Gender and Livelihood Analysis - Implementation Level

Special Initiative: One World No Hunger
Afar Soil Rehabilitation Project

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Acronyms

AfDB	African Development Bank
APDA	Afar Pastoral Development Association
ASRP	Afar Soil Rehabilitation Project
ATVET	Agricultural Technical and Vocational Education and Training
BoPAD	Bureau of Pastoral and Agricultural Development
BoWR	Bureau of Water Resources
BoWYC	Bureau of Women, Youth and Children
BMZ	Federal Ministry of Economic Cooperation and Development (Bundesministerium für Wirtschaftliche Zusammenarbeit und Entwicklung)
CARE	Cooperative for Assistance and Relief Everywhere
CSA	Central Statistics Authority
DA	Development Agent
DPPC	Disaster Prevention and Preparedness Food Security Coordination
EDHS	Ethiopian Demographic and Health Survey
FAO	Food and Agriculture Organization
FGM	Female Gender Mutilation
FTCs	Farmers Training Centres
GC	Gregorian Calendar
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
GPS	Geographical Positioning System
HIV/AIDS	Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome
ICRISAT	International Crops Research Institute for the Semi-Arid Tropics
ICT	Information and Communication Technology
M&E	Monitoring and Evaluation
MoA	Ministry of Agriculture
MoFED	Ministry of Finance and Economic Development
MoWA	Ministry of Women Affairs
NGO	Non-Government Organisation
NRM	Natural Resource Management
PADO	Pastoral and Agricultural Development Office
PCDP	Pastoral Community Development Programme
PSNP	Productive Safety Net Programme
TB	Tuberculosis
TVET	Technical and Vocational Education and Training
UN	United Nations
UNICEF	United Nations Children's Fund
UN-OCHA	United Nations Office for Coordinating Humanitarian Action
USAID	United States Agency for International Development
UNFPA	United Nations Population Fund
USDA	United States Department of Agriculture
VRP	Voluntary Resettlement Program
WASH	Water, Sanitation and Hygiene
WB	World Bank
WFP	World Food Programme
WPLUP	Woreda Participatory Land Use Planning
WSW	Water Spreading Weir

Executive Summary

The Livelihood and Gender Analysis was prepared for the special initiative: *One World No Hunger - Afar Soil Rehabilitation Project* implemented in Afar Region, Ethiopia by the *Deutsche Gesellschaft für Internationale Zusammenarbeit* (GIZ*).* The objective of the study was to provide a description and analysis of gender roles and relations and livelihood strategies in the project area. As the ASRP had recently started when this study was conducted, insights, conclusions and recommendations of the study aimed at assisting the Project Management Team to incorporate a gender strategy into the ASRP as stated in the GIZ Gender Policy.

The study team conducted field work in the following locations of Chifra *woreda*:

(1) An area with soil rehabilitation infrastructure (water spreading weirs - WSW) already constructed – Shaqayi-boro *tabia*, Chifra;
(2) An area with the project designed but not yet constructed – *Mosquit kebele, Chifra.*
(3) An area with erosion problems and need for land rehabilitation but without plans to implement the WSW project – *Sidihadaba tabia, Chifra*

Complementary field visits and interviews were conducted in Assayta *woreda* (a farming *kebele*), Awra (Kalkasa area), and Gariro and Hida *kebeles*.

Quantitative analysis of statistical data information and qualitative methods using open and semi-structured interviews with relevant male and female informants were combined. The field work included mixed and same-sex group discussions, direct and participatory observations. The field visits were conducted during November and December, 2015.

Overview of the study areas

The estimated population of Afar region in the 2007 national census[1] was 1,411,092. In the study area, the total population of Chifra *woreda* by December of 2015 was 109,998 inhabitants[2]. The population of Chifra *woreda* -consistent with regional trends- increased by almost 26% in the last decade. The large majority of population is rural (87%). The environment is extremely degraded. Women are particularly vulnerable as they are in charge of securing water and food for the family. Customary rules and traditions threaten the wellbeing of women at all ages. Female genital mutilation has a prevalence of over 60%. Illiteracy rates reach 59.7% for men and 68.4% for women[3]. While educating children seems to be valued by the families interviewed[4], in practice, for most boys and girls, attending school will hardly open more options for income generation: urban jobs are scarce, and the skills learned at school are not the most relevant for herding livestock (boys) and getting married and caring for the home (girls).

Pastoralism and agro-pastoralism are the dominant livelihood sources in the region. However, these livelihoods depend almost exclusively on unreliable rainfall, severely degraded rangelands and weak markets. Where permanent water sources and farming land are accessible, farming mostly low value crops provides food and some cash income. Opportunities for diversifying incomes are very limited.

[1] The figures of the total population size of Afar in the census of 2007 corresponds to an estimation based on the total counted population found in 8 *kebele*s of Elidar *woreda* in November, 2007 (CSA, 2015).
[2] Data provided by the Office of Finance, Chifra *Woreda*. Personal communication, December 2015.
[3] CSA, 2014.
[4] Fieldwork results from this study.

Employment opportunities are scarce. Wage labour is available through PSNP and other government or cooperation projects, but are sporadic and of short-term. In town as well as in *kebele* centres, a small number of people are employed by the government.

Regional gender equality policies in the field of agriculture and natural resource management

Ethiopia adopted a gender mainstreaming approach across all government structures dealing with natural resource management. A number of government and non-government organisations relevant for the ASRP implementation were interviewed to understand their gender equality approach.

- Bureau of Pastoralism and Agriculture Development (BoPAD), Bureau of Water Resources (BoWR) and Bureau of Women, Youth and Children (BoWYC). The number of female staff in all these government bodies is very low at maximally 5% of the staff. There are very few female technical and extension specialists, compromising an effective gender equality policy.
- The NGOs Save the Children and Afar Pastoralist Development Association (APDA) have comprehensive gender equality and women empowerment policies implemented through specific gender departments.
- Training institutions such as Awra Research Centre, Adadale Polytechnic College and Faculty of Agriculture, Samara University do not have formal gender policies but adopt actions towards facilitating access of women to training activities and job opportunities.

Livelihood systems in the study areas

Findings from the field work indicate that the broad livelihood classifications of pastoralists and agro-pastoralists do not cover all current livelihood characteristics and strategies in Afar. Five livelihood systems were identified in the visited *kebeles*: (a) drop-outs from pastoralism; (b) pastoralists; (c) agro-pastoralists; (d) farmers, and (e) impoverished pastoralists and agro-pastoralists. These livelihood systems are likely to cover most livelihood systems present in rural Afar. However, the areas in which these livelihood groups were observed do not cover all the agro-ecological zones found in Afar region.

Livestock is the most important asset for Afar people in all study areas and livelihood systems observed. Wealth categories appear to have changed in the past decades. The 'rich' category has largely disappeared and the 'medium' and 'poor' categories have now fewer assets. The overall number of animals per household has decreased. Agro-pastoralists and farmers who are able to keep livestock seem to be the most successful livelihood systems.

Gender roles and responsibilities

Major gender roles and responsibilities seem similar in all communities visited. Women and girls performed the bulk of the household domestic work, and an increasing, large share of the productive work. Increasingly, women are found to be the bread-winner. Securing water is by far the most time consuming activity of women. The degree of women's participation in livestock and farming is influenced by age, marital status and life cycle (i.e. pregnancy, breastfeeding). Women are found caring for small ruminants. Men and women share the marketing of livestock; however, this varies according to type of animal, season, and age of the household member. Many pastoralist men have reduced their involvement in production activities due to animal loss, while there are very limited alternative livelihood options to replace what they were doing before. The existing farming activities tend to be mostly performed by men. Few Afar men work as agricultural day labourers in the rather

limited farming areas of the region. When women work in farming, they do it for their households and it is mostly unpaid work.

Men usually perform family and community representation activities, i.e. religious duties, *kebele* meetings and conflict resolution activities. Elder women and female heads of households also participate in consultations or other activities requiring *kebele* female representation. Female participation in public varied in every community. Every community imposes its own rules and regulations. Anecdotal observations suggest that husbands or male relatives may not necessarily share information with their wives or female relatives; this should be considered in the communication strategies of the project.

Analysis of Results

Results and findings were analysed under the perspective of gender access, use and control over critical resources for Afar people: land, water, and livestock. Modalities of access to resources are important as it will help understand how people may benefit from the project:

- Soil and water conservation projects are based on land ownership[5]. Only (agro) pastoralists with rights over land will be able to directly benefit from soil rehabilitation outcomes[6].
- Without long-term land tenure, pastoralists do not have incentives to improve their lands.
- Land tenure is usually concentrated on men. Women in Afar do not have independent rights on pastoral areas, and very limited ownership of farming land.
- Unequal economic and power relations within a community may influence who participates in project activities, thus who gets more benefits from project outcomes. Impoverished pastoralists and agro-pastoralists are usually less able to claim rights.
- Pastoralists that lost all their livestock or access to farming land ('drop-outs') are only able to benefit from income opportunities created by the project as daily labourers.

Clan members use rangelands communally. Interview partners in this study scarcely mentioned using the traditional '*desso*' rangeland management system (based on restricting access to certain pasture areas during defined periods in order to allow vegetation regeneration). Rain-fed farming areas are used individually. Apparently, any *kebele* member can fence an area and start farming, without any permission. Permission from the *kebele* leaders in agreement with clan leaders seems only necessary if there is a conflict of interest over use of the land for pastoralists or a change in the environment. These rules seem to be linked to social relations within the communities, i.e. clan alliances; thus context specific. In the irrigated farming areas (e.g. Mille River) a process of registering land and acquiring land certificates recently started.

