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Youth and Agriculture in the Drylands –

Realities, Aspirations and Challenges of Rural Youth Living in Agricultural Dryland Areas



Preliminary Report of a Field Study Conducted in the Province of Midelt, Morocco

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Cover photo: Young nomad herder with grazing sheep and goats

Except where noted, all photographs were taken by the authors. Figures, tables and boxes without stating a reference are based on the collection of primary data during the field research in Midelt, Morocco between October and November 2015.

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Acronyms

ALS	Agricultural Livelihood System
AR4D	Agricultural Research for Development
CGIAR	Consultative Group on International Agricultural Research
CRP	CGIAR Research Program
DCLAS	Dryland Cereals and Legumes Agri-Food Systems
FAO	Food and Agriculture Organization of the United Nations
FGD	Focus Group Discussion
HAFL	Bern University of Applied Sciences, School of Agricultural, Forest and Food Sciences
ICARDA	International Center for Agricultural Research in Dry Areas
ICT	Information and Communication Technology
INDH	Initiative Nationale pour le Développement Humain
KIT	Royal Tropical Institute
NGO	Non-Governmental Organization
NOAA	National Oceanic and Atmospheric Administration
PMV	Plan Maroc Vert (Green Morocco Plan)
RQ	Research Question
SDC	Swiss Development Cooperation
UN	United Nations
YPARD	Young Professionals for Agricultural Development

Abstract

The present report presents some initial results of the study on Youth and Agriculture in the Drylands – Realities, Aspirations and Challenges of Rural Youth Living in Agricultural Dryland Areas, commissioned by ICARDA and YPARD, conducted in the province of Midelt, Morocco between October and November 2015 by a team of experts lead by HAFL.

The study aims at providing a diagnostic analysis and identifying rural youths' viewpoints, aspirations, challenges, opportunities and options in the selected study site in the three agricultural livelihoods systems (ALS) of dry areas, namely 'irrigated', 'rainfed' and 'pastoral'.

Using a combination of qualitative and quantitative research methods, data has been collected through 98 in-depth interviews with rural youth (69 with young men and 29 with young women). The study applied a purposeful sampling approach to target youth. Additionally, focus group discussions (FGD) and key informant interviews were carried out. Some 23 short videos of youth who had something interesting to say were taken as well.

Midelt is located on a rain-sheltered plateau at about 1500 m of altitude between the Middle and High Atlas mountains in the Northern part of Morocco, characterized by steep mountain slopes and numerous valleys. The main irrigated crops are fruit trees (very dominantly apple trees), fodder crops and vegetables. The main rainfed crop is barley. Nomadic (sheep, fewer goats) and sedentary (sheep, goats, cows) forms of pastoralism are highly present.

In areas where food security was assured, before expressing their aspirations in their rural life and career, youth raised first the issue of the lack of primary needs which are not fulfilled yet in the surveyed villages, i.e. access to education, access to potable water, a lack of roads and infrastructure, health care. The issue of outmigration from rural areas is not very widespread; the majority of young people in the surveyed area do not and cannot leave their parents and families (in particular the young women). Youths would also rather prefer to stay in their villages if the conditions were better – hence FGDs made use of a creative approach to get youths to draw the 'village of their dreams' where they could have a more comfortable life with their own families and farm better, rather than chasing their 'dream job'. There is a perception of poverty among rural youth: many are illiterate, they own little or no land, and only few livestock, no properties, and they are cut out of job opportunities offered in the surrounding areas due to a lack of infrastructure. Resulting from youths' perception of poverty and the lack of education, the use of modern information and communication technology (ICT) was limited to mobile phones; internet use was not very widespread. Consequently, the potential benefits of these tools (e.g. improved marketing of agricultural produce, organizational development, etc.) are missed out as well. Young women's positions are even more unfavorable, as their choices and desires are strongly influenced or taken by their fathers or husbands and their level of education is even lower than that of their male peers. The excessive degradation of natural resources (such as forests, shrubs and agricultural land) and bad water management in the surveyed area strongly affect the livelihoods in all the three systems. There is a need of governmental or non-governmental interventions regarding land provision and restoration, as well as irrigation systems. Furthermore, training on agricultural practices is required – including livestock management, the use of inputs, etc. – as the present system of associations and cooperatives fails to include youth. Value added activities within the agricultural sector are very limited. Only few youths reported to process or add value to their produce, and often these activities did not encompass what is sold on the markets but were instead limited to subsistence production.

This document intends to provide a status update of the current study and to present preliminary results of the field work carried out in October and November 2015. The reported results are based on the first observations and preliminary qualitative and descriptive statistical analysis of some selected data and issues. The final report/paper presenting the overall outcome of the research, based on a full data analysis, will be submitted to ICARDA at the end of May 2016.

1 Introduction

Drylands face some of the highest youth unemployment rates in the world (ILO 2016). Growing populations mean that increasing numbers of youth are entering the work force every year and there is concern at how already stretched national systems, organizations and the private sector will be able to absorb these new workers. This 'demographic dividend' is a challenge or an opportunity, depending on how prepared we are to engage and work with these youth. While some research has been undertaken in this field, more information is required to develop appropriate strategies, policies and programs. Youth remain a highly diverse group, with different backgrounds, drivers and experience leading to varying ideas, aspirations and challenges.

There is general consensus by professionals in Agricultural Research for Development (AR4D) on the need for more age-disaggregated data. There are few studies and data available on youth (Proctor and Lucchesi 2012) as this area remains a relatively new one for researchers and has struggled to obtain the recognition and importance it requires. Understanding the specific context of youth is critical to developing appropriate and effective strategies and programs.

The CGIAR Research Program (CRP) was an early leader in confronting the challenges of youth targeting and engagement within the CRP. This study falls under Intermediate Development Outcome (IDO) 5 of the CRP on: *better access to, and control over, productive assets, inputs, information and market opportunities for women and young people so that they can obtain a more equitable share of increased income, food and other benefits* as well as being part of one of the cross-cutting themes on youth. The youth strategy for the Drylands CRP outlines the dangers of neglecting youth and reaffirms their importance in the research, which is particularly relevant to drylands. The youth strategy identifies knowledge gaps which are addressed by this study, specifically those on aspirations of rural young men and women and places priority on studying these aspirations. The objectives of the youth strategy furthermore guide this study, in particular Objective 1, Research Question 2 on aspirations and how they are affected by trends in social norms, cultural and religious values, class characteristics, and economic incentives.

YPARD (Young Professional for Agricultural Development) became involved in the early stages of the Drylands CRP, providing viewpoints at planning workshops and insight on possible youth focused activities. A proposal was developed for research on understanding the norms of youth in drylands areas, and their aspirations for the future.

Aspirations enable us to better understanding the life trajectory that young people want to take. It enables marginalized groups to exercise 'voice' and enables them to reflect on ways to change their situation (Appadurai 2004). Agriculture is not the first career choice by many and young people cannot be forced into the sector, but have to want to choose it. By collecting information on aspirations we can match aspirations with specific targeted program design. This information will be vital for the next stage of the CRP in order to develop locally appropriate steps to address youth.

1.1 Objectives of the study

The study aims at providing a diagnostic analysis and identifying rural youths' viewpoints, aspirations, options, challenges and opportunities in the selected sites in dryland systems.

In doing so, we hope to better understand their ALS's and the (external) factors that have implications on their choices and decisions (e.g. decision to stay or migrate), and the overall agricultural development. On that basis, we will discuss the potential role of AR4D in improving their livelihoods based on youths' perspectives.

The study intends to gain further insights on rural youth (in the selected site) in dryland systems based on their appreciation of their current situation.

An additional goal of the research is to develop and test a methodology to collect qualitative and quantitative data through a pilot study in the selected sites, which could be further adapted for replication in other sites.

1.2 Scope of the study

To be able to do this, the study is designed to:

- Identify and analyse the challenges and opportunities being faced by rural youth in the selected sites in dryland systems.
- Study the ALS's and the (external) factors that influence both the overall agricultural development of the study site as well as the choices and decisions (e.g. to remain in rural areas or to migrate to urban centres) made by the rural youth in the area.
- Understand what rural youth in the study site sees as their potential options for the future (near- and long-term).

Based on the above, the study will also endeavour to discuss the entry points for (and/or potential role of) AR4D in order to contribute to improving livelihoods of young people.

1.3 State of the art

Rural youth in Morocco

In Morocco, to realize the aspirations and reach success in a life project is a real challenge for the rural youth, who can barely have access to productive resources (land, water, capital). Likewise in many development and transition countries, including Morocco, the achievement of the young people's life projects depends on the opportunity of obtaining an own income that would allow them to meet their needs, being independent, and form a family. Income generation for rural youth is heavily dependent on their access to productive resources. Hence, in most of the cases, young people still live and depend from their parents (usually their fathers), recognized as head of household and the only ones owning the land and taking decisions on the farm. These parents are then the only link between the youth and the public institutions and the research and development interventions, which still lack to fully recognize the productive role of youth. Nevertheless, development agents who interact directly with farmers are fully aware of the active role of the youth in agricultural and rural development in Morocco (Bouzidi et al. 2015).

