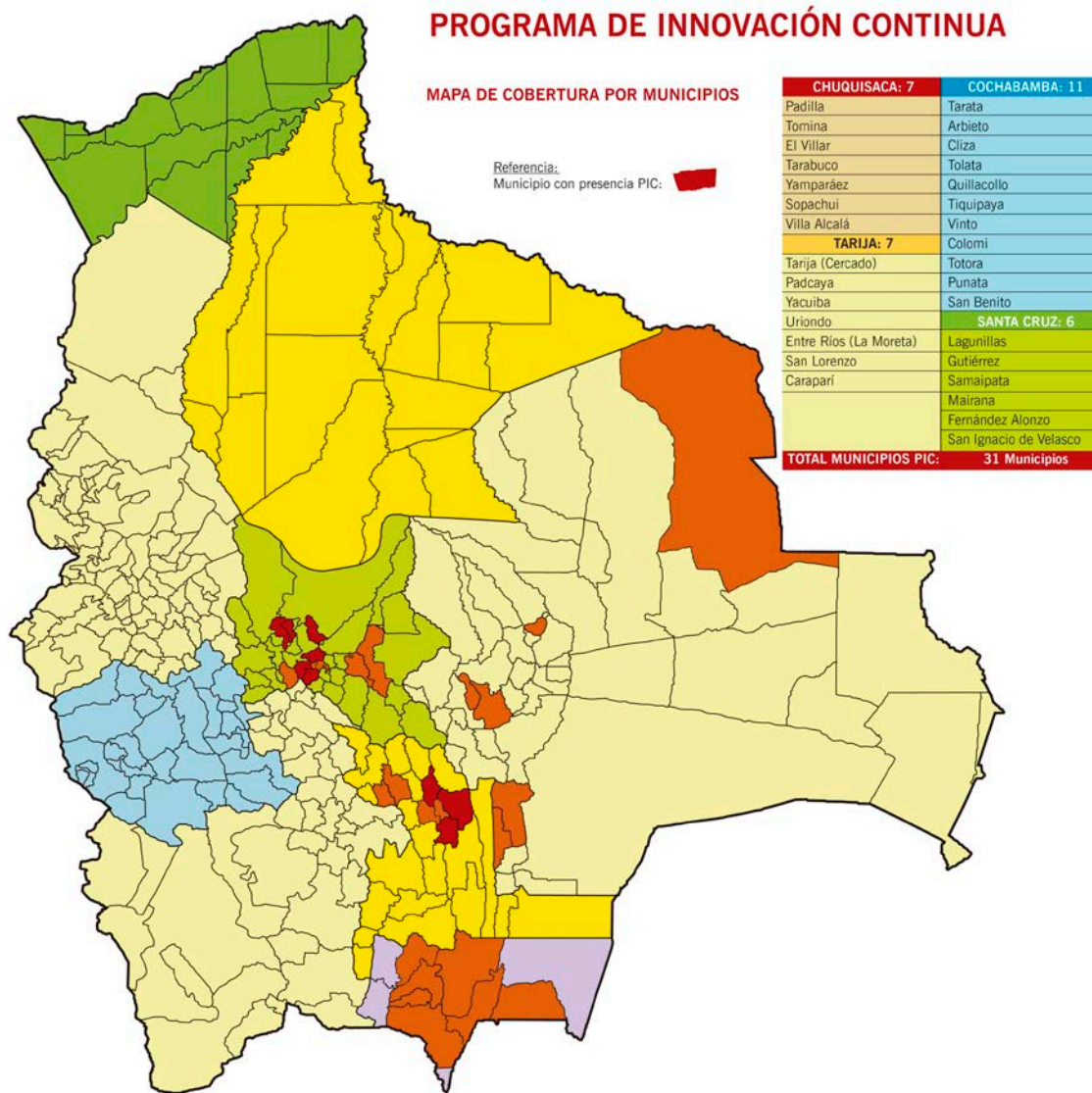
¹¹ Extracted or adapted from Credit Proposal Document, PIC ASIAB Project Phasing Over. 2014 - 2017.

¹² Phase 1 “Entrada en Materia” + Phase 2 “Implementación”. Local counterparts leverage accounted for CHF 2,33 million in cash and/or kind

¹³ QUATRIM SRL. L. Villarroel, R. Oros, C. Rocha. Estudio de Evaluación de Efectos e Impactos del PIC. Junio 2013.