Women have disproportionally low access to land and other productive assets. For example, from 150 land owners in the irrigation users' association of Mosquit *kebele*, only 3 are women. Although they are not legally excluded from accessing farming land ownership, they are customarily excluded. Farming land inheritance is still managed according to customary laws that include *Sharia* rules (daughters receive less land than sons).

Access to perennial and seasonal rivers is free for rural residents and livestock except when irrigation schemes are in place. In irrigation schemes, water access is restricted to irrigation water users. In general, *kebele* residents use the same water source for multiple uses, e.g. river water for irrigation and livestock, but also for drinking, cooking and other domestic uses. Water quality is precarious in

[5] Schager and Ostrom (1992)
[6] Meinzen-Dick (2014)

all areas visited. The presence of a water source close to the household is a direct benefit for all household members, particularly women. This project outcome (e.g. Kalkasa) is highly valued by pastoralists.

Most rural women in Afar live under cultural constraints and customary rules that undermine their physical, psychological and intellectual potential. The ability of women to participate in and benefit from the ASRP (i.e. accessing and using the rehabilitated resources; working in the project and/or benefiting from training activities) is greatly dependent on their access to key resources (land, water and livestock), their capacity to use the resources (knowledge) and to effectively participate in decision making about interventions. In practical terms, this may require establishing specific and explicit community agreements, as well as adapted capacity development efforts.

Field study results indicate that the observed current management practices and dynamics of social relations are strongly challenged by the continued population growth, unpredictability of climate change impacts and shifts in the balance of power relations between customary institutions and government. Evidence of this is seen in the severe degradation of the landscape, increase in poverty levels, erosion of household assets[7] and chronic long-term food insecurity. Under these circumstances, resilience of communities becomes limited. At present, alternative livelihood options are very limited. However, there are good opportunities to improve the key assets, rangelands and farmland, and promote a more rational use of water and livestock.

Conclusions and recommendations

Key findings of this livelihood and gender analysis suggest that an approach to promote gender equality should include:

- Addressing systemic constraints of rural women in the ASRP project areas such as lack of secured access to land, financial support, inputs, knowledge, and markets;
- Engaging men as stakeholders and partners in gender equality efforts. This includes community representatives, community facilitators, project team members and government officials that demonstrate genuine interest in gender equality;
- Reinforcing the integration between the technical ('engineering'), the community development and the socio-economic aspects of the project.

Such an approach requires the integration of gender considerations in both institutional and technical activities of the project. This should be reflected at each stage in the project management cycle and across project documents (work plans, performing monitoring plan, etc.).

Recommended actions and implementation approaches are provided at three key aspects:

i. Improvement of critical people's assets: *water, land, livestock, knowledge and social capital*
ii. Opportunities for livelihood diversification
iii. Approach to bring practical knowledge into the system

Details are presented below:

[7] Results from fieldwork for this study indicate that all pastoralists interviewed have lost a large part of their animals in the last one or two decades. Loss of rangeland productivity was also mentioned. For references, see also Schmidt and Pearson (2014, 2016).

Recommendations at the implementation level: ***Opportunities for developing livelihood strategies with a gender equality perspective***

i. Improvement of critical people's assets: water, land, livestock, knowledge and social capital

Priority areas of support	Recommended actions	Implementation approach	Specific potential activities for women
Water availability and water use	• Promote rational water use: - To sustain livestock*: forage production* - For household uses • Use of *in-situ* rainwater management, e.g. micro-basins for shrubs and trees	Incorporation of pertinent awareness activities and technical guidelines into planned watershed trainings	- Seed production of indigenous grasses for own use and for the market
Land and vegetation management	• Technical support for firewood production for own consumption with appropriate species • Technical assistance to produce forage stock • Support or conduct detailed rangeland inventory of species in project areas • Support assisted vegetation restoration; sowing of indigenous grasses • Develop agreements with communities on use of resources and equal sharing of benefits	- Training of community members in the project area as field assistants in rangeland inventory - Encourage women representation and decision making in participatory land use planning: include female heads of household and selected women non-head of households. - Encourage youth representation.	- Development of skills in surveying and inventorying vegetation for supporting the ASRP project areas - Creation of a pool of female field assistants to attend project needs
Livestock	• Establish collaborative agreements with other projects implementing livestock management support. Targeted trainings in livestock management to increase productivity: animal health, reproduction, nutrition	- Both male and female participants - Address local cooperatives and organisations such as saving and credit or animal fattening cooperatives	- Skills to improve livestock production for own animals and/or business unit (in the case of cooperatives)
Knowledge	• Upgrading skills and knowledge of project beneficiaries through a comprehensive capacity development approach. For details, see part iii) *Approach to bring practical knowledge into the system* below.	- Appropriate subject matters and working opportunities after skills are gained - Appropriate logistics and accommodation facilities	- A number of specific training and capacity development activities for women

Social capital	• Provide technical knowledge in relevant project areas (i.e. NRM, farming)**.** *See part (iii)* • Assess land right situation for women in project areas • Include selection criteria for project areas/ interventions that consider gender equity and sustainability • Select and train (local) community mobilisers with skills as community facilitator, but also with knowledge of aspects related to the project, e.g. rangeland /watershed management; agriculture; livestock.	- Integration of the technical aspects of the project with the community development and gender integration approach - Participation of women in WPLUP: include women heads of household *and* selected women non-head of households.	- Local women trained as community mobilisers - Women users of the ASRP areas take part in decisions made by the project; in trainings and in labour opportunities

ii. Opportunities for livelihood diversification

Priority areas of support	Recommended actions	Implementation approach	Specific potential activities for women
• **Firewood (own consumption) and forage stock production**	• Support nursery units for seed and seedling production • Develop agreements with PSNP and other organisations working on NRM to purchase seeds and reforestation species from nurseries supported by ASRP. Ensure that women owned nurseries are supported.	- Integrated support of ICRISAT and Awra Research Centre for selection of lowland, rain-fed forage species, and appropriate selection of techniques for tree and shrub production - Nursery production is usually a successful activity for women. Nurseries can be settled close to their homes and do not require large amounts of land.	- Development of nursery units for production of trees and shrubs to support the project needs and projects implemented by other organisations
• **Pilot integrated watershed - livestock management model**	• Explore collaborative agreements with other projects working in developing animal markets (e.g. Save the Children) for conducting livestock producers' needs assessment	- Technical support for improvement of animal production - Mixed male and female participants - Address local cooperatives and organisations such as saving and credit or animal fattening cooperatives	- Fair prices for livestock sold by women - Linkages of women's cooperatives higher value markets

• **Agriculture**	• Technical support for improving yields of current crops and reduction of post-harvest losses • Technical support in the introduction of improved drought-adapted cereal varieties • Technical training in seed storage and seed banks • Introduction of conservation agriculture practices (low tillage) • Technical support in crop rotation practices • Technical support in production of high value crops in suitable areas: fruit trees; vegetables • Training for improvement of irrigation skills • Support development of market opportunities for high value crops	- Complement with extension services adapted to the specific training needs and learning requirements of the selected groups of project beneficiaries, men and women (section iii) - Care should be given to avoid replacement of crop production of essential household items for crops that are only market oriented (in order to avoid compromising household food security)	- Development of commercial nursery run by women to produce fruit trees; mother stock varieties; vegetable seedlings in land not used for food production for the household
• **Producer associations**	• Training of basic managerial, financial and leadership skills • Explore use of adapted financial tools such as 'mobile money'	- Targeted support to a selected number of local cooperatives or organisations	- Selection of women's associations
• **Non-farm income opportunities**	• Support the creation of *kebele* markets for food and household items with women organisations, farmers and suppliers	- Priority should be given to local women organisations	- Development of small business units for supplying basic food items in *kebeles*

iii. Approach to bring practical knowledge into the system

The technical recommendations provided for improving assets of project beneficiaries and creating livelihood opportunities from the underused potential of the existing assets must be implemented through capacity development activities that are adapted to the local learning needs of project beneficiaries.

This capacity development approach should be based on field days, short courses and vocational training. A suggested priority of topics includes:

Training /capacity development activity	Target population	Implementation approach	Suggested duration	Priority
Short training in rangeland inventory: skills in vegetation surveying and inventory	- Selected women and men from different *kebeles* of the project *woredas*	One trainer, specialist in rangeland ecology. Consider use of the existing plant knowledge of local men and women.	According to project needs	High
Short training in vegetation restoration	- Selected groups of (agro) pastoralists from all project kebeles. - Members of livestock production associations	- Partnership with Awra Research Centre for field activities - Local cooperatives working in indigenous fodder seed production	1 - 2 weeks	High
Training in basic livestock management subjects	- Male and female youth members of project *kebeles*	- Collaborative partnership with local institutions working in this sector. APDA has long experience in these activities.	1 month - short follow ups (2 days) every 6 months	High
Training courses in crop production of interest and market opportunity, e.g.: - vegetable production for market - fruit tree production	- Selected female and male farmers from farming *kebeles* who own land (groups of 10-12 persons). Also, priority should be given to women encouraged by family members to use farmland.	- Part of the training in an experimental field (e.g. Awra Research Centre), and - Part of the practical training using plots owned by community members	1 week in the research centre; 2 weeks at home. Regular follow up during the crop cycle	High
Short field practices in diverse agricultural practices: - improved crop varieties - crop rotation - pest management - preparation for market	- Groups of male and female agro-pastoralists and farmers	- Selected local trainer with good communication skills and good knowledge of the communities (e.g. PADO expert; NGO specialists)	1-2 days/field practice	High
Internship programme for girls from project *kebeles* on topics related to the ASRP activities.	- A selected number of girls from project *kebele*s, graduated from secondary school	- Training in Gewane ATVET - Scholarships covering small allowance, transport and accommodation	1 year	Medium
Training modules related to water supply and irrigation. Suggested topics: -watershed management principles -maintenance of structures - pump and equipment repair - electric/power installations - small scale community project management (e.g. access to inputs; communal savings)	- selected groups of male and female youth members from farming project *kebeles*	- Trainers that mobilise to the communities - Support from Adadale Polytechnic College	Variable	Medium