Rural and agricultural development in Morocco

In order to improve the agricultural sector's performance, the government launched Plan Maroc Vert (PMV), or Green Morocco Plan, in 2008, to support both small and large farms in becoming more efficient and market oriented. The PMV's goal is to increase agricultural production and diversity, and reduce rural poverty and rural-urban inequality. However, rural youth are generally cut out of any kind of assistance, as they often cannot have access to financial support from programs like INDH (Initiative Nationale pour le Développement Humain) or the PMV as they lack one of the most important required resources, the land (ibid.). Ghanem (2015) argues that that supporting small family farmers needs to be implemented by the introduction of new social safety net programs based on cash transfers, and by building new inclusive economic institutions that represent small farmers and ensure that they have a voice in the policymaking process. Reducing poverty will enable more rural youth to pursue education beyond the primary level.

Youth and education in Morocco

Much has been written about the unemployment rate among university graduates and the high numbers of Moroccans who did not finish secondary school. However, the statistics are even worse when looking at rural areas. Until farm families are able to increase productivity

and become more profitable, educating children beyond the mandatory primary school level is a luxury. The challenge is great: more than 95% of youth now have access to primary school education, but less than 15% of first grade students are likely to graduate from high school (Abinader 2015). Much of the educational gap can be attributed to the difficult economic conditions in rural and overcrowded urban areas – communities that do not have a sufficiently strong local economy to sustain jobs for parents and young people that allow for savings and re-investment in household goods, services, and education.

Despite a long-term commitment to education and human rights, there remains a startling division in literacy rates between Morocco’s urban and rural populations. In many ways, the urban/rural achievement gap may not be so surprising: Rural villages can be many miles away from schools; temperatures are sweltering in summer and can be freezing in winter; main roads are often crowded and in poor shape; and alternative transportation is out of reach for many poverty-stricken families. Another issue in rural areas is the cultural constraint that favors males over females in terms of access to education and advancement. The unique obstacles faced by many rural women and girls – who enroll in lower secondary education at a rate of 26% compared to 79% for rural boys – are considerable (Mouttaki 2015). For traditional Moroccan families, it is simply not acceptable for young girls to walk to and from school alone, or to live away from home and attend school if a daily commute proves taxing. While illegal, underage marriage remains a reality for many Moroccan girls, and often eliminates any potential for a secondary education. Some estimates claim that even five years post ‘Education Decade’, illiteracy rates for rural women and girls in Morocco remain as high as 90%, though official sources put the figure at 54.4% (Mouttaki 2015).

2 Materials and methods

The methodological framework of the research was developed and revised during several stages, and included a broad range of different tools. Figure 1 gives a chronological overview of the most important steps that have been undertaken in the course of the project.

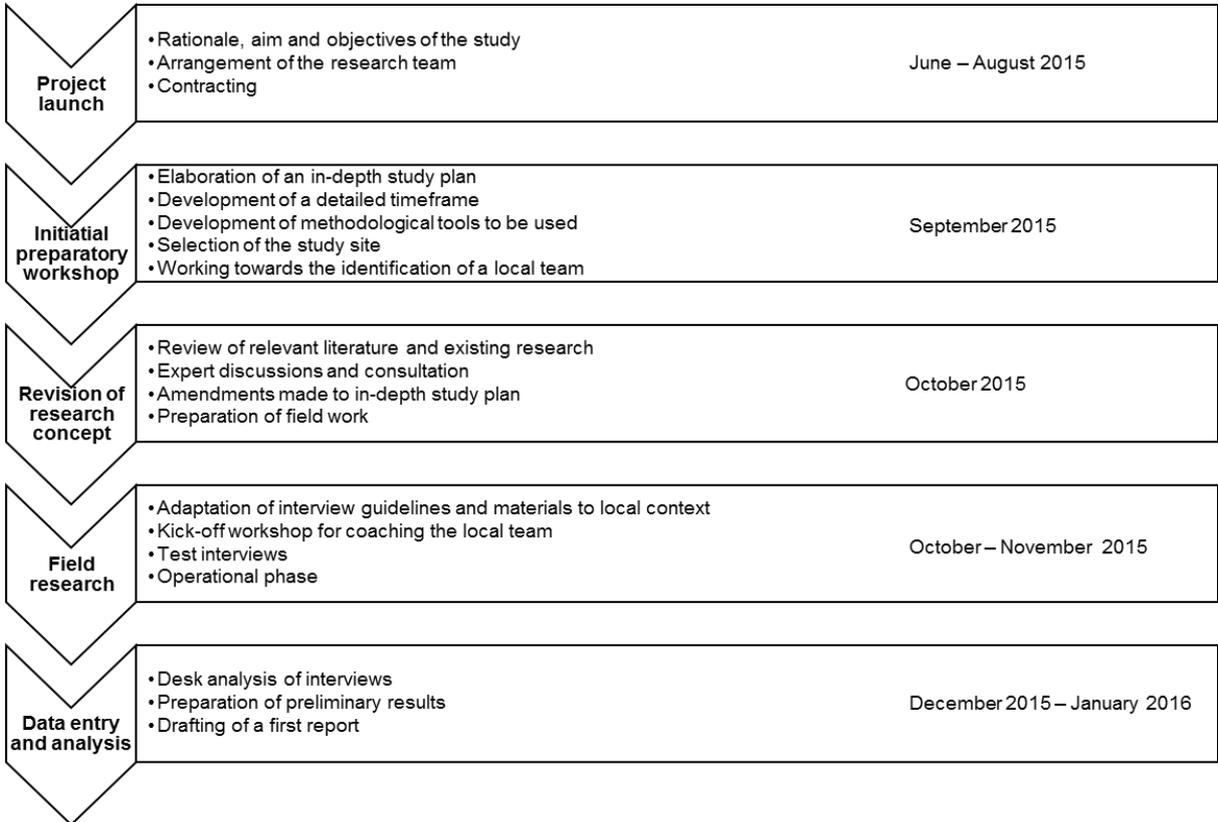


Figure 1: Project stages (September 2015 – January 2016): initial, revision, operational and analytical phase

Since the focus of the research project had been laid upon young men and women and their multiple relations towards agriculture, the interviews conducted with youth can clearly be regarded as the core piece of all activities undertaken. Initially it was intended to predominantly apply a quantitative approach during the actual field research activities, however, given the goal of the study to capture and better *understand* the realities, viewpoints and aspirations of young people living in agricultural dryland regions, as well as the rather limited timeframe, the study team elaborated that applying both quantitative and qualitative tools to work together with youth would be the most suitable approach. As such, the survey made use of an in-depth interview guideline for conducting at least 20 interviews each with youth from all three relevant ALS's – pastoral, irrigated and rainfed agriculture. Additionally, FGDs were done where appropriate for the triangulation of information obtained during the interviews to get a deeper understanding of key issues in the target sites. Interviews – though fewer and shorter – were also carried out with those who directly or indirectly influence young men and women (key informants), namely parents, teachers, possible employers, association leaders, as well as men and women who migrated from a rural home to an urban area as a youth. Thirdly, officials of governmental and non-governmental organizations (NGO) in and outside of the study region were approached as another group of key informants to understand their perceptions of issues that relate to rural youth in dryland agriculture. A detailed overview of all relevant interview partners will be provided in the following sections.

2.1 Selection of the research site

A suitable site for carrying out the research activities was not predefined; the actual selection had rather been part of the project. During the initial preparatory workshop, the following criteria were defined for the potential research site:

- DCLAS target country where plans are at a more advanced stage, to build on existing projects (and possibly a CG site integration country + or ++).
- Presence of all three relevant ALS's: pastoral, irrigated and rainfed agriculture.
- Expertise of the research team, and in particular of the team members who were going to work on the field, and synergies with other projects in which the team members are involved in. Given the limited frame of the study and the tight deadlines, this was meant to facilitate contacts in the research site.
- Pro-activeness of YPARD country representatives and the local YPARD network.
- Security reasons for involved team members.
- Existing expertise and background studies, available data.
- Existing contacts in the country and region for the identification of a local team; presence of ICARDA and YPARD staff.

Certainly, not all of the above criteria could be met by the chosen research site to the fullest. However, the identified region in the province of Midelt fulfilled the most relevant criteria – including the presence of all three respective ALS's – to conduct a pilot study on the realities, aspirations and challenges of rural youth in agriculture, and also brought along a range of other advantages such as the close proximity to Europe, where the research team is based. More specific information about the research site is given in section 3 of this report.

2.2 Literature review, research questions and in-depth interviews with rural youth

For the determination of possible research entry points that can contribute to fill existing knowledge gaps about the realities, perceptions and aspirations of youth in agriculture, a review of relevant literature and previously conducted research was done during the initial phase and continuously over all stages of the project. Partly building on these findings and also taking into account the discussions held with experts who engage in the field of gender and youth studies, four main research questions (RQ), each with a range of specific sub-questions to be addressed, were formulated.

RQ 1: What are youths' realities of agricultural livelihoods in dryland systems in the study area?

RQ 2: What are the livelihood aspirations of rural youth in agricultural dryland systems in the study area? Do the aspirations they have correspond to the perceived and existing options in their respective ALS?

RQ 3: What are the challenges and opportunities encountered by rural youth in agricultural dryland systems in the study area according to their perceptions and to those of other stakeholders?

RQ 4: What are the implications of rural youths' aspirations, challenges and opportunities for AR4D interventions in the study area?