¹⁴ Potato, Andean roots, peaches, corn, peanuts, Andean chili pepper, family poultry

Figure 1: PIC locations in Bolivia

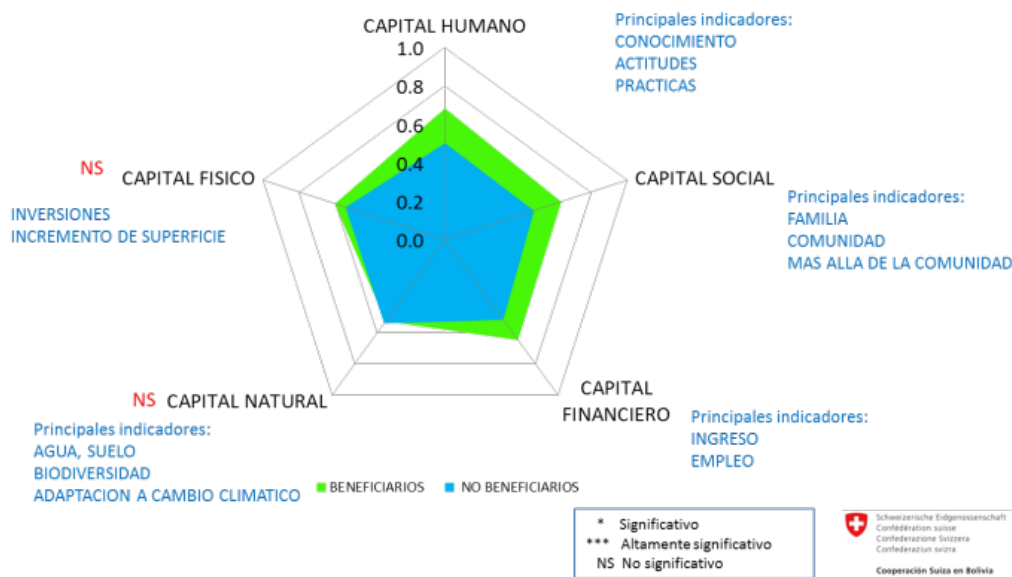


The impact evaluation found an overall Benefit/Cost ratio of 2.71 over SDC investment, with an estimated Social Net Present Value (S-NPV) of USD 18.3 million surplus for the national economy. In terms of income, employment and private investment, the Impact Study has shown that:

- Participant families average agriculture net income increased 54% in terms of annualized NPV (up to 1,055 USD/family/year)
- Time invested by the family to agriculture tasks increased 10.1% (self-employment). No significant number of newly created jobs was determined.
- 55.8% of participating families re-invested earnings in new technologies and practices.

In terms of livelihood assets (human, social, financial, physical and natural), a surprise effect was evidenced: Statistically significant positive change was proved in 3/5 assets (human, social and financial). No significant changes were observed in physical and natural assets, although the last showed a negative change, yet to be addressed (figure 2).