Important considerations for training women in practical skills include:

Area	Action items	Implementation approach	Direct benefits for women
• Training facilities	• Use of local infrastructure, e.g. *kebele* elementary schools • Flexible training times	- The training methodologies should be adapted to low literacy levels and domestic responsibilities and cultural constraints of participants	- Women can attend training activities that better address their training needs
• Curricula	• Develop training curricula that match local needs and interests • Complement with numeracy and literacy when possible • Complement with subjects that may support improvements in everyday life (e.g. nutrition, hygiene practices; basic finance management)		
• Trainers and extension personnel	• Integrate women trainers and agricultural extension workers and/or 'gender-sensitive' male trainers • Develop training manuals for trainers that include consideration of local literacy levels, language and gender diverse production needs • Develop an internship programme through scholarships to facilitate girls to be trained as DAs	- It may be necessary to upgrade the existing skills of trainers in both technical and gender oriented issues - The instruction for the internship programme could be provided by Gewane ATVET - The internship programme could be developed in collaboration with BoPAD and NGOs working in the area.	- Creation of a pool of female trainers to attend project needs
• Target population	• Support existing (formal and informal) associations • Select and support female pastoralists and farmers not previously involved in trainings	- Support includes: access to market information, basic finance literacy; development of business plans; leadership	- Targeted trainings to selected women in project *kebeles*
	• Train mixed groups of boys and girls in basic animal production knowledge • Train mixed groups in practical skills related to pump and equipment repairing; plumbing; electricity	- Young people may prove to be more amenable to adopt new knowledge and practices. In addition, they have less household tasks and obligations.	- New skills that can support improvement of owned livestock and/or income generation

1. Introduction

1.1. Background of the study

The Afar Soil Rehabilitation Programme (ASRP), one of the two country packages for Ethiopia under the special initiative, 'One World No Hunger' aims at developing sustainable approaches for the inclusive promotion of soil conservation and for the rehabilitation of degraded soils in the Afar region. The programme, in accordance with the current cross-sectoral BMZ Strategy 'Gender Equality in German Development Cooperation' (May 2014), and the GIZ Gender Strategy committed a gender analysis at two levels: gender and livelihood project assessment at the implementation level, and a gender analysis at the programmatic level. The later will be presented in a separate document (Gender Analysis - Programmatic level).

According to the current cross-sectoral BMZ Strategy 'Gender Equality in German Development Cooperation' (May 2014), the results of gender analyses must be plausibly reflected in programme proposals.

Objectives of the livelihood and gender analysis at the implementation level[8]

- Review of the current legislation on gender equality in Ethiopia, with special focus on agriculture, pastoralism and NRM, at the regional level. Identification of relevant institutions related to gender issues in agricultural and NRM, at national, regional and local levels.
- A needs assessment based on interviews with project partners and, where applicable, other relevant stakeholders and/or representatives of the target group: how should gender aspects be taken into consideration by the programme?
- Review and briefly assess gender policies and gender related activities of project partners.
- Provide and inventory of the activities of other donors working in this particular field and of how they take gender aspects into consideration in their work. Identify which of those activities could benefit the ASRP, and how.
- Provide recommendations for programme design, management and monitoring system implementation to integrate gender in an effective manner and according to the GIZ standards and policies.
- Review the current livelihood systems identified in the selected programme areas through a gender perspective.
- Review and identify potential income generating activities that promote gender equality.
- Provide recommendations and management options for the programme (implementation level) on how to go beyond income generating activities and engage in gender sensitive value chain development.

Study locations

At the time of conducting the study, a number of complementary studies were in process or recently completed, including:

- Characterisation of project sites: Initial site profiles[9]

[8] According to Terms of References

- Stakeholder assessment[10]
- Baseline study on areas with projected water spreading weirs (WSW)[11]

In order to avoid duplications, it was decided to conduct this study in only two projects areas, in Chifra *woreda*, Zone 1 to obtain a detailed assessment of two situations:

(1) an area with soil rehabilitation infrastructure (WSW) already constructed – *Shaqayi-boro tabia, Chifra*;
(2) an area with the project designed but not yet constructed – *Mosquit kebele, Chifra*.

During the field work, the study team found of interest to also include a third situation:

(3) an area with erosion problems and need for land rehabilitation but without plans to implement the WSW project – *Sidihadaba tabia, Chifra*

Complementary field visits and interviews were conducted in Assayta *woreda* (a farming *kebele*), Awra (Kalkasa area), and Gariro and Hida *kebeles*.

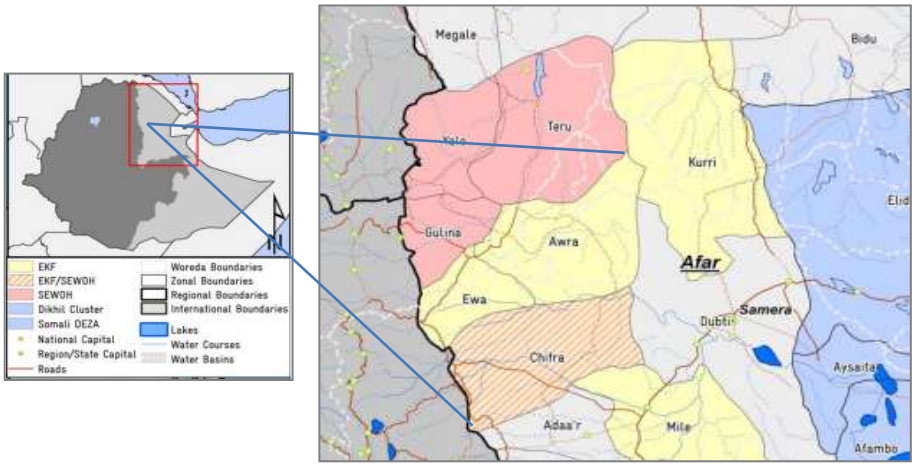


FIGURE 1 MAP OF AFAR REGION SHOWING *WOREDAS* VISITED DURING FIELD WORK. SOURCE: GIZ, 2016

1.2. Methodology

The scope of work mandated the use of both livelihood and gender analysis tools to collect data and analyse the livelihood systems and gender related issues in selected areas where the ASRP is being implemented.

The methodology used included a quantitative analysis based on secondary information, and qualitative methods using open and semi-structured interviews with relevant male and female informants. Key stakeholders at different levels were interviewed. Mixed and same-sex group interviews were conducted at community levels. Information from focus groups was cross-checked by in-depth individual household

[9] Data provided by M&E expert in GIZ Samara office
[10] Yoseph, B. & Winterscheid, K. (2014). Stakeholders Involved in Project Implementation Processes in Afar Region. GIZ.
[11] Informal conversations with the baseline study team

interviews, discussions with key informants and direct observations. The study team accompanied the technical team in the field in various occasions, what allowed also the use of participatory observations.

Data collection

During November and December, 2015, the study team performed the following activities:

Desk study/literature review	*Nov 6 to 17*
Study assessment in Addis	*Nov 18, 19 and 30; Dec 1, 7, 8 and 21*
1st field trip: *Samara – Chifra*	*Nov 19 to 29*
2nd field trip: *Samara – Chifra-Assayta – Awra*	*Dec 8 to 20*

During the field work, 29 interviews were conducted with key informants and stakeholders at regional and local levels, and 23 individual and group interviews were conducted in rural communities (detailed list of informants is presented in Annex 1). In addition, a number of formal and informal interviews with ASRP project staff members were conducted.

Study team and responsibilities

- Team leader (Laura Imburgia, International Consultant): study design and planning; literature review; field data collection and analysis; preparation and presentation of results; development of written report.
- Field study assistant (Mohammed Detona, National Consultant): translation and facilitation of document and data collection in selected regional offices in Samara.
- Field work assistant in Chifra (Essie Bokka Ahmed): support in translation and organisation of meetings with *kebele* leaders and stakeholders in Chifra.

1.3. Considerations and limitations of the assessment

The fieldwork employed a qualitative study approach. The quality of the information collected largely depends on the translation of the interviews. During the initial days of fieldwork in Afar region, the translation was not satisfactory and it was necessary to change the translator. Ideally, a gender study benefits from having a translation team with at least on female translator. However, finding a female translator with acceptable translation skills was a challenge. For the continuation of the study, a male Afar (non local) study assistant accompanied the consultant, supporting in translation and coordination of meetings. In addition, a local extension expert from Chifra supported most the field work in the area of Chifra. This assistance resulted essential to quickly gain trust of the communities and also to gather reliable data.

The study was conducted in the dry season during a serious drought caused by El Niño. This may have conditioned and shaped some of the responses. This was taken into account for the data analysis in an attempt to avoid generalisations of conditions that may differ under normal weather conditions.

1.4. Conceptual considerations

Land and water rights are interconnected, and access to land tends to be the primary determinant of water access rights for men and women. Many groups of women are disproportionately deprived of land rights.[12] Land rights tend to be concentrated on men. For this reason, watershed projects, mostly based on land tenure (individual or communal), are frequently 'male-focused'. Consequently, NRM governance structures usually remain a male domain.

Even though gender relations vary greatly in time, location and culture, unequal power relations between men and women are recognised to result in generalised asymmetries, mostly to the detriment of many women.

2. Overview of the study areas

2.1. Physical characterisation of the study areas: Chifra *woreda*

Chifra *woreda* is located in Zone 1, 160 km from Samara, the Afar regional capital. Chifra borders Dubti in the east, Worebabo in the west, Ewa and Awra *woredas* in the north and Mille and Bati *woredas* in the south. It comprises of 18 rural *kebeles* and 1 urban centre.