According to the sub-questions identified for each of the four main RQs (annex 1), a comprehensive questionnaire for in-depth interview with young men and women in the target site was developed, comprising a total of 34 closed, semi-open and open questions (annex 2). Further to this, other methodological tools were developed which will be explained in the following sections 2.3 to 2.5. It is important to note that within the whole project great value has been placed to the collection of data which is sex-disaggregated and equally includes youth of different ages, social backgrounds, etc. However, particularly as regards to gender, the experience was that it is more difficult to get young women to participate in an interview, despite the strong efforts undertaken to achieve a gender-balanced dataset. Reasons for this inequality – which is de facto to be seen as a result of the research underway – may be explained by a still patriarchal societal structure of the country in which men dominate women in various respects (Žvan Elliott 2014). It is for this reason and comes as no surprise that eventually only one third of all interviews were conducted with young women. The exact figures of all interviews (disaggregated by ALS and gender) can be obtained from table 1.

Table 1: Number of youth interviewed by gender and agricultural livelihood system (ALS)

ALS	Minimum to interview	Youth interviewed		
		Total	Women	Men
Pastoral	20	32	10	22
Irrigated	20	39	11	28
Rainfed	20	27	8	19
Total	60	98	29	69

The survey applied a purposeful sampling approach which is often used in the context of qualitative studies that define a very specific target group (Palinkas et al. 2015). As such, the relevant criteria for the youth to meet in order to participate in the survey were the following:

- Age. Young men and women had to be within 15 and 30 years of age. This age range is based on the Dryland Systems Youth Strategy's definition of youth being between 15 and 24 (adopted from the official United Nations (UN) definition), and for specific research up to 30 years old (CGIAR Research Program on Dryland Systems 2015).
- Being involved in agricultural activities themselves or living in a household that depends on agriculture as the main source of income.
- Not more than one youth (man or woman) from the same household. However, since the definition of household had proven to be a rather vague term among the respondents, cases in which more than one youth of an extended household or family were interviewed may be possible and cannot be excluded.

Youth getting the opportunity to speak freely. Surprisingly, this point turned out to be less critical than expected. Conducting an interview did not require to have absolute confidentiality – which is, as was experienced, a very rare circumstance under the given cultural conditions. However, young women were observed to be patronized by men in some cases. In such cases it was only possible to conduct the interview if appropriate surroundings could be ensured, such that the respondent felt confident to contribute openly.

The operational phase of the field work kicked off with a workshop together with the local team, organized through the Midelt-based Association Al Amal pour l'Aide des Enfants aux Besoins Speciaux. The group consisted of four enumerators for the translation from Berber dialect to English and French, and two local operators who were in charge of organizing all logistics during the two-week field research in the Midelt province. Meetings were held at the association's main building, informing the enumerators and local operators about the important points for them to know to support the research activities to the fullest. Among others, the introductory workshop and training included the clarification of the following points:

- Detailed explanations about the goal and the objectives of the study, as well as about the target group.
- Sensitizing the team in gender-related aspects of the study.
- Explanations about the three relevant ALS's. Even though pastoral, irrigated and rainfed farming might all be integral parts of a household's income, it was important to explain the intention to conduct at least 20 interviews for each system where the respective ALS was the main source of income. This did not solely challenge the selection of youth to be interviewed, but also the specific research sites to be visited as each system has different occurrences in the various regions of the province.
- How questions and the interview guideline need to be translated so that the questions remain open and semi-open; how instructions and further questions need to be handled during the interview.
- Not to cause unrealistically high, direct impact driven expectations among the villagers (including youth) which the project cannot fulfill. Explaining that the research carried out was only the beginning of a broader approach to better take into account the position of youth.
- How and in which situations FGDs might be appropriate and work well.

Following the introductory workshop, test interviews were conducted with rural youth farmers in the town of Midelt, after they had finished their business at the weekly Sunday souk (which was the reason for them being in town). Only a few minor amendments were made to the in-depth youth questionnaire as generally it had proven to work well together with the enumerators' translation skills. One in-depth interview took between one and 1.5 hours of time.

The data collection of all 98 interviews took place between October 25 and November 4, 2015. For the identification of suitable interview candidates the study used different techniques. Generally and most important, the research applied the criterion-i strategy during the visit of a village/douar, which serves to select respondents that meet the required, predefined criteria (see above); furthermore, where applicable, the snowball technique was used to identify additional youth with the help of those that had already been interviewed (Palinkas et al. 2015). A total of twelve persons were part of the field research (table 2), not all of which participated over the whole period. As a general rule three or four interviews could be done at a time.

Table 2: Field research participants and their respective functions/roles

	Name	Local function/role
International team	Alessandra Giuliani (HAFL, project coordinator)	Planning, organization, interviews
	Sebastian Mengel (HAFL)	Interviews
	Sarah Dettwiler (HAFL)	Interviews
	Ingrid Flink (KIT)	Interviews
Local coordinator	Nicole Perkins (Planet H ₂ O)	Coordination, interviews
FAO local consultant	Malika Chkirni	Interviews
Local team	Aomar Melkaoui (president of the association)	Local organization/coordination of enumerators
	Salah Boudrine	Local organization, logistics
	Abdelatif Abdelaali	Enumerator
	Ben Youssef Aït Daoud	Enumerator
	Abdellatif Ouzougagh	Enumerator
	Mohamed Ouled Cherif	Enumerator

The first week of conducting interviews with youth started in the commune of Aït Izdeg, which lies close to the border of the town of Midelt. Over the duration of the field research various other communes and douars were visited to interview youth, each with a different presence of pastoral, irrigated and rainfed agriculture. More details about the region in general and the specific research sites will be given in the following section 3.

2.3 Focus group discussions

As outlined above, FGDs were used as a methodological tool to triangulate information between respondents to get a deeper understanding of key issues that were observed during the interviews. Key issues were often reported by youth to be the challenges they face. The FGDs conducted did not follow any predefined guidelines, but rather built on a specific momentum. A creative, interactive approach was used which asked youth to visually report their challenges and to propose suitable solutions. As a general rule, FGDs were gender-specific – either with a group of young men or women – to avoid a situation in which either gender might not feel comfortable to speak openly, and to ensure discussions were not dominated by one-side. Of course, not all dominance-related issues could be solved by having gender-specific FGDs since other factors (age, personality, etc.) play a fundamental role to an individual's empowerment as well. A total of six FGDs were carried out during the 10-day field research, one of which was not with youth but with elderly women (table 3). In each FGD between four and eleven individuals participated. Further details about the procedure of and the results obtained from the FGDs are described in sections 4.3.

Table 3: Number of focus group discussions (FGD) by gender and agricultural livelihood system (ALS)

Gender	ALS		
	Pastoral	Irrigated	Rainfed
Young men	1*	1	1*
Young women	2**	1	None***

* Pastoral and rainfed FGDs with young men were mixed systems

** One FGD carried out with elderly women sharing their views about youth

*** Insufficient women met (for a FGD) whose income primarily depends on rainfed agriculture

2.4 Videos

Some 23 non-professional, short videos were filmed of the rural youth who were interviewed and had something interesting to say. Furthermore, videos were recorded during five FGDs. Enumerators were asked to write transcripts of each video that was taken so they can technically be translated with the help of subtitles at a later stage. The videos last about 1-2 minutes each. Together with YPARD it is intended to use these videos for social media purposes, depending on their technical suitability. This activity will be in addition to the actual research undertaken and aims at further engaging youth and other stakeholders in a dialogue about the challenges and opportunities of youth in dryland agriculture.

2.5 Interviews with key informants

In addition to the survey conducted with youth to get their own views, different types of key informants were interviewed to get a more holistic understanding through applying a multi-perspective approach.

2.5.1 Influencers

Prior to and at the very beginning of the field work carried out in October and November 2015, a stakeholder analysis was done to identify relevant parties that directly or indirectly influence youth in their thinking and acting. The following groups were identified to have strong influence on youth, while their actual roles and impact on youth were going to be investigated through interviews during the field work:

- Parents. Even though the age of a young man or woman might play a role if a household is shared (not in every case however) by more than one or even two generations, parents as well as parents-in-law tend to have strong influence on the perceptions and decision-making of their children or children-in-law. This is particularly true in a society in which strict hierarchies are prevalent.
- Teachers. Their influence depends largely on the years of students' schooling plus the physical presence of a student during his or her education. Thus, access to education and early drop-outs can make a huge difference on how strongly youth are or were influenced by a teacher.
- Actual or possible employers that contribute to shape young people's professional and personal life in multiple ways.
- Associations can play a fundamental role in the life of young people in several respects, particularly in regards to social life.
- Men and women who migrated as a youth from a rural to an urban area might serve as role models – depending on whether their migration is regarded a successful one. This can strongly influence the desired life trajectory of rural youth.

As depicted in table 4, different influencers were interviewed during the field research to get a complementary view of youths' challenges and opportunities in the study region.

Table 4: Type and number of influencers interviewed

Influencer	Number of interviews
Youth migrants with agricultural background	4
Industrial farmer	1
Farmers association	3
Parent	3
Teacher	2
Input wholesaler	1
Processor of agricultural goods	3
Older farmer	1
Total	18

2.5.2 Governmental and non-governmental officials

Officials of governmental and non-governmental organizations were found to be another important group of actors that exert influence on youth, though rather an indirect one, e.g. through (youth) policies, possible interventions, etc. Three interviews were carried out with this group of key informants, one with a local FAO consultant working in the field of regional intervention projects, another with the FAO country representative in the country's capital Rabat, and one with the local director of the Directions Provinciales de l'Agriculture (DPA), the Moroccan ministry of agriculture. Insights and finding from these interviews are reported in the analytical part of the research.