Figure 2.: Innovation effects in 5 livelihood assets

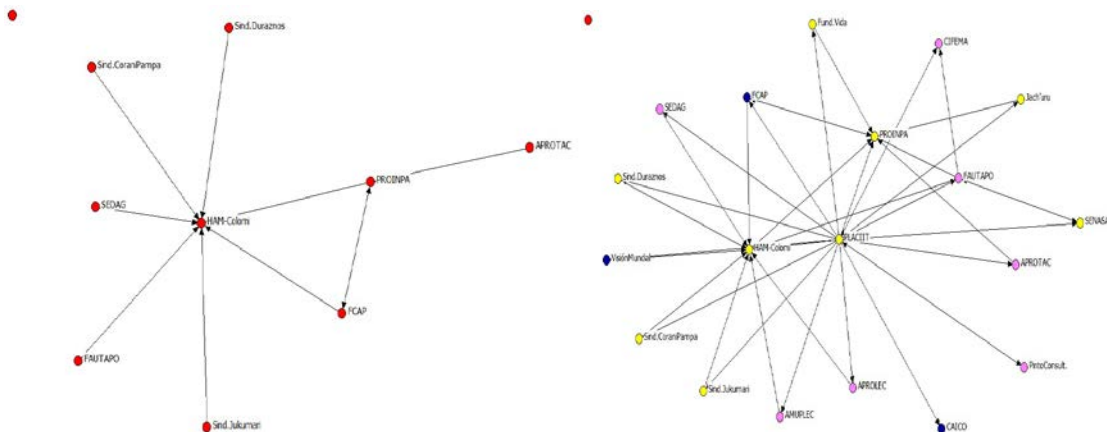


Conclusions

The external evaluation concluded that PIC has made significant changes in the lives of small farmers' families in its geographic area of intervention, demonstrating statistically significant changes in 3 livelihoods assets, family income and re-investment.

Social capital was strengthened through broad multi-actor local innovation networks –platforms- which allowed a) better linkage of farmers to technology and markets, b) greater awareness and involvement of authorities in small farming issues and value chain, and c) a more enabling environment for innovation interventions (figure 3).

Figure 3: Local innovation network changes: "Plataforma Colomi", before and after the project.



Implications

The PIC Impact Evaluation set a milestone in project evaluation at SDC-Bolivia and its methodology was replicated by other projects. It provided reliable data based on quantitative, qualitative and financial analysis, helping SDC and authorities to better understand potential of rural innovation. Nowadays, the model is being adapted in alliance with the National Agriculture and Forestry Innovation Institute (INIAF), as *innovation platforms* are becoming a public policy. Most of all, farmers, rural advisors and researchers have evidenced that with this approach, *they can change* rural livelihood.

Special thanks for their contribution to the Impact Study:

QUATRIM SRL team: Luis Villarroel, Rolando Oros and Cimar Rocha
 Markus Glatz, SDC Quality Assurance Officer, Bolivia
 José Luis Pereira, SDC and PIC Program Officer, Bolivia
 Freddy Ruiz, SDC Program Officer, Nicaragua
 Marcelo Collao, former SDC Program officer, Bolivia
 Humberto Rios, PIC international advisor

Subgroups

The first subgroup 'Value-Chains and Agriculture' has been launched. The aim of the subgroup is to exchange information / experience and promote mutual learning on the topic among the members of the network.

Few sub-topics were posted early this month and based on voting results, discussions on the following areas have begun and will continue until 31st October. We cordially invite you to contribute by raising questions and providing answers based on your experiences. You are also free to invite others into the sub-group whom you feel could be interested in discussing agricultural value chains.

1. Addressing food security, nutrition and biological diversity through value chains
2. Analysing value chains
3. Making value chains work for the small holders
4. Scalable/sustainable models for small farming households and in weak markets

The moderators of the discussion are Bulisani Ncube from SDC South Africa and Fouzia Nasreen from Swisscontact. Please log on to <http://afs1.pawy.net/> for your contribution and more information.

Further Information

The State of Food Insecurity in the World 2014

FAO, 2014 (PDF, 3131 KB)

The State of Food Insecurity in the World 2014 presents updated estimates of undernourishment and progress towards the Millennium Development Goal (MDG) and World Food Summit (WFS) hunger targets. The 2014 report also presents further insights into the suite of food security indicators introduced in 2013 and analyses in greater depth the dimensions of food security – availability, access, stability and utilization.

In addition, this year's report examines the diverse experiences of seven countries, with a specific focus on the enabling environment for food security and nutrition that reflects commitment and capacities across four dimensions: policies, programmes and legal frameworks; mobilization of human and financial resources; coordination mechanisms and partnerships; and evidence-based decision-making.

Youth and Agriculture: Key Challenges and Concrete Solutions

FAO / CTA / IFAD. August 2014 (PDF, 2836 KB)

The Food and Agriculture Organization (FAO), the Technical Centre for Agricultural and Rural Cooperation (CTA) and the International Fund for Agricultural Development (IFAD) have joined forces to conduct research and produce a publication which provides real life examples from developing and more advanced economies. Many of the initiatives reported originate with the young people themselves. They show that – when there is a supportive environment – youth are able to find innovative ways to create a future for themselves, and also contribute to the societies and communities in which they live. CTA, FAO and IFAD hope that this publication will help development practitioners, youth leaders, youth associations, producers' organisations and policy makers alike by providing insights into possible solutions that can be tailored to their own context.

Did you know that...?



[More information >>](#)