Main physical features

- **Total area** of Chifra *woreda*: 1,519 km^2
- **Climate**: arid to semi-arid, with average temperature of 28 ºC to 40 ºC.
- **Rainfall**: annual rainfall is 250 - 400 mm[13], distributed in the following rainy seasons: *'Karma'* (long rainy season) from mid-July to end of September - beginning of October; *'Sugum'* (short rainy season) from March to end of April (Figure 2). A very short rainy season called *'Dadaa*', occurring in December or January, is usually mentioned. However, this is highly erratic.
- **Altitude**: 900 masl
- **Topography**: undulating landscape traversed by numerous seasonal and a few permanent rivers; extensive low flat lands and depressions.
- **Hydrology**: Zone 1 is located within the Awash drainage system, fed by streams draining from the south-eastern highlands of the Amhara region. There are a number of permanent rivers and streams including Logiya, Mille, Telalek, Borkena, Moferwuha, Ataye, Jara, Robi and Awadi[14].

[12] Meinzen-Dick, R., Kovarik, C. & Quisumbing, A. R. (2014).
[13] Save the Children (2008). Livelihoods and Vulnerability.
[14] *Ibid*

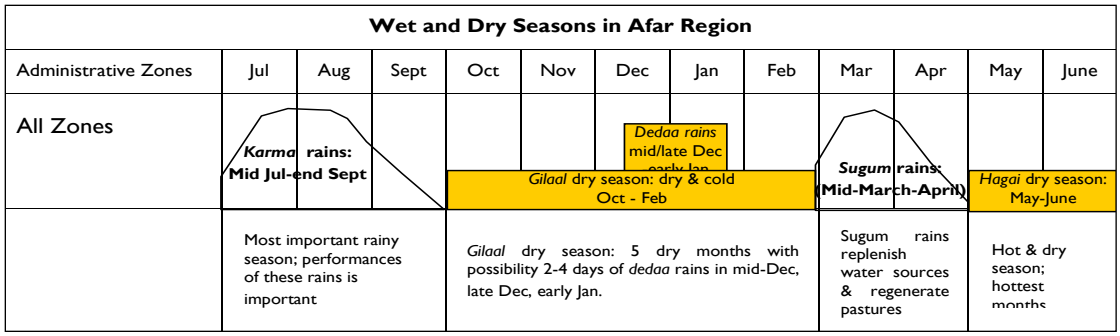


FIGURE 2: BIMODAL RAIN PRECIPITATION PATTERN IN AFAR REGION. SOURCE: LIVELIHOOD ANALYSIS, SAVE THE CHILDREN (2008)

Livelihoods

The study area corresponds to the agroecological zone 'hot to warm arid lowland plains'[15] and has been classified as part of the *Araamis ke Adaar* Pastoral livelihood zone (LZ6)[16]. The area is predominantly pastoralist with limited, mostly rain-fed agriculture. The terrain has browse-rich areas suitable for camels and goats, and plains dominated by shrubs and herbaceous vegetation. Bush encroachment is important. *Acacia nubica* and *Parthenium hysterophorus* are major invasive species. Rain-fed agriculture is limited and affected by the unreliable rainfall regime. Irrigation agriculture is practiced along the river basins. Flash floods are reported affecting crop production near riverbeds.

The most important livestock species present in the region are cattle, goats, sheep and camel. Although the average number of animals per household is reported to have decreased (see section 4.3), the overall number of animals in the region has significantly increased (Table 1).

TABLE 1: LIVESTOCK POPULATION IN AFAR REGION (ZONES 1 AND 3)

Afar	Cattle	Sheep	Goats	Horses	Mules	Donkeys	Camels	Poultry	Beehives
2004/05	327,373	196,385	483,779	--	195	12,269	99,833	38,315	8,104
2007/08	401,167	353,418	599,828	--	--	32,897	142,357	53,857	--
2012/13	1,190,166	916,353	1,935,611	95	1,796	65,284	270,402	42,951	457

Sources: CSA (2005); CSA (2008); CSA (2013)

Afar region is characterized by a short growing season (60-120 days), constraining farmers to grow only short cycle crop varieties.

2.2. Socio–economic characterisation

2.2.1. Demography and gender gap

The estimated population of Afar region in the 2007 national census[17] was 1,411,092. The projected population for July, 2014 was 1,678,000, of which 55% were male and 45% were female. From the total

[15] CSA. *Atlas of the Ethiopian Rural Economy*. 2006
[16] Save the Children (2008). Livelihoods and Vulnerability.
[17] The figures of the total population size of Afar in the census of 2007 corresponds to an estimation based on the total counted population found in 8 *kebele*s of Elidar *woreda* in November, 2007 (CSA, 2015).

population, 83% correspond to rural residents. Between 2004 and 2014, the total population of Afar increased by 26.2 %.

In the study area, the total population of Chifra *woreda* by December of 2015 was 109,998 inhabitants[18], of which 87% correspond to rural population. The gender distribution of population in Chifra follows the regional trend, with 56% male and 44% female. According to official population data from CSA (2014) the population of Chifra grew by 25.8% in the last decade. There are 19,297 households in Chifra *woreda*, with an average calculated household size of 5.7 persons. Annex 2 presents a list with demographic information of Chifra *woreda* obtained from the Office of Finance, in Chifra town.

The gender gap observed in Afar Region may be explained by:

- Problematic census sampling due to difficulties to estimate mobile pastoralist population.[19]
- Difficulties to inquire rural communities, in particular Muslim groups about family size and female family members.
- Poor health conditions of women due to female genital mutilation (FGM), very limited medical attendance at birth, work overload, tougher physical and psychological living conditions.

2.2.2. Regional economy: pastoral and agricultural sector

Rural population in Afar region is dependent on livestock as by far most important livelihood source. The major livelihood systems described for Afar are pastoralism and agro-pastoralism, with 90% of the rural population of the region practicing pastoralism as the sole livelihood strategy. The remaining 10% of the population live from rain-fed or irrigated agriculture. In areas where a perennial water source is present, agriculture has the potential to support livelihoods. Permanent irrigation is only practiced in riverine areas.

Grazing land is usually used communally, with livestock migration patterns that may require accessing areas outside the land controlled by the clan[20]. Farming land is used mostly individually, and supposedly obtained by approval of *kebele* representatives and the clan leader[21]. There are cases of land rented by clans to investors or state farms (e.g. Tendaho Sugarcane Plantation Company), restricting grazing access for pastoralists.

The main rain-fed crops reported for Afar are maize, sorghum, teff, barley, wheat, millet, pulse, cotton, and oil crops[22]. Predominant rain-fed crops observed during the field work for this study were maize and, in a lesser extent, sorghum. Very small areas were reported as being cultivated with teff and sesame[23]. In irrigated areas of Chifra, the most frequent crop was maize. Some farmers were planting vegetables (tomato, onion, hot pepper). One larger farm had fruit trees (mango, papaya, guava, banana, and citrus).

[18] Data provided by the Office of Finance, Chifra *Woreda*. Personal communication, December 2015.
[19] In fact, the available data for Afar region of the 2007 National Census correspond to a sample from one *woreda*.
[20] Save the Children (2008). Livelihoods and Vulnerability.
[21] *Ibid*
[22] *Ibid*
[23] Source: Initial site profile obtained from M&E team, GIZ Samara office, November, 2015.

Other irrigation areas visited (Assayta, Hida kebele) had more diversification of crops, in particular fruit trees.

Employment opportunities are limited in the study areas, and mostly concentrated in towns. Sporadic daily labour opportunities are offered as 'cash for work'by government programmes or cooperation projects. Field observations indicated availability of some daily labour opportunities in farming and limited petty trade activities in urban centres. Anecdotal evidence indicated that most of these income opportunities are usually taken over by migrants -'highlanders'- from other regions of the country, namely Tigray, Oromya and Amhara regions.

In recent years, expansion of irrigated land is a federal government priority for several parts of the country, which includes the Tendaho sugar cane production in Afar Region. This state-owned agro-industry seems to produce mixed results in terms of employment and benefits for the region (see section 2.2.4). The sugar cane company is perceived as a threat for the local society in several ways, for example, because of acquiring rangelands from clans that are converted into sugar cane plantations. Other opinions indicate that the company utilises non-restricted large amounts of ground water.

Although there is an ongoing distribution of food and fodder aid in the region, none of the grains, pulse or fodder distributed is produced in Afar. According to an interview with the Disaster and Risk Prevention Office[24], most of the products come from Nazret and Kombolcha. APDA and Save the Children are the major NGOs supporting food distribution in the study areas.

2.2.3. Poverty and human development indicators

Ethiopia is one of the countries suffering humanitarian crisis[25], exacerbated this year by the El Niño event. It is estimated that the drought of 2015-2016 will increase the number of people in need of food aid from over 10 million in January 2016 to 18 million by the end of 2016[26]. Afar region is included in the most affected areas of Ethiopia in terms of food and water shortages. Increase in child malnutrition is also reported[27].

Afar Region has the lowest poverty and human development indicators in the country. For the interest of this study, selected indicators are:

- **Human development index:** While the Human Development Index (HDI)[28][29] for Ethiopia for 2012/2013 was 0.461, for Afar Region the figure was 0.361, the lowest below the national average, followed by Somali Region (0.419), Amhara (0.455) and Oromia (0.458)[30].

[24] November, 2015
[25] ACAPS (2016). **http://geo.acaps.org/**. Last entrance 05.03.16
[26] *Ibid*
[27] *Ibid*
[28] This indicator is calculated on the base of national government data and standard HDI methodology, which includes long-term progress in three dimensions: 'a long and healthy life, access to knowledge, and a decent standard of living'. For details on calculations, see UNDP, 2015.
[29] CSA and ICF International Calverton (2011). Ethiopia Demographic and Health Survey 2011 *In:* Central Statistical Agency (ed.). Addis Ababa, Ethiopia and Maryland, US
[30] UNDP (2015). NATIONAL HUMAN DEVELOPMENT REPORT 2014 - Accelerating Inclusive Growth for Sustainable Human Development in Ethiopia. *In:* UNDP (ed.). Addis Ababa.