3 Information about the research site

The map in figure 2 show that the province of Midelt is located on a rain-sheltered plateau at about 1500 m of altitude between the Middle and High Atlas mountains in the Northern part of Morocco; geographically Midelt lies at 32° Northern latitude and 4° Western longitude (NOAA no date). Whilst the town of Midelt is located on a plain, large parts of the province are characterized by steep mountain slopes and numerous valleys. As was experienced during the field work, extensive landscapes, particularly in the mountainous regions, are highly degraded by deforestation and soil erosion. The main irrigated crops that were found to be grown are fruit trees (very dominantly apple trees), fodder crops and vegetables. The main crops in rainfed farming were observed to be barley and some wheat as well. Nomadic (sheep, fewer goats) and sedentary (sheep, goats, cows) forms of pastoralism are highly present. Beekeeping plays a certain role too, though this activity seems to be still not yet so widespread among farmers. As the landscape declines in altitude and the climate gets milder, more Mediterranean fruit-bearing trees such as olives, almonds and apricots dominate.



Figure 2: Red circle indicating the research site in Morocco, located in between the High and Middle Atlas
 Ezilon.com Regional Maps (2015)

According to data of the US-American National Oceanic and Atmospheric Administration (NOAA), average annual rainfall in Midelt is low at about 210 mm, while annual average temperature lies at 14.3° C (NOAA no date). In the Köppen-Geiger climate system Midelt is classified with the typology Bsk, a mid-latitude dry steppe (Hijmans et al. 2005; de Bie, C. A. J. M. 2007). The climate diagram in figure 3 clearly shows the semi-arid climate conditions, particularly during the warm season respectively the vegetation period from May to November.

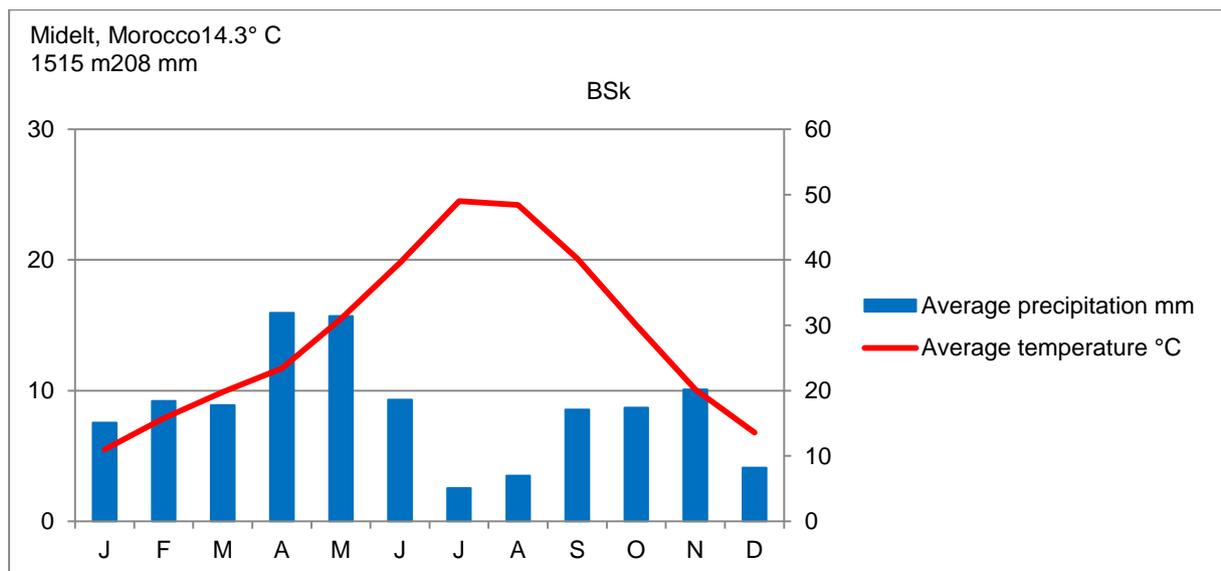


Figure 3: Climate of Midelt, Morocco
 Adapted from NOAA (no date)

The villages/douars that were visited to conduct the survey were spread throughout the province of Midelt and varied considerably in landscape, micro-climatic conditions, as well as in other regards such as access to infrastructure and public services, etc. An overview of the communes and, more specifically, the villages that were visited (including the dates) in the course of the field research is given in table 5; a map of the province of Midelt is depicted in figure 4.

Table 5: Villages/douars visited during the field work

Name of commune	Name of village/douar	Date visited
Aït Izdeg	Tatouine	October 26
	Tissouite	October 26
	Aït Assaka	October 30
	Berem	November 1
Tounfite	Aït Brahim Ouichou	October 28
	Aït Lahri	October 28
Boumia	Tanwordit	October 29
Zaïda	Aït Ilousan	October 29
Amersid	Taourit	October 30
	Zebzat	October 30, November 1
	Titourmas	November 3
Aghbalou	Ouahi	October 29
	Aït Boulmane	October 31
Tanourdi	Targot	November 2
	Aït Said Ouizzo	November 2

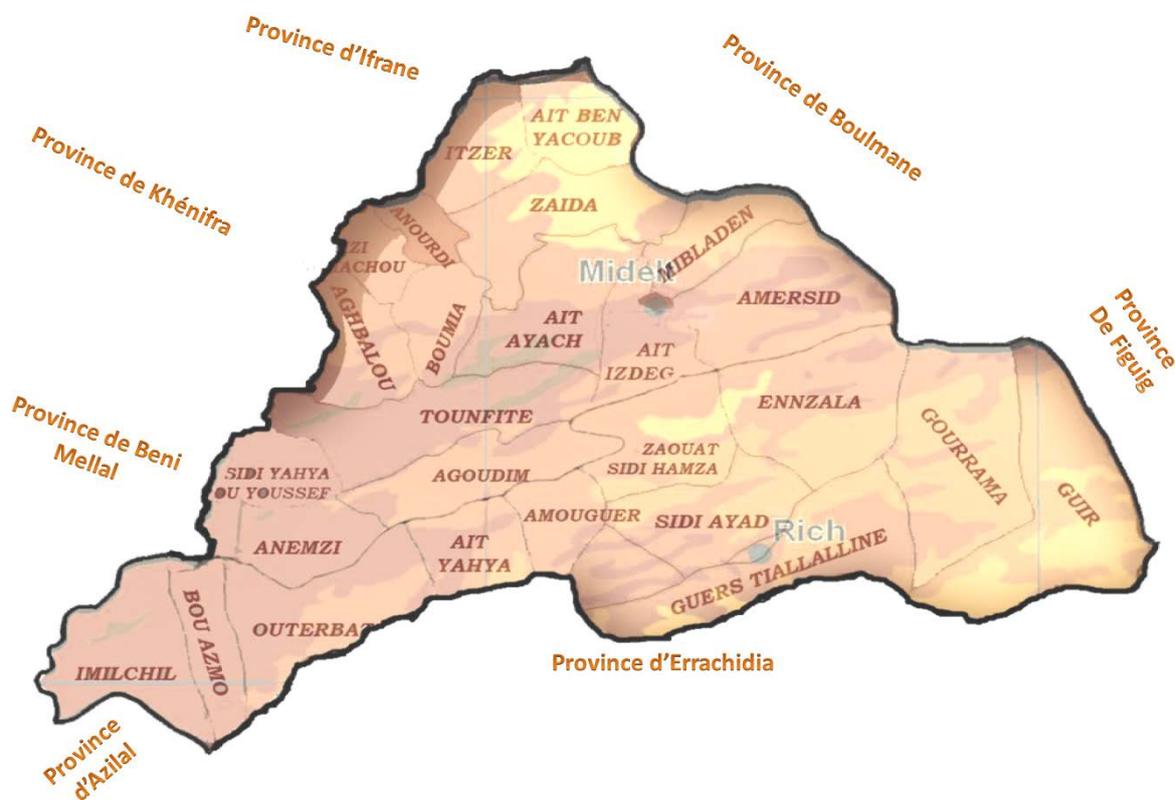


Figure 4: Communes in the province of Midelt, Morocco Chkirni (2015)

Even though differences between the villages/douars that were visited in the course of the two-week field work were obvious, some important points and characteristics had been repeatedly observed and can be summarized as follows:

- Access to the villages was almost exclusively on unsealed dirt roads. Since the majority of villages are located in a hilly or even mountainous landscape, dirt roads often passed difficult conditions at considerably changing altitudes, as well as terrain that is subject to regular flooding. The lack of transport infrastructure had shown to be a major constraint faced by the people living in more remote places, particularly in relation to market activities throughout the year (livestock) and especially during and after the time of harvest (vegetables, cereals, fruit).
- Many of the villagers reported to have an ancestral background as nomads. Over the generations some of their ancestors settled down in suitable areas such as valley floors, establishing a sedentary lifestyle with fruit, vegetable and cereal cultivation. As such, the villagers' life can be described as a change in tradition. However, given the topographical setup of the region, land for cultivation is usually rare as it is mostly limited to narrow valleys.
- Tourism only plays a minor role. Some villages get small revenues from mountain tourism, mainly during the summer months.
- Large parts of the landscape around the villages are highly degraded by flood erosion, as natural resources such as trees and shrubs were unsustainably collected from the wild; deforestation was observed to be a major issue. This again strongly links with the issue of difficult transport infrastructure and greatly affects the livelihoods of people in all three studied ALS.
- A potable water system is, in the majority of all cases, not in place. The water supply comes from local wells and other sources. A few cases reported that water is only available from places farther away. Upstream water use and pollution (waste water, from the use of agricultural inputs, among others) was observed to be a problem, particularly for those downstream suffering from low water quantity and quality.
- Irrigated farming systems mainly rely on the use of furrow irrigation. Irrigation infrastructure was often observed to be in a bad condition, though some (newly built) concrete irrigation canals could be seen too. In some places drip irrigation was widespread.
- Electricity supply in most villages was through connection to the national network. In some villages where electricity was not centrally provided, decentralized systems such as solar panels provided limited supply.
- Houses are traditionally built with clay. Only a few concrete buildings were seen during the field research. Strong weather exposure and the absence of a financial means to re-invest has, in many cases, lead to major leaks in the building structures, particularly affecting public infrastructure such as schools, social centers, etc.
- Difficult road conditions mean that teachers from outside the village were not showing up regularly. The villages are generally lacking secondary and vocational schooling possibilities; only primary schools, if any at all, were found to be in place.
- The absence of hospitals or health centers was often pointed out to be a huge problem under the given difficult road conditions, particularly for pregnant women.
- Youth as well as other villagers often mentioned the absence of associations. However, even if associations or cooperatives were reported to be in place, their existence was often described as de facto useless due to different reasons (e.g. no activities, bad management, etc.).

4 Findings from the field research

The findings from the field research are divided into different sub-sections. Firstly, the key observations from the field study will be reported, followed by the descriptive analysis of four specific key variables. Sub-sections 4.3 and 4.4 provide additional information about the FGDs as well as the interviews with influencers.

4.1 Key observations

The following key observations are based on the preliminary qualitative remarks from the in-depth interviews with rural youths, focus groups discussions and key informant interviews.

Basic needs are the priority

In areas where food security was assured, before talking about the needs and aspiration in their rural life and career, youth raised first the issue of primary needs which are not being fulfilled in the surveyed villages, namely: schools/education, access to potable water, roads, infrastructure and health care.

- Poverty. Among the young rural people surveyed, there was the issue of *perceived poverty and lack of possession*. Interviewed youths see themselves as 'poor', or better 'resource poor'. We think that this perception is due to their realization of 'not possessing much' or 'not possessing anything', namely no land (nomadic herders) or very small patches of land (in the case of irrigated cultivated land, which anyway belongs to the parents/family), very few animals, no owned houses. The perception of poverty may also be related to the comparison with the near surrounding urban areas. Interviewed young people, even when they were married and had own children, still live at their parents' houses. They strongly wish to have their own small house not to be shared with all the members of the family of origin. Besides, nomad herders are completely marginalized by other people as they are illiterate, and they are bear off by the farmers because their animals graze on the farmers' land and ruin their produce.

"I know that I will never get married as nobody wants to marry a poor nomad herder without a house"

Personal communication with young male nomad herder from the village of Tatouine

"We live with animals, we live like animals"

Personal communication with mother of a young male nomad herder

- Lacking education. All the interviewed young people mentioned that reaching a certain level of education is one of their first aspirations in life. They suffer from the little education they receive in their villages. Most of the children and youths in the village have access to primary education (Besides the formal education, the *Education Non-Formelle*, provided by associations and NGOs, plays an important role given the country's drop out and illiteracy rate.

- Table 6). However, the access to primary schools is often limited to both broken buildings, and more often the absence of teachers. In some villages where the school is more than one kilometer from the house, children are threatened, particularly during winter months, by cold and snow, darkness, and wild animals on their way to schools. The secondary schools are in nearby urban centers, and thus inaccessible for youths due to a) lack of time, as parents require their labor on the farm), b) lack of roads and means of transport to reach the schools, c) lack of basic education received in the rural primary schools to enter and to follow secondary school curriculum, d) traditional expectations for girls whereby parents do not want their daughters to live in students residences outside the home. The situation in the surveyed villages is similar to other parts of rural Morocco. Morocco has been suffering for several years from a very weak education status. Global monitoring located Morocco in 143rd place out of 164 countries (UNESCO 2014). Besides the formal education, the *Education Non-Formelle*, provided by associations and NGOs, plays an important role given the country's drop out and illiteracy rate.

Table 6: Scholar system in Morocco

Education	School/level	Age from	Age to	Years	Notes	Project coding
Primary	Primary School	6	12	6	Primary school education is compulsory	Primary (1)
Secondary (1)	Basic education (L'Enseignement Fondamental)	12	15	3	Certificate/diploma awarded: Certificat d'Enseignement Secondaire	Secondary (2)
Secondary (2a)	General Secondary (L'Enseignement Secondaire)	15	18	3	Certificate/diploma awarded: Baccalauréat	High school (3)
Secondary (2b)	Technical secondary	15	18	3	Certificate/diploma awarded: Baccalauréat Technique	High school (3)
Vocational	Technical	18	20	2	Certificate/diploma awarded: Brevet de Technicien Supérieur	Tertiary (3)
Tertiary	First university degree	*	*	2	Preparatory phase	Academic (4)
Tertiary	Second university degree	*	*	4	Leads to the award of the Licence/Maîtrise /Diplôme (4-5 years total including preparatory phase)	Academic (4)
Tertiary	Third university degree	*	*	2	Certificate/diploma awarded: Diplôme d'Etudes Supérieures (DES), Diplôme d'Etudes Supérieures Approfondies (DESA)	Academic (4)

Adapted from Classbase (2012)

* Not relevant

- Lacking infrastructure. The surveyed rural youths reported a lack of basic infrastructure as one of the major constraints in their villages. Though the surveyed villages lay only ten to 60 kilometers from urban centers, rural youths are isolated as paved roads are missing. After heavy rains these few roads are not accessible. Almost all the interviewed youths do not own a vehicle, so reaching the urban areas, where hospitals, secondary schools, markets, and wage labor opportunities lay) can be done only by walking or with the use of a donkey or mule in most of the villages also in dry seasons. Lack of basic health care in the village is also reported among the major constraints in the rural life. Hospitals and clinics are difficult to reach due to poor roads. Lack of water in the houses is also reported by the interviewed youths as a great limitation in their everyday life in the rural villages.

"We need healthcare in the villages; I saw my friend's mum dying while she was giving birth as she could not reach a hospital in time"

Personal communication with young male rainfed farmer from the village of Aït Lahri

ICT tools

- The use ICT is still very limited in the survey site, also among the youths. This is mainly due to a lack of resources (to purchase smartphones for example), but also to illiteracy: they know that the tools exist, they would like to use them, but they are not able to use them or understand how they work. Mobile phones are widespread and used for personal and professional purposes, such as getting in contact with friends, as well as contacting

traders in towns, for example. Data on the use of ICT are reported in the below section 4.2.1.

“I use my mobile phone to inform my parents when I am far away with my sheep and due to bad weather I cannot go back to the tent in the evening”

Personal communication with young male nomad herder

Migration

- Migration from rural areas was not found to be widespread in the surveyed site. Migrating is not an option for many youths, as leaving the family is not part of their culture. This is an option only for rural girls when getting married to an urban dweller, or for an entire family, when the father decides to migrate for employment. Surveyed rural youths from all the three ALS's wish to remain in their villages, but wish the conditions were better – hence the development of the image of the ‘village of their dreams’ rather than their ‘dream job’ or ‘dream life’ (section 4.3).

Skills required to improve rural livelihoods

- It was difficult to obtain input about the missing and desired competencies and skills the youths would need to farm better, as the majority of the interviewed young people did not know what skills and competences exist at all. However, some limited competencies and skills were voiced:
 - Knowledge of and ability to use of chemical inputs, in particular for apple production.
 - Fruit tree pruning (apple) techniques.
 - Identification and management of animal diseases (cows, sheep, goats).
- Mainly they responded with missing technology, such as:
 - Refrigerated storage containers (to keep the apples and not waste the harvest, and wait for prices to rise).
 - Processing machines to produce juice and jam from apples (for the overproduction).

The role of cooperatives and associations

- The available assistance (from FAO, the Swiss Development Cooperation (SDC), INDH, etc.) requires that the beneficiary be a member of an association or cooperative, whereas very few of those interviewed had any contact with or knowledge of any associations or cooperatives. There are questions on how to get the help to those who need it, keeping in mind issues of corruption that are standard among those in charge, from elected officials to presidents of associations. Section 4.2 will shed further light on the issue of cooperatives and associations.

Influencers of rural youths’ decisions

- Rural youths’ decisions are either taken or strongly influenced by the family (parents, and in particular the fathers for women or husbands if they are married), society, customs and traditions.

4.2 Descriptive analysis of key variables

The following sections provide a descriptive analysis of four variables which are of considerable importance for the overall project. At this stage the data of all 98 youth in-depth interviews has been processed with Microsoft Excel. Further qualitative – and statistical, where appropriate and feasible – analysis of the data will be carried out in the course of the project.

4.2.1 The use of information and communication technology

ICT can make large contributions to agricultural progress in developing countries with positive effects on youth. It has been found that ICT can help youth to facilitate the marketing of their agricultural produce, increase the yield of farming activities, improve young people's positions as they affirm their ability to make their own decisions towards their parents and other influencers, and foster organizational development (IICD 2013).