According to the Ethiopian Demographic and Health (EDH) Survey of 2011, 57% of the population of Afar Region was in the lowest wealth quintile and 21.7% in the highest wealth quintile[31]. An updated survey conducted in 2014 indicates an increase in poverty, with 59.8% of the population of Afar concentrated in the lowest wealth quintile and 16.1% in the highest[32]. This level of poverty concentration is the highest in the country. In practical terms, findings of the study indicate a move from better-off pastoralists to medium and poor categories (see section 4.3).

- **Life expectancy** in Afar is 59.5 years, similar to the national average[33].
- **Poverty** incidence in Afar is 36.1%, the highest in the country, followed by Somali Region (32.8%) and Gambella (32%)[34].
- **PSNP:** According to the last EDH survey of 2014, 65.6% of the households in Afar participate in the Productive Safety Net Programme (PSNP)[35].
- **Food aid:** The number of beneficiaries of food aid in Chifra in 2014 was 182,381, thus 11% of the population[36]. Data from September 2015 indicate that 592,082 people received food assistance, accounting for 35.3% of the population of the region[37]. The food request for December 2015 totalled 774,464 beneficiaries, thus 46% of the population. All 32 woredas of the region receive food aid, with concentration on Zones 1 and 2.
- **School enrolment** rates in Afar region present the highest gap in comparison with national average. For example, according to the National Human Development Report published by UNDP in 2015[38], the net primary school enrolment rate is 85.7% for the national average and 31.7% for Afar. In terms of parity of boys and girls attending school, this UNDP study states that Afar region has reached the gender parity goal set by the Government, which might correspond to strong affirmative measures such as families receiving incentives for girls not missing school[39]. Anecdotal observations from this study indicate that boys may be frequently missing school days in order to meet household responsibilities, such as herding animals. This observation corresponds to secondary data analysed for this study (see section 2.2.6) and results from informal interviews with primary school teachers in rural areas of Chifra[40]. It is also important to note that during the current drought a large number of children might be missing out school in order to support families fetching water by taking care of younger siblings so mothers can fulfil this duty, or taking livestock to where water is available.
- The *absuma* tradition, which imposes girls and boys to marry a pre-defined relative (usually the eldest first cousin of the girl) is believed to have a social security function, in the sense of ensuring that all girls will be able to marry and have economical security. Findings from the field indicate that this tradition frequently imposes severe stress and trauma upon the youth.[41] Moreover, it creates conflicts within and between the families, which may involve clan leaders' negotiations. Anecdotal stories

[31] CSA and ICF International Calverton (2011). Ethiopia Demographic and Health Survey 2011 *In:* Central Statistical Agency (ed.). Addis Ababa, Ethiopia and Maryland, US
[32] CSA (2014). Ethiopia Mini Demographic and Health Survey 2014. *In:* Central Statistical Agency (ed.). Addis Ababa.
[33] *Ibid*
[34] UNDP (2015). NATIONAL HUMAN DEVELOPMENT REPORT 2014 - Accelerating Inclusive Growth for Sustainable Human Development in Ethiopia. *In:* UNDP (ed.). Addis Ababa.
[35] CSA (2014)
[36] *Ibid*
[37] Disaster Prevention and Food Security Coordination Office. Personal communication, December 2015.
[38] UNDP, 2015
[39] It was observed in the field that girls were receiving a 5-liter oil can every two months for not skipping school days during this period. Personal communication, Gariro, 17.12.15.
[40] Interviews to primary school teachers of Yarra *kebele*, 11.12.15 and school director and a teacher in Gariro *kebele*, 15.12.15.
[41] Anecdotal evidence from field interviews.

about problems related to this tradition are abundant. Among other issues, *absuma* is a cause of early marriage, exit from education and emotional distress, with a disproportionate impact on young women.

2.2.4. Employment

In most areas visited, employment opportunities appear very limited. By far, agriculture (including pastoralism) is the most important occupation for men in Afar.

Box 1: Employment and gender differences in Afar

According the 2011 EDH Survey[1], most women (76.6%) considered themselves as not having an income earning occupation during the preceding 12 months. From the occupied women, only less than a quarter declared work in agriculture. However, field data for this study indicate that women perform many duties in livestock production and some in farming. The survey indicates that women with no or little education are involved in agriculture. Women with secondary or higher education tend to be employed in sales and services and professional or technical jobs.

[1]CSA and ICF International Calverton, 2011

Employment data from the 2011 EDH Survey[42] indicate that in Afar, 66.8% of men (between 15-49 years old) were employed (thus having done some work in the previous 7 days) in 2011, while 8.4% of men were not employed in the 12 months preceding the survey. 24.8% were not employed at the time of the survey, but had a job in the 12 months preceding the survey. In terms of women, 76.6% indicated that they have not been employed in the 12 months preceding the survey; 4.4% were currently unemployed (but had a job in the 12 months preceding the survey) and only 19% were employed at the time of the survey.

In terms of occupation, the EDH survey indicated that from the women that considered themselves occupied 44.7% were in sales and services, 22.6% in agriculture, 16.3% in skilled manual jobs, and 8.2% in technical or professional jobs. Conversely, more than half of the men declared occupied (57.9%) indicated being occupied in agriculture, followed by 16.6% in sales and services, 11.4% having professional or technical jobs, and 8.3% performing skilled jobs.

The Tendaho Sugar factory plans to provide a high amount of job opportunities. At present Afar people only occupy positions as guards and cleaners, earning the minimum wage[43]. According to key informants[44], skilled employment opportunities are not being used by Afar people due to low education level. On the other hand, when the company will enter into full production, many employment and income opportunities could be realised. For example, there could be opportunities for the creation of small-scale enterprises to provide a range of services to the company and to its employees.

2.2.5. Health

The most common health problems leading to medical care and death in Afar include malaria, all types of TB, maternal health-related complications, diarrhea and malnutrition. Prevalence of preventable illnesses and nutritional deficiencies is very high.

[42] CSA and ICF International Calverton (2011)
[43] Anecdotal information indicated that in Assyta, a guard earns about 400 – 500 birr/month.
[44] Interview to Hussein Ahmed, Dean and Tafari Ayyaalow, Vice Dean of the Adadale Polytechnic College, Assayta, 09.12.15

Most of the health and nutrition indicators in Afar Region are the lowest in the country (see Box 2).

Box 2: Selected health and nutrition indicators in Afar Region

- Mortality rate of children under five is 127/1000 live births
- 47.3% of children between 12-23 months did not receive vaccination at all; 8.6% received all vaccinations recommended by the World Health Organisation.
- 9.9% of births are delivered in health facilities; 90.1% of births are delivered at home
- 89.9% do not receive post-natal check-up
- 65.4% do not receive ante-natal care; 20.2% receive ante-natal care by doctor or nurse/midwife
- 74.3% of children (6-59 months) had some kind of anaemia (mild, moderate of severe) with 7% having severe and 46.1% having moderate anaemia (the highest values in the country)
- 34.3% of women had some kind of anaemia, with prevalence of mild anaemia
- 15% of men had some kind of anaemia

Source: (CSA and ICF International Calverton, 2011; CSA, 2014)

HIV/AIDS

According to the Ethiopia 2012 Report on HIV[45], there was a prevalence of HIV of 1.8% of the adult Afar population in 2011 (1.2% males and 2.3% females). Projections from the study[46] indicate a reduction in these percentages to 1.4% in HIV prevalence total adult population in Afar for 2015 and 1.3% for 2016. Reliable information about HIV/AIDS incidence is difficult to obtain due to the low coverage of health services in the region. Due to cultural behaviour influenced by the Muslim religion, transmission most frequently occurs through men exposed outside home mainly in heterosexual intercourse. Risk of exposure to the disease are higher in trade areas, in roadside towns and areas of concentration of mobile men temporarily residing in town (truckers, drivers, migrant workers, soldiers), where commercial sex is present alongside growth in economic activity. It is also reported that use of unclean cutting knives for birth delivery and FGM practices may be minor sources of transmission.[47]

FGM

Female genital mutilation (FGM) is still recognised as one of the central problems that Afar women face with a prevalence of more than 60% (Box 3). FGM is still strongly rooted in the traditions of the region. In Afar, the most commonly FGM practiced is infibulation[48], which is the most drastic form of genital mutilation. Girls suffer severe pain, trauma and health complications. The difficulties to eradicate the practice include that FGM is linked to religious beliefs and traditions; girls and women accept it as a necessary practice supporting its continuity. Talking about this practice is still a 'taboo' as it was experienced during this study.

Box 3: Incidence of FGM in Afar Region

Due to the nature of the problem, reliable data of FGM prevalence rates are very difficult to obtain. According to the 2011 Welfare Monitoring Survey, the prevalence of FGM practiced at national level was 23%, while the prevalence in Afar was 60%. This accounted for the highest rate only followed by Somali Region. Information provided by the gender focal person at BoWYC (Samara, 18.12.15) indicated that this figure was 87.4% in 2007/8.

[45] Ethiopian Health and Nutrition Research Institute (2012). Ministry of Health - Ethiopia.
[46] *Ibid*
[47] APDA, http://www.apdaethiopia.org/HIVAIDS.html. Last entrance, 10.03.15
[48] Infibulation is a practice that involves "removing the clitoris, labia minora and labia majora, followed by sealing the wound" (UNFPA-UNICEF, 2015). Urine and menstruation can be discharged through a small hole that remains (*Ibid*).