The study carried out in the province of Midelt aimed at, next to other sub-objectives, investigating to which extent young people use ICT and identify how the potential benefits of ICT can be spread more widely among youth farmers.

The survey had foreseen to ask youth explicitly if they are able to distinguish between a private and a professional use of ICT in their lives, which purposes they use ICT for, and how they see ICT can improve their lives. During the field work it was found that not all youths were able to identify a difference between the private and professional use of ICT, while only a limited number of respondents was able to do so. Resulting from this, the important question turned out to be which ICTs youth already use – and which ones they are missing from their point of view.

Radio and TV

Since most of the villages were connected to a wider electricity network, as mentioned in section 3, it is no surprise that the majority of respondents regularly use radio and TV. Out of the 98 interviewed young men and women, however 18 stated they did, not use radio and TV. Twelve of these relied on pastoralism as their main source of income. Many of the interviewed pastoralists follow a nomadic lifestyle, and the missing access to electricity and heating in the winter months was voiced as a highly critical issue for them, preventing them from regularly using basic forms of ICT. Radio and TV were, in most cases, reported to be privately used. Some youths, however, highlighted the importance of the two media for weather forecasts, helping them to plan their agricultural activities.

Mobile phones

The use of mobile communications within the sample is as widely spread as the use of radio and TV, with 83 out of 98 respondents declaring they own a mobile phone. Still, 15 youths said they do not own their own mobile phones, although some have occasional access within their household. 14 of the 15 non-users were women; only one non-user was a young man of 15 years.

Smartphones and computers

Things look very different with the use of smartphones and computers (internet capable devices). Only 17 youths within the sample responded to own either a smartphone or a computer with which they can access the internet. Despite 58 of the 81 non-users expressing the wish to own an internet capable device, 23 said they would not wish to do so. In these cases youths often argued that they are not capable of reading and writing as they left the educational system as illiterates (or did not even enter school at all), and consequently they would not be able to use these tools.

4.2.2 The issue of rural-urban migration

Outmigration from rural homes to urban areas was a controversial issue among the youths that were interviewed. Youths' views on rural-urban migration fell into three different categories: 45 out of 98 said that they were not thinking of leaving their village, 18 were undecided, and 35 expressed the explicit wish to migrate to another place, preferably to an urban area.

Youth for which migration is not an option

The most striking reason among youths who said they were not thinking of migrating could be identified as the personal environment in which they live and the responsibilities which they have or are perceived to have towards their relatives. 36% mentioned their families, friends and responsibilities as the reason why they would not think about leaving their villages. Another 25% expressed their preference for agriculture and rural life as the reason why migration is not an option. A further 25% said the reason why they would exclude migration from their set of options was the self-perception of being too unskilled for a life in town since urban areas, in their understanding, are for people with a higher education.

Youth remaining undecided about migration

The young men and women who did not very clearly say whether they would want to migrate or not mentioned the absence of opportunities in their rural homes as a key challenge they face; 39% of the undecided youths stated that this would be a key driver should they decide to leave. 17% of the undecided said they were so as they actually prefer agriculture and rural life, though the conditions they live in might be difficult. Another 17% of undecided youth stated their concerns of being too uneducated for a skills-demanding urban life. Conflicts within the family or personal environment were mentioned by 11% as potential reasons for migration.

Youth wishing to leave their rural homes

Of the 35 youths who expressed the wish to leave their homes and live in a more urban area, 57% said so in line with the complaint about no or very limited rural opportunities. Despite their explicit wish to migrate, another 26% mentioned their families and responsibilities in the villages hampering them from doing so; this shows how strongly youth seem to be rooted in their rural environment. Controversially, a further 14% of all respondents expressed the desire to migrate even though at the same time they felt, in their view, that urban working life requires people with very specific skills, which they do not believe themselves to have. Those 14% can presumably be described as frustrated in their perceived lack of competencies to obtain urban based opportunities. Only one youth expressed the desire to migrate as a result of conflicts within the family or personal environment.

4.2.3 Associations and cooperatives

Among the 98 surveyed young men and women, only six stated that they were members of any associations or cooperatives that might exist. The vast majority is not and had several reasons. Most frequently, at 33%, the respondents argued that there was no association or cooperative that they could become a member of. It remained unclear whether, in the respective villages, there was a de facto absence of associations and/or cooperatives, or if existing ones were simply not accessible to youth. 17% of the respondents did actually argue that the existing ones were not accessible for them for different reasons such as corruption or discrimination. A further 29% were not able to provide any reason why they are not a member of an association or cooperative, and 18% mentioned a lack of time, interest or a critical view (including the perception of associations and cooperatives as being useless) as their main reason.

4.2.4 Value added activities

Value added activities were rarely mentioned by youth during the field work, despite clearly asking this point during the interview. Firstly, it is important to note that 26 out of 98 respondents did not quite understand what value added activities are. Generally, the evaluation of this important point used an open approach, with the initial question asking whether youths themselves or the household they live in follow any activities to add value to their produce. If youths did not really come up with a reply, some examples were provided. Still, some 26

young men and women did not grasp the concept. Out of the 72 youths who understood what value added activities were, only 26 said they would do any, and these were limited to rather simple activities: 18 mentioned sorting and packaging their produce themselves instead of selling it in the field (e.g. selling apples on the tree turned out to be a very widespread practice), 4 reported to bring their produce, in this case apples, to a cold storage outside of the village to keep it fresh and sell it at a later point should market prices decline around the time of harvest. 13 young men and women mentioned the processing or transformation of the agricultural goods they produce as value added activities. However, these workings were in the majority of all cases limited to subsistence production and comprised techniques such as the production of wool, leather and milk derivatives; no post production could be found for the most dominant crop – apples. Only two interviewed young men mentioned selling olive oil from their own production, favored by a rarely prevalent mild micro climate enabling them to grow olive trees.

4.3 Results from the focus group discussions

A number of FGDs were carried out with groups of young men and groups of young women in some surveyed villages about their aspirations and the ‘villages of their dreams’. Hereafter, the results of two FGDs are reported.

FGD 1 – Rural girls from the commune Aït Izdeg, village Tissuite

A first FGD was conducted in the commune Aït Izdeg, village Tissuite, with ten young women (Table 7). To start the FGD, some initiating questions were asked to the group.

Table 7: Participants’ profile of focus group discussion (FGD) 1

FGD participants: 10	Highest level of education com- pleted	Age	Marital status	Number of children	Main occupation
ALS: Irrigated	Primary	15-18	All single	-	Weeding and collecting fodder and grass in the apple trees for feeding cows, sheep and goats. Taking care of the house, cooking for the family.

Initiating FGD questions: ‘What do you want to do in the future? How should your village look like for you to stay? How is the village of your dreams?’

To answer the questions, the young participants discussed their ideas among themselves, drew together a plan to respond to the above question, and then they presented. The results of the ‘participatory drawing’ exercise are reported in Box 1.

Box 1: Results of the 'participatory drawing' of focus group discussion 1

"We want to remain in our village; we want to see more development, especially in agriculture as the income we get is not enough. Now we spend our day weeding, and then we cook for the family. Here it is just difficult to continue education for us, young women, because our families say that primary education is enough for a young woman. It is difficult to convince our parents to send us to school as they are afraid about us travelling to the schools in town. We want to find a job here, not in the city, but many improvements should occur. Some of us don't want to stay, they prefer to go leave and marry an urban dweller, as life in a city is easier. But migrating only works if there is a husband to marry and we can find a husband only if we get educated!"

"We need a pre-school system, so the children will be ready to go to school when they will turn 6. We need a new primary school building and more committed teachers. We also want to have a college here in the village. We need a proper water supply in the village and in the houses; the water here is of bad quality. We want a system to avoid the harvest damage by the wild boars and other wild animals. We need an institute to get training in sewing clothes. We would like to create a cooperative. 'Our' cooperative would work like this: we would develop our business idea, of producing cheese, artisanal bread production, honey and cloths. Then we would need milking machines, and a vehicle. We would elect one girl as president. We could produce cheese, honey and sewing and tailoring products. Paved roads should be developed as transportation is a key for market access. For the marketing, we would need to create partnerships with sellers in town. We cannot direct selling in town as we believe being a seller requires more emancipation than we have, and we lack the required education and skills for this."



Figure 5: Rural girls drawing during the focus group discussion (FGD) 1

FGD 2 – Rural young men from the commune Tounfite, village Aït Lahri

A second FGD was conducted in the commune Tounfite, village Aït Lahri with a group of young men from combined systems, rainfed/pastoral (Table 8). Again, to start the discussion, a few initiating questions were asked to the group.

Table 8: Participants' profile of focus group discussion (FGD) 2

FGD participants: 10	Highest level of education com- pleted	Age	Marital status	Number of children	Main occupation
ALS: Combined systems, pastoral (seden- tary), rainfed	Primary or none	17-30	All single	-	During two months culti- vation of rainfed crops (wheat, barley, etc.), sedentary livestock keep- ers (sheep, chicken, cows), very limited off- farm activities in the nearby towns

Initiating FGD question: 'What do you want to do in the future? How should your village look like for you to stay? How is the village of your dreams?'

To answer the questions, the young men discussed their ideas first, then they drew together a plan to answer the above questions, and finally they presented. The FGD and the participatory drawing took place under a tree at the entrance of their village, surrounded by curious children just coming out of school. The results of the 'participatory drawing' exercise are presented in Box 2.

Box 2: Results of the 'participatory drawing' of focus group discussion (FGD) 2

"We want to remain in the village and will be happy to live in our place, because job opportunities will be there, and the life conditions will be good. We will continue working in agriculture and we will be busy with agricultural activities all year round, so we will not fall into drugs."

"The village of our dreams will have:

- A hospital. The empty hospital building in the village will be equipped with all a hospital needs: doctors, beds, medicines and an ambulance to bring women when they give birth. Pregnant women will not have to rely anymore on private transport through mules and reach far away hospitals, risking the death for themselves and their babies, but they will be taken care at the hospital in the village. There will be doctors and nurses living in the village and work in the local hospital. Medicines should be available.
- Sport fields. A football field will be constructed and a football team will be formed and this would bring an exciting sport activity for us, the young men in the village, and will be a way to push us away from drug addiction and other bad habits. The football will not be any more something to watch on TV, but to practice!
- Schools. All the children will have a school near their houses, also reachable during winter months, even with the snow. Enough teachers will be available, and all the teachers will come to the village every day and will never miss a class. They will come and live in our villages. The teachers will not tell us that we do not deserve to be educated only because we are illiterate. There will be an organized transport to bring the children to the College, or even a college will be constructed near the village. The teachers in the college of Tounfite will not tell us that we are not worth to be in the college and we need to go back to primary school, because our primary school will provide good education, so all the students will proceed with schooling in a committed and enthusiastic way.
- Vocational training. There will be a training center for mechanics, welders, and carpenters, to have access to seasonal jobs in town, gain money for the family, and get back to the agricultural fields in the village.
- Access to water. There will be access to water at home, so our mums and sisters will not obliged to walk so far away to go and collect water and transport it home. We will have showers in our village, or even at home, for our personal hygiene.
- Road. During winter it will be possible to access the village because we will be able to build roads. We will have vehicles to move and transport our goods.
- Street lights. There will be lights on the streets in the village. We will be able to go out our houses even in the dark hours.
- Water in agriculture. The dam will be completed, and there will be a wells close by (constructed though the stony soils with a jackhammer), and water will be pumped from the dam to the village. There will be reservoir to collect rain water and use for agriculture.
- Improved natural resources management. About 400 ha of land in the village have been degraded by flooding and desertification. Once, we will have access to water, the rain fed degraded land will be irrigated and become fertile land to cultivate and generate income. The protests we made in other villages against the bad natural resources management will be heard.
- Common lands will be shared among families in the villages, and thanks to access to water, also the landless will be able to get a good income from agriculture.
- Phytosanitary products and protection nets for the apple trees against the hail will be available also to those farmers who cannot afford them.
- Protection from wild animals. Forest guards will put in place a system to stop wild boars from ruining the rain fed harvest and the apple trees.
- Grazing. Forest officers will be planting trees and plants on the grazing lands and mountains, so that there will be enough to feed our animals."



Figure 6: Participatory drawing of the village of dreams by a group of young men during focus group discussion (FGD) 2

4.4 The views of the influencers

As explained in the methodological description, the following actors were identified as the most influential individuals for the youths in rural areas in the survey site:

- Parents (in particular fathers)
- Husbands and wives (for the married ones)
- Other members of the family (grandparents, older brothers and sisters, uncles, etc.)

Through key informant interviews, we gathered various views of the influencers and other community members, on the realities and aspirations of youth in rural areas in the surveyed sites. Some results are reported hereafter in boxes 3, 4 and 5.

Box 3: Realities of and challenges faced by rural youth from the point of view of the influencers

- Rural youth have no education, and get low salaries. The transport constraints like no paved roads and lack of transport means hamper the access to working opportunities in the surrounding rural and urban areas. Work places are far away and difficult to reach.
- Rural youth can manage farming and livestock only with the limited knowledge transferred from their parents, meaning they are not able to opt for a different crop, or agricultural activity than the one they are dealing with.
- There are no income opportunities directly for women (like places for sewing, weaving, knitting). Regulations are restricted to the collection of medicinal and aromatic plants (like rosemary) from the wild.
- The apple production suffers from low prices and lack of market access
- Land degradation, soil erosion, lack of access to water in agriculture hamper main agricultural activities

Box 4: Opportunities to improve rural youths' livelihoods from the perspective of influencers

- Basic education needs to be provided. Training in agriculture should be provided by the ministry of agriculture extension service (i.e. on vaccination and help livestock giving birth, pruning, use of inputs).
- Selection to attend trainings should be done in an inclusive way. As for the moment, the selection is done through associations' membership and all the young people not belonging to an association are cut out. Representatives of the DPA should visit the douar and villages and raise awareness about the trainings offered.
- Associations and cooperatives need to be strengthened, with more support of youth. Provide space for young people not being part of associations and cooperatives as well.
- Government should offer young people much of the lands owned here and let them expand their agricultural activities. Government should also invest in agricultural infrastructures, such as construction of dams,, drill wells, upgrading irrigation canals, irrigations techniques, input provisions.
- Government should provide an improved forest management and a reorganization of the regulation on collection of wild medicinal plants

“My son tried to benefit from PMV, he was applying a couple of times, but the reasons why he did not get support for young people remain unclear. There seems to be some kind of favoritism, political issues, and corruption. All farmers generally qualify, but you need starting capital, this is why many young farmers cannot benefit. The minimum you need is 12,000 MAD/ha to apply for PMV support, e.g. to invest in drip irrigation, hail nets, etc. Otherwise you do not need to think about applying for PMV support. Plus, there seems to be unknown reasons why support is refused. Small structure and small scale farming seems to be a problem to access PMV support, while in other regions like Agadir, where big farming is dominant, it is easy to get access. Maximum support in Midelt region you can get from INDH is 10,000 EUR, whilst in Agadir it is 400,000 EUR.”

Personal communication with influencer ‘father’ (farmer) from a field work village

Box 5: Aspirations of rural youth from the perspective of influencers

Young rural people desire to:

- Be educated.
- Improve their standard of living.
- Get married and get a family.
- Transform their traditional agricultural livelihoods systems into modern system.

5 Conclusion

In areas where food security was assured, but poverty is widespread, before expressing their aspirations in their rural life and career, youths raised first the issue of lacking primary needs which are not fulfilled yet, i.e. access to education, access to potable water, lack of roads and infrastructure and health care. The perception of poverty among rural youth is based on their awareness of not possessing much, no or very little land, few livestock, not having access to wage labour opportunities because of limited or no education, and the lack of roads to reach urban areas. The situation is even more critical among young nomad herders and generally among young women, for whom, as reported in previous researches on rural youth in Morocco (IFAD 1997), the physical work required in agriculture is seen as demeaning and of low status.

The degradation of natural resources, due to deforestation, soil erosion, and bad water management significantly affects livelihoods of all generations in all three systems (irrigated, rain-fed and pastoral).

Young people in the surveyed area do not want and cannot leave their parents and family (in particular the young women). Youths would also rather prefer to stay in their villages if the conditions were better. They aspire to be educated, have a family, and improve their agricultural activities through owning land, having access to trainings (though many surveyed youth

do not know what skills and competences would be needed), and establishing a more market-oriented production. Resulting from youths' perception of poverty and the lack of education, the use of modern information and communication technology (ICT) is limited to mobile phones; internet use is not very widespread. Consequently, the potential benefits of these tools (e.g. improved marketing of agricultural produce, organizational development, etc.) are missing as well.

The preliminary results of this study support (Ghanem 2015) statement of the need to include agriculture and rural development into inclusive growth policies for Morocco. Besides, the preliminary results underline the need of supporting small family farmers through the additional introduction of ad hoc possible social safety net programs, as well as the development of comprehensive and participatory economic institutions representing the voice of (poor) small-scale farmers. Indeed, the assistance from governmental, non-governmental and international organizations is provided only to members of associations or cooperatives, while at the same time there is a lack of awareness, limited access and mistrusts towards these institutions. This result confirms what is stated by Bouzidi et al. (2015) on the very difficult access of rural youth to governmental support.

The research has so far unearthed several interesting points which were unexpected and require further analysis. The desire for the majority of the youths interviewed to stay within their villages challenges the prevailing narrative whereby it is assumed that youth are eager to migrate from rural areas. The high levels of illiteracy in the research create additional challenges of stepping back a little to focus recommendations for interventions on more basic services, skills and competencies rather than those used in working with higher educated youth. The target group highlighted in this study is truly one with which the drylands CRP should be focusing their energy on. These are the more disadvantaged, but also those with strong ties to their villages who are motivated to work for the improvement of their rural homeland.

The data collected in this study is an important first step in understanding, addressing and working with youth for better rural futures. Youth research and interventions are critical for the creation of strong leaders who are necessary to ensure the sustainability of drylands systems now and for the future.

Since the present report is the result of a preliminary and only partial analysis of some of the collected data, the next stages within the project consist of a full data analysis using qualitative and quantitative tools (to be presented in a final report/paper), and of the preparation of a policy brief (to be completed at the end of May 2016). The final report may include some experiences from testing the developed methodology in a different research site. With regards to the videos that were taken, the project seeks to use them on social media platforms.