Approach of Afar Region to eradicate FGM

In addition to the national legislation regarding criminalisation of FGM practices, the region has defined a 'model' programme in close collaboration with religious leaders, government offices, police and NGOs. This programme has its roots in 2000, when regional religious leaders started an awareness campaign advocating for the abandonment of FGM; in 2006, the Afar Government subscribed to the position of the Penal Code of Ethiopia, which considers FGM as a crime. The programme has a strong awareness component starting in primary school in grades 5 to 10. The region has also established a so called 'FGM protection day', which is celebrated every year under the auspice of diverse organisations. UNICEF allocates a special budget for this initiative. Punishment for FGM practices includes 3 months to 7 years of prison. There is also an initial punishment of 500 birr for participating (hosting the practice) or for being witness (relatives or neighbours). The problem has been significantly reduced in urban areas, although it remains of important concern in rural areas. In 2013, the region declared that 7 *woredas* had abandoned FGM (which in practice might be difficult to confirm).

2.2.6. Education

According to several informants, lack of education is probably the most problematic issue for the Afar society. The overwhelming majority of Afar population has little or no education, with women being even less educated than men (Box 4). One qualified informant said: '*The main problem for Afar is not water...it is education! Afar is good in natural resources.*'[49]

While field observations for this study indicated that all *kebeles* have a primary school, the research team also observed serious deficiencies and challenges. Interviews with primary level school teachers indicated that infrastructure and teaching materials are usually deficient, hindering the education process of students[50]. In *kebeles* with acute water scarcity, lack of water in the schools prevents students from receiving regular instruction. As confirmed by teachers, boys often skip school days due to animal herding responsibilities at home. If boys can share animal responsibilities with their brothers or relatives, the usual school attendance for boys is every other day.

Box 4: Gender gap in education in Afar Region

According to the 'mini' 2014 EDHS[1], the proportion of population over six years old with no education is the highest of the country, with a prevalent gender gap at all levels:

- 59.7% of males and 68.4% of the female population age six and over have no education;
- While the EDHS of 2011 indicated that 35% of male population age six and over had received some primary education, this figure drops to 30.9% in the survey update of 2014[1]. Similarly, in 2011, 3.4% of males completed primary school but only 1.9% did it in 2014. Regarding females, 1.6% completed primary school in 2011 and 1.3% in 2014;
- While 4.8% of male attended some secondary school (0.8% completing secondary school), only 2.8% of women did some secondary school level (only 0.4% completing secondary studies).

[1] CSA and ICF International Calverton (2011)
[2] CSA (2014)

Observations for this study also indicate that boys and girls are sent to school when the elementary school is close to their homes. If families have to send children for continuing their education in town, most

[49] Key informant, Assayta, 09.12.15
[50] Interviews to primary school teachers of Yarra *kebele*, 11.12.15 and school director and a teacher in Gariro *kebele*, 15.12.15.

families interviewed indicated that this option was not affordable as it implied renting an accommodation for their sons and daughters as well as food expenses. Most interviewees said that they would like to educate their children. However, it was observed that for most rural boys and girls, attending school does not lead to more income opportunities in future, if the most probable activity for boys will be continuing their pastoral life and for girls to get married and stay at home.

As in other pastoralist areas of the country, access of pastoralist children to school is also limited due to migration.

2.2.7. Communications

Mobile phone coverage is reported to be present in most of the region. Mobile phones are commonplace in all pastoral and agro-pastoral communities visited. In most cases, it has complemented and even replaced the traditional *'dago'*[51] communication system between pastoralists.

Exposure to mass media (newspaper, television and radio) is very low in the region. 62.7% of males and 74.7% of females do not access mass media at least once per week[52].

Conclusions of this section

Afar region has the lowest values in human development indicators of Ethiopia. This means that a very large proportion of the population including the ASRP target population lives in poverty or in extreme poverty. People struggle to cover their basic needs. Most Afar people live in extremely degraded environments. Women tend to be particularly vulnerable as they are in charge of securing water and food for the family. Additionally, a significant number of development projects have been implemented, but discontinued. Under these conditions, which are currently worsened by a severe drought, the resilience of communities is suffering. Against this background, obtaining the trust of the population to engage and genuinely support new initiatives is becoming a problem. Nevertheless, people continue to collaborate, hoping that things will be different in the future and their efforts will be worthwhile.

[51] Afar practice of oral communication and information exchange

[52] CSA (2012). Ethiopian Welfare Monitoring Survey 2011. *In:* Central Statistical Agency, UNDP & Statistics Finland (eds.). Addis Ababa.

3. Overview of regional gender equality policies in the fields of agriculture and natural resource management

A previous gender analysis conducted for the SDR-ASAL in 2014[53] elaborates on the most relevant gender policies in Ethiopia. Accordingly, due to the scope of this study, this section will provide a brief summary of the relevant gender legislation in the country and will focus on salient institutions and gender policies and approaches directly linked to NRM and agriculture within the institutions that directly or indirectly are linked to the ASRP.

3.1. Relevant gender legislation and institutions in Ethiopia[54]

Among the most relevant policies framing the institutionalisation of the work on gender equality in Ethiopia, the following milestones are highlighted:

- *1993.* The National Policy on Women ("the Women's Policy"). This policy institutionalised the 'political, economical, and social rights of women' through the creation of specific structures at government office level in order to incorporate gender-sensitive policies across development actions in Ethiopia.
- *1994.* The promulgation of the new constitution guarantees equality of all citizens before the law with prohibition of any discrimination based on gender. The constitution also states principles of equality of access to economic opportunities, including the right to equality in employment and land ownership.
- *1995.* Signature of the Beijing declarations and Plan of Action (Fourth World Women Conference).
- *2006*. National Action Plan on Gender and Development (2006-2010)
- Development Plan for Women and Children (2011-2028) includes commitments on women's participation in politics and decision making; promotion of women's economic empowerment and reducing violence against women.

As result of these policy precedents, the Federal Government of Ethiopia established *gender mainstreaming* guidelines as the backbone gender approach within all government plans and programmes of development.

3.2. Government institutions related to women and gender issues in Ethiopia

Institutions directly related to women affairs and gender issues are highlighted here:

- *National level:*
    - Women's Affairs Office (WAO) of the Prime Minister's Office:
        - coordination and monitoring of women's affairs activities at national level
        - ensure policy implementation
        - forum for government and non-government organisations at national level
        - implementation of studies on women issues, and

[53] See Gender Analysis: Capacity Development for Strengthening Drought Resilience of the Pastoral and Agro-Pastoral Population in the Lowlands of Ethiopia (SDR-ASAL), by Alemarye, H. and Kochius, R., 2014.
[54] UNFPA-UNWomen (2012). Ethiopia Joint Programme On Gender Equality And Women's Empowerment: Phase II. Addis Ababa.

        - devise of strategies to address women's problems
    - Women's Affairs Departments in strategic ministries:
        - Address women's issues at the sector level
        - Report to respective ministries and WAO
- *Regional level:*
    - Women's Affairs Bureaus (currently: Bureau of Women, Youth and Children)
        - Accountable to the respective Regional Government
        - These Bureaus have lately incorporated support to youth and children protection
        - Centre of regional coordination of women's issues and gender activities as well as the implementation of the gender mainstreaming national policy
        - Chair of coordinating meetings with other Bureaus
        - Conduction of extensive gender awareness initiatives related to gender equality and women's rights, e.g. seminars, campaigns, mass media presence
        - Assistance to organised women in associations and cooperatives
        - Secure funds to assist rural landless and urban poor women
        - Conduct surveys and other studies related to women's problems
        - Establishment of regional women federations
        - Major channel to humanitarian support from UNICEF and other donors working in issues related to women, health, and economic empowerment
    - Gender department in selected Bureaus
    - Gender focal point in most of government offices
- *Local level:*
    - *Woreda*: replication of regional level (not in all cases)
    - *Kebele*: few *kebele*s have a gender focal point

3.3. Relevant government stakeholders interviewed related to (agro) pastoral livelihoods and gender in the project areas

As well as in all other development sectors, Ethiopia adopted the 'gender mainstreaming' approach across all government structures dealing with natural resource management, agriculture and development.

At the federal level, the Ministry of Agriculture hosts the Women, Youth and Children Directorate, which is in charge of facilitating and monitoring the implementation of the gender mainstreaming guidelines across all units within the ministry and affiliated institutions.

At the regional level, the relevant Bureaus interviewed in relation to the ASRP and to this study are:

- Bureau of Women, Youth and Children (BoWYC)
- Bureau of Pastoralism and Agriculture Development (BoPAD)
- Bureau of Water Resources (BoWR)

Field observations indicated a weak representation of BoWYC and BoWR at the *woreda* level and almost none at *kebele* level, with reported limited capacity (personnel and skills) at community levels to implement policies.

Bureau of Women, Youth and Children[55]

This Bureau has the mandate to support the implementation of the federal gender mainstreaming policy as well as a number of specific activities to support gender equality, namely:

- Provision of training on gender issues to other regional Bureaus.
- Awareness and other support actions towards abandonment of female genital mutilation (FGM) practices.
- Economic 'empowerment' of women through management of funds from diverse donors to implement women activities. E.g.: facilitation of start-up capital for women's business initiatives; support to create credit cooperatives at the *woreda* level.
- When a programme (donor) provides financial support to start women activities, the Bureau has the mandate to provide technical assistance. However, their capacities and scale of intervention seem to be limited. Trainings are usually provided by the Small Scale Enterprise Programme.
- Awareness creation in nutrition sufficiency and reproductive health in pastoral women in collaboration with the Health Bureau. Trainers from the Regional Office go to *woredas* and *kebeles* and provide 3- days awareness trainings.

The technical activities are organised in the following core processes:

- Child rights and child protection (6 experts, 1 female secretary)
- Gender Mainstreaming (4 male and 3 female experts)
- Women participation, development and youth assistance (ex Women Empowerment core process) (1 male and 4 female experts)
- Youth Development (3 male and 2 female experts; a female secretary)

As mentioned in all other offices visited, finding qualified women to work is challenging. Possible reasons may include[56]:

- Very low presence of women in the higher education (lower than in other regions), in particular female Afar students
- High turnover of women due to family commitments
- Very few women were found participating in decision making positions. There is a visible need of skill development, and awareness of women capabilities.

Interviewees also referred to the main challenges to deliver support to other Bureaus, which include:

- Most of the Bureaus do not have a dedicated gender focal point. There are only two Bureaus with specific gender focal points at regional level:
  (1) Police office.
  (2) BoPAD (Mrs. Kadiya Hommod); she is employed as a woman affairs specialist.

[55] Interview conducted to Nur Mohammed, Women Empowerment Core Process, and Saada Mohammed, technical assistant and UNICEF focal person. 18.12.15
[56] Interview to several informants in BoWYC, November 2015.

At the *woreda* level, only the Police Office has a gender focal point.

- The rest of the offices fulfil the gender mainstreaming requirements assigning the responsibility to a selected staff member that already has his/her own duties. Therefore, this assigned gender focal person perceives this task as additional workload without monetary or career incentive.
- Usually, there is no data collection disaggregated by gender in most of the Bureaus.
- Bureaus do not have specific budget to work on gender. It is perceived as an economic burden on their regular duties. As a result, gender activities lack the sense of ownership required for effective implementation. Therefore, limited attention is then given to gender issues.

Bureau of Pastoralism and Agriculture Development (BoPAD)

This bureau is the main government body concerned with pastoral and agro-pastoral sectors in Afar region, and the formal partner of the ASRP. This office has the broadest representation at *woreda* (PADO) and *kebele* levels (through DAs).

At the time of the interview, the Deputy Bureau Head was Mrs. Abbahina Kooba (at present Bureau Head of BoPAD).

The Bureau has 15 experts, of which 3 are women (one in each of the following areas: Biodiversity, Gender Issues and Natural Resource Management). According to Mrs. Abbahina, the Bureau is open to work with women in technical positions, however, qualified women to fill these positions are not easy to find. A problematic issue mentioned was the high turnover of technical staff at *woreda* and *kebele* levels.

Gender strategy of BoPAD

In its policy orientation, the Bureau believes that women and children are the most vulnerable population due to recurrent droughts. Therefore, any support in improving natural resources will directly impact the wellbeing of women.

The Bureau works on gender issues through the PSNP programme. This programme has developed a formal, gender mainstreaming strategy that includes 'gender sensitivity' as one of the core principles of the programme.[57] A number of direct actions are implemented, such as allowing women to work fewer hours than men for the same pay ('cash for work' programmes) and allowing women to receive direct support when pregnant or breastfeeding. The gender strategy also considers mandatory participation of women in programme structures and decision making bodies at community, *kebele* and *woreda* levels.[58]

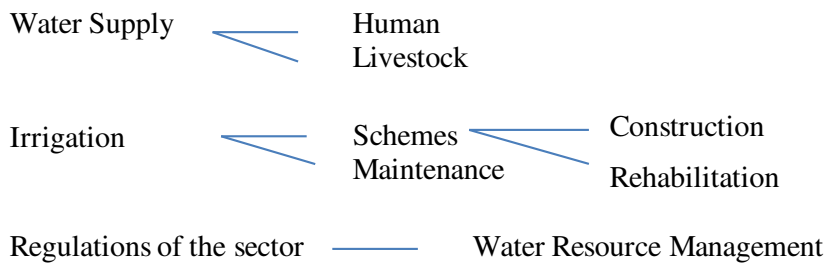
Bureau of Water Resources[59]

In Afar region, water scarcity is an overarching challenge for all institutions serving communities. In addition to not having enough water for the local needs of people and livestock, several areas of the region have the additional problem of deficient water quality due to salinity and natural fluoride contaminations.

[57] MoA (2012). Productive Safety Net Programme. Pastoral areas public work: a guideline. *In:* Ministry of Agriculture (ed.) First ed. Addis Ababa.
[58] *Ibid*
[59] Interview to Water Supply expert from Ministry of Water, and Water Supply Core Process Owner. 24.12.15

The Bureau has water offices in the 32 *woredas* of the region. Apparently, the technical capacity at *woreda* level is low, thus *"most of the work burden falls into the regional capacity"*[60].

The technical activities are organised in the following core processes:



It was indicated that the Bureau supports particularly settled communities making water accessible.

A maintenance programme of water schemes is in place. The office counts with three mobile crews for covering all the regional maintenance needs. Therefore, their capacity is very limited. The biggest challenges recognised by the interviewees are the limited access to machinery and the lack of skill of the technical personnel.

When asked about coordination of this bureau with other offices working in rural areas, the interviewees mentioned that at the regional level, coordination of activities and efforts is deficient; however, it is more effective at *woreda* level.

Gender strategy of BoWR

As well as other governmental offices, the Bureau has a mandate for mainstreaming gender into its activities. The gender and women related work is directly linked to the WASH programme, supported by World Bank, UNICEF and African Development Bank.

At scheme levels, the WASH programme implements WASH committees that manage water scheme maintenance, water distribution and community representation. Each committee is composed of seven members, of which at least two must be women.

When consulted about female staff, the interviewees mentioned that the Bureau makes efforts to hire women for technical positions but they cannot find qualified female personnel. From all technical staff, only three are women: one water quality expert; one civil engineer and one geologist.

[60] Water Supply Expert. 24.12.15

3.4. Non-government stakeholders interviewed relevant to the project areas

Afar Pastoralist Development Association (APDA)[61]

APDA is a local NGO, accounting for the largest NGO presence in rural areas of the region. APDA began their work in Afar 20 years ago. They started working with health, education and relief. Lately they incorporated water and soil conservation, irrigation, livestock and veterinary services, and women extension services. They also implement mobile services for pastoralists.

Gender approach

APDA has a specific gender department. In addition, all other departments count on an allocated staff member to gender issues. APDA has committed to develop a written organisational gender policy that covers 2015 – 2019[62]. This gender policy is based on the principles of gender equality and women empowerment at both organisational and programmatic levels. The policy will incorporate standards to implement pre-project gender analysis; regular discussions and gender dialog with staff and communities; quarterly review and planning with the target community; six month household surveys in order to identify changes, and annual evaluation of the organisation's progress towards gender equality in their pastoral target communities. According to the policy, a budget specifically for implementation of the described activities will be allocated.

Regarding the implementation of project activities, the APDA gender focal person mentioned that they promote gender awareness within their target population and partners. In regards to community selection, they seek balance between men and women beneficiaries, for example, when implementing cash for work activities. In every *woreda* where they are present, they work with the CDCs (Community Development Committees), which have 7 members (3 women and 4 men).

They experience important difficulties in finding female staff for technical positions. However, this seems to be slightly improving with more women accessing higher education. As part of their gender policy, women are given priority when searching for staff members.

Save the Children[63]

Save the Children is one of the international NGOs with the broadest presence in the area of the study. Their support to pastoral communities mainly includes disaster risk reduction (emergency support): food distribution; WASH; health and nutrition, and food security and livelihoods, through 'cash for work' for NRM activities (terracing, soil conservation, rangeland management, fencing pasture areas). Other NRM activities being implemented in the region include water and soil conservation activities such as soil benching and construction of gabions. They distribute seeds to farmers that are not accessible in the market such as hybrid varieties of maize. They also support animal restocking (goats) to families seriously affected by drought. Apparently, the scale of support is not very large. They also promote destocking of animals when rains are poor. All these activities are linked to PADO.

[61] Interview to M&E Gender focal person and team leader of Relief Department. 19.11.15.
[62] Afar Pastoralist Development Association (APDA) – Organisational gender policy 20015 – 2019 (document facilitated by gender staff member at the APDA office in Logia).
[63]Various attempts to interview the organisation were made, both in Samara and Chifra offices. Fruitful meetings were conducted with the Office Head and the Livelihood Expert in Chifra office, 15.12.15.

Gender approach

Save the Children has adopted a global gender approach that is integrated across the organisation. The organisation has a gender detailed mainstreaming guidance. Save the Children understands gender as a cross-cutting issue and they apply a gender mainstreaming concept. In addition, they use the concept of 'stand alone gender programming'[64]. For example, their work in nutrition and health is oriented towards women and children under five. The organisation does not have a focal person in Chifra; the gender officer located in Samara conducts the work of gender. Their cash for work activities must fulfill a minimum of 30% of participation of women, focusing on women head of households.

3.5. Professional training facilities interviewed

Afar region has two Technical Vocational and Educational training (TVET) institutes, one in Assayta and the other in Gewane.[65] There is also a higher education institution, Samara University, which offers careers in agriculture and natural resource management. In terms of training opportunities in areas related to the project, the Awra Research Centre is involved in training farmers and, in the future, pastoralists.

Adadale Polytechnic College[66]

This polytechnic college offers formal standard trainings within their departments and also short-term courses with an opportunity to develop on-demand training modules. A recent GIZ consultation to this college[67] focused on the training capacities of the college. The interview for this study focused on aspects of Afar livelihoods, gender and related training opportunities.

Presently, the college is focusing on providing training services to the state Tendaho sugar Company. From the 419 students they hosted last year, 263 attended the sugar cane production (111 trainees) and sugar cane processing (152 trainees) courses. As indicated by the college's Vice Dean, all of these 263 graduates were employed by the Tendaho Sugar Company. They also indicated that 43% of these graduate were women (113 students). The activities that graduates seem to be performing in the company are related to supervision of plantations and different specialised tasks in the sugar production process.