According to the final results which will be available over the next months, it will become possible to identify the needs of further analysis of potential entry points (i.e. value chains) which might be explored during additional studies.

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Annex 1: Research questions

RQ 1: What are youths' realities of agricultural livelihoods in dryland systems in the study area?

- a. Perception of reality (do youth consider themselves successful and the reasons behind, how did youth get into agriculture)
- b. Present options for ALS
- c. Financial viability of agriculture as a profession (survey and statistics, secondary data) and perception of the financial reality by youth
- d. Impressions of rural life (are changes observed, past, present, future, ICT implication)
- e. Interest in agriculture
- f. Level of involvement in agriculture (labor, decision making, etc.) and not (leisure time, non-agricultural occupations, vacation, interests such as music, etc.)
- g. Access to resources (land, livestock, financial, knowledge, education, networks such as youth groups and other, survey and secondary data)
- h. Capacity to innovate (questions on indicators such access to networks, see above)
- i. Reason for migration and non-migration (rural youth, ex-rural youth)
- j. Skill gaps (what technical/soft skills are missing to be successful in agriculture)
- k. Skills required (of youth) by farmers and other employers (to be asked both to youth and employers)
- l. Effectiveness of youth programs and initiatives that are in place (key informant interviews and secondary data)
- m. Impact of past and current AR4D interventions from youth perspectives
- n. Drivers of rural youth in drylands

RQ 2: What are the livelihood aspirations of rural youth in agricultural dryland systems in the study area? Do the aspirations they have correspond to the perceived and existing options in their respective ALS?

- a. Future perspectives (rural youth)
- b. Vision of improved livelihoods (how, what it looks like)
- c. Possible selves (in up to five years, and in a long run) – current vs. desired life trajectories
- d. Gap between options and aspirations
- e. Required changes from a rural youth perspective
- f. Required AR4D interventions from a rural youth perspective

RQ 3: What are the challenges and opportunities encountered by rural youth in agricultural dryland systems in the study area according to their perceptions and to those of other stakeholders?

- a. Enabling factors for a rural livelihood – implications to entry points for research
 - Value added in agriculture
 - Impact evaluation of interventions regarding youth in agriculture
- b. Limiting factors (to be distinguished in internal and external factors)

RQ 4: What are the implications of rural youths' aspirations, challenges and opportunities for agricultural research interventions (agricultural research for development) in the study area?

- a. Added value, entry points for future research to address the main issues of gaps between aspirations and options for rural youth in their respective ALS
- b. Relation between aspirations/options and impact of previous interventions regarding youth in agriculture

Annex 2: Guideline for in-depth interviews with rural youth

Interview guideline for in-depth interviews with rural youth in agriculture

Interview details: Interviewer/enumerator: Respondent/interviewee: Phone number: Date: Duration:	Most important agricultural livelihood system (ALS): <input type="checkbox"/> Pastoral <input type="checkbox"/> Rainfed <input type="checkbox"/> Irrigated
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Demographic data

Age:
Gender:
Ethnic group:
Marital status:
Number of children (if any):
Number of persons in household:
Head of household:
Commune:
Village/douar:

Highest level of education completed:

- None (0)
- Primary (1)
- Secondary (2)
- High school (3)
- Academic/university level (4)

Please indicate answers by choosing from the below given choices. Where asked for a number (e.g. in ha), please answer by giving the exact figure. Open and semi-open questions are to be specified (written answers). Instructions (written in italics and bold) are not to be read loudly.

Realities and perceptions of youth

Reality

1. How do you earn your living? *You can tick more than one box, but you need to rank them (e.g. 1 is most important), specifications need to be written in bold*
 - Farm household/family farm
 - Pastoralist (sedentary)
 - Pastoralist (nomadic)
 - Collecting plants from the wild (medicinal and aromatic plants, mushrooms, berries)
 - Employed at someone's farm
 - Agricultural business household (own or family?) – which type (processing, inputs shop)?
 - Employed at someone's agricultural business – which type (processing, inputs shop)?

Other (specify)

2. Do you or your family own the agricultural land you have access to?

a. Land

<p>Yes (specify type of land according to ALS):</p> <p>How much land do you or your family own (in ha)?</p> <p><input type="checkbox"/> Unable to quantify</p> <p>Quality of land:</p> <p><input type="checkbox"/> Very poor</p> <p><input type="checkbox"/> Poor</p> <p><input type="checkbox"/> Average</p> <p><input type="checkbox"/> Good</p> <p><input type="checkbox"/> Very good</p>	<p>No:</p> <p>Why did you get into agriculture?</p> <p>Which are the barriers to get access to land?</p> <p><input type="checkbox"/> Inheritance</p> <p><input type="checkbox"/> No access to collective land</p> <p><input type="checkbox"/> No access to finances for purchasing land</p> <p><input type="checkbox"/> Other (specify):</p>
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b. How do you have access to water?

3. Which percentage of the goods you produce is for sale and which percentage is for subsistence?

For the market (%):	Subsistence (%):
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4. What are the main agricultural goods, both crops/livestock you and your family produce on this land? **Please also include plants which you collect**

For the market:	Subsistence:
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5. How many animals do you own?

Cows:	Sheep:	Goats:	Donkeys/mule:	Poultry:	Other (which?):
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6. Do you process or add value to your agricultural goods produced? How? **Postharvest, e.g. sorting, packaging, labeling, marketing, processing, and drying**

Perception of reality

7. Is working in agriculture or related activities something that you would describe as an interesting profession?

Why? Which advantages?	Why not? Which disadvantages?
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8. Is your activity in agriculture financially viable?

Yes, why?	No, why?
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Impressions of rural life (past, present, future)

9. Compared to 5-10 years ago, how do you consider your and your family's well-being?
This question addresses both the financial and the social/status dimension of prosperity

<input type="checkbox"/> Better	<input type="checkbox"/> Equal	<input type="checkbox"/> Worse
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a. Why and in which sense?

10. What information and communication technology (ICT) (mobile phones, computers, etc.) do you/would you like to use?

In your personal life: Do you use? Would you like to use?	In your agricultural work: Do you use? Would you like to use?
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11. How can value added activities in agriculture improve your community's/region's situation? *If the term 'value added' is not clear, please provide some examples, e.g. cheese production/dairy processing, olive oil production, drying fruit, etc.*

Involvement of youth in agricultural activities

12. Who is making decisions in respect to agricultural or related activities in your household?

13. How are you involved in those decisions?

14. How much time do you spend with agricultural and other activities (hours per week)?

Agricultural work:	Non-agricultural work:	Leisure:	Training:
Type of activities?	Which type?	Which activities?	Which type?
Hours total (per week)?			

Access to finance and social life

15. Do you have access to financial support (parents, relatives, banks, state, and other loan givers)? Which ones?

16. Are you able to put some of your money into savings? How? *E.g. putting it into a bank account, investing it, etc.*

17. In the recent past, have there been any agricultural/natural resource management projects or youth-targeted policies (e.g. *training opportunities, micro credits, support for entrepreneurial activities, changing to organic, use of improved varieties or breeds, irrigation techniques, etc.*) in the community/region?

Past interventions:	Were you part of the intervention? <input type="checkbox"/> Yes, why? <input type="checkbox"/> No, why?	Impact on your livelihood (e.g. <i>increased number of livestock, higher yields, less pesticide use, better access to veterinarian services, etc.</i>):
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18. Are you member of any youth groups/associations/cooperatives or networks (e.g. young farmers associations) in your community/region? Why, why not, which ones? Which role do you have as a member?

Rural-urban migration

19. Did you ever think about moving to another place? Why? Where?

20. How do you think is rural life different from living in a city?

21. Do you know youth (men or women) who returned from living in urban areas back to the community/region? Do the opportunities they get change? How?

Skill gaps/skills required

22. Which know-how do you need to be successful in agriculture (both hard/technical and soft skills)? *E.g. information about the use of fertilizer, pesticides, etc. for hard skills, creativity to improve the marketing of your products through cooling capacities or contacts*

23. Which programs provide you with this knowledge in your area (e.g. *schools, further training, etc.*)? Do you have access to this? Why, or why not?

24. What should be offered? Which activities and interventions of governmental/non-governmental institutions would be needed to support rural youth (in agriculture)?

Innovation

25. Have you tried new practices in your agricultural activities (e.g. *changing to organic, use of improved varieties or breeds, irrigation techniques, adaption to climate change, etc.*)?

Which?	Why?	Impact?
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26. What do you do if you have a surplus of production? How do you plan for the following year (e.g. *diversification, e.g. producing less of one crop and more of another*)?

27. What do you do if you cannot sell your produce?

Aspirations of youth

28. Where would you like to see yourself in 10 years' time? What is your dream?

What is your dream job?	Have you made a plan for this to happen?	Why or why not?
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29. Where do you see yourself (personal and professional life) in 10 years' time realistically?
30. How do you imagine a good life for you and your children? Is agriculture part of it?
31. Who is playing an important role in your life and for the decisions you make? *If it is the father, ask who else beside the father*

Challenges and opportunities encountered by youth
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Challenges	Solution/needs
32. What are the main challenges in your agricultural activities?	33. What would be required to overcome these challenges? <i>Link and itemize to answers given in previous question, e.g. hail nets against hail, cold storage for better marketing if prices are low, etc.</i>

34. Are there young men/women in the community/region who successfully started their own business? If yes, what and how do they do?