Both Dean and Vice Dean indicated that the majority of their students do not come from the Afar region. This may be due to two main reasons: one, the significant lower education level of Afar nationals and two, the high levels of poverty of local households, in particular from rural areas. For most Afar families, it is not possible to sustain children living outside[68].

The college is willing to develop tailored training programmes for including women trainees from the region although this is very challenging. For example, from the 419 students attending regular courses

[64]Stand-alone gender programming in the implementation of specific programmes to address certain gender inequality (e.g. a programme that work specifically with girls at risk of early marriage).
[65] Previous to this study, GIZ consultant Irmfried Neumann conducted interviews in both polytechnic educational institutions in November, 2015.
[66] Interview conducted to the Dean and Vice Dean of the College. 09.12.15
[67] Refer to Irmfried Neumann's interview in Adadale College on 12.11.15
[68] This was also stated in all other interviews in rural *kebele*s visited during this study. Boys and girls usually stop their education after primary school as families cannot afford sending them to town to complete a higher education degree.

during 2014-15, only 50 students were Afar women, and most of them were coming from the surrounding areas of Assayta. Main reasons given are, first, the lower educational level that most female Afar women have in comparison with men of same age, and second, the lack of accommodation facilities belonging to the college to host students.

Recruitment of skilled trainers seems also very problematic.

Samara University - Faculty of Agriculture[69]

The faculty of Agriculture at Samara University has 105 faculty members, of whom 41 were out of office at the time of the interview due to upgrades in their training level (attending MSc or PhD programmes).

The faculty has 512 students, of which 475 are regular and 37 are extension students, distributed in the following departments:

Department	First year	Second year	Third year	Total
Animal Science	30	0	34	64 students
NRM	34	32	30	110 students
Horticulture	27	30	30	87 students
Agribusiness and value chain	33	28	33	94 students
Plant Science	120 regular students + 37 extension students in Dubti			

At present, the college does not have a postgraduate programme, but they plan to open a master degree in 2017 on Natural Resource Management, and in Disaster Risk Management.

The university has a demonstration site in Dubti *woreda* for plant science and extension students. In addition, they have a number of community service programmes based on research but most of them are not currently functional. The university is planning to build an animal fattening facility under the Animal Science Department, for training purposes.

Awra Research Centre - Afar Regional Pastoralist and Agro-Pastoralist Research Institute[70]

This research centre belongs to BoPAD. It has four centres that serve communities in zone 4 (The study team visited their experimental field site in Hida *kebele)*. The research centre employs 5 researchers (male); 2 technical assistants (male); 40 administration staff (2 women). In addition, about 50 daily labourers (all female) are hired for the experimental field in Hida *kebele*.

The centre is specialised in four areas (departments): Livestock; Natural Resources; Crops, and Socio-economic and Agricultural Extension. The main activities of the centre include adaptation trials for food crops and fodder. The centre plans to produce seeds and fruit tree seedlings and distribute them to farmers.

[69] Interview conducted in Samara University, Samara, 05.01.16
[70] Interview to Mohammed Jemale, Director of the Awra Research Centre. 16.12.15

In terms of training options, the centre has a trial in a participatory training approach oriented to pastoral communities*: Pastoralist Research Groups* (PRG). The programme establishes *on-farm* trials working along the entire production cycle from problem identification up to implementation and follow-up. Problems to implement their training activities are mostly concentrated on lack of training materials and equipments (they have a large building in Awra but apparently not yet functional). The research centre does not have accommodation for trainees.

An additional problem in the research site is the lack of maintenance of the irrigation infrastructure, which produces irrigation problems.

Linkages with other relevant offices such as the Water Bureau or other organisations supporting the local agricultural sector are apparently weak.

An assessment on the quality of their practical training capacity is recommended.

Conclusions of the section

All three Bureaus visited have implemented a gender mainstreaming policy. The very low number of female technical and extension specialists makes the implementation of an effective gender equality policy difficult.

The BoWYC seems to have capable staff members at the regional office. The Bureau receives important support from the regional government. It has also high visibility, as it is the only specific government body attending gender issues.

APDA and Save the Children have a long term experience in integrating gender into programming. APDA has a comprehensive understanding of the needs of men and women in Afar, in particular of pastoralist communities.

The training institutions visited do not have specific programmes to train women. The Adadale College and Awra Research Centre could provide opportunity for developing tailored trainings for rural women. They may lack qualified, skillful trainers.

Action item:

- Integrate a representative of the BoWYC in coordination meetings and public events organised by the ASRP. This will provide up-to-date information on the diverse opportunities for women projects, in particular income generation opportunities.
- The gender policy that APDA is developing seems appropriate and comprehensive. It is recommended to share lessons learned with this office and discuss potential areas of collaboration.
- Explore opportunities to develop tailored training modules for women, for example, in basic farming practices using experimental fields of the Awra Research Centre.

4. Results of interviews with project beneficiaries and field observations

4.1. Data collection sites

The study team collected data from three locations (see Annex 3):

- an area with the WSW already constructed: **Shaqayi-boro *tabia***
- an area with the project designed but not yet constructed: **Mosquit *kebele*,** and
- an area without project: **Sidihadaba *tabia***

Even though these three situations will not cover the entire diversity of the region, the analysis of the data collected in addition to the secondary information reviewed will allow providing recommendations that reflect livelihoods and gender dynamics in the project areas.

a) Area with the WSW constructed: Shaqayi-boro *tabia*

- *Kebele*: Tabaoye
- Clan: Arabta
- Population[71] of the *kebele*: 5,559 persons (Dec, 2015)
- Distance to Chifra: approx. 7 km

Main features:

- The community is mostly pastoral, with some (rain-fed) agro-pastoral activity.
- **Source of water for domestic use:** piped city water that fills a tank; water is distributed by an electric pump. When there is no electricity, female residents fetch water from Mille River (walking distance: 1 hour).
- **Source of water for irrigation:** rainfall. The community does not have a perennial water source for farming.
- **Land management:** pastoral land is used communally; there are a number of small individually enclosed areas used for rain-fed farming.
- **Farming activities:** Pastoral communities are practicing some rain-fed, subsistence agriculture on a limited scale. In 2015, some farmers sowed maize in one of the areas where the WSW was constructed, getting advantage of soil moisture remaining after a flood occurred at the end of the *karma* rains. Although the crop did not reach maturity, the farmers were able to harvest the stalks as animal fodder.
- **Awareness and perception of the WSW project:** When men were consulted about the WSW, they responded that they did not know details about who is supporting the project but they knew it would benefit soils and may help expand agriculture. Some men from the community were hired as daily labourers for the construction. When women were consulted about the WSW project, they answered that they knew there was '*something going on there*' but they did not know what it was about. [72]

Although this community has access to important resources such as piped water and lies in a relatively short distance to Chifra, with relatively easy market access, the community seems still very poor, and dependent on external support. Enthusiasm about farming did not seem strong.

[71] Information provided by Office of Finance, Chifra, Dec 2015

[72] A reason for these responses might be that the project had recently started when these interviews were conducted

b) Area with project designed but not yet constructed: Mosquit *kebele*

- *Kebele*: Mosquit
- Clan: Arabta
- Population[73] of the *kebele*: 3,956 persons (Dec, 2015)
- Distance to Chifra: approx. 11 km
- Religious centre of importance in all areas surrounding Chifra

Main features:

- The community is agro-pastoral, with a longtime irrigated farming tradition.
- **Source of water for domestic use:** deep well with piped water distribution; Mille River when the pump is broken or the community does not have fuel (walking distance: 15 min).
- **Source of water for irrigation:** river-flow diversion from Mille River (through a network of hand dug canals that require constant maintenance).
- **Land management:** rangelands are used communally; farming land is used individually. The process of land distribution started almost 30 years ago (at the end of the Derg regime). Clan leaders and community leaders distributed one plot of 20 metres by 50 metres per household. A process of land certification started in the area 6 months ago.
- **Farming activities:** Farmers have been practicing subsistence, small-scale agriculture in the area since land distribution. According to informants[74], agriculture is expanding now. The main problem farmers face with agriculture is the occurrence of recurrent floods during rainy seasons.
- **Awareness and perception of the WSW project:** When men were consulted about the WSW, they responded that they have been informed about the project. They did not have details about when the project would start and exactly where the construction would take place. When women were consulted about the WSW project, they answered that they did not know about this project.[75]

Anecdotal information and personal observations indicated that *kebele* residents owning land and practicing farming had a better sense of self-organisation than other *kebele* residents that only depended on livestock.

c) Area with no project: Sidihadaba *tabia*[76]

- *Kebele*: Jarra
- Clan: Arabta
- Population[77] of the *kebele*: 7,071 (Dec, 2015). Sidihadaba *tabia:*150 households (Dec, 2015)
- Distance to Chifra: approx. 21 km

Main features:

- The community is mostly pastoral, with limited (rain-fed) agro-pastoral activity.

[73] Information provided by Office of Finance, Chifra, Dec 2015
[74] Irrigation association of Mosquit *kebele*. 15.12.15
[75] By the time of the fieldwork for this report, the project had not yet conducted an awareness workshop as it was still in the preparation phase.
[76] GIS location: 11°41'43.93"N - 39°57'05.25"E, 1041m
[77] Information provided by Office of Finance, Chifra, Dec 2015

- **Domestic water source:** perennial river in Amhara Region (women from the *kebele* have to walk and carry the water as the area is too steep for camels or donkeys). Alternatively, women go with camels to Mille River (walking distance: 4 hours round trip). The *tabia* has two covered *birkads* (water reservoirs constructed by APDA).
- **Source of water for irrigation:** rainfall. No perennial source of irrigation water.
- **Land management:** The areas surrounding the *kebele* show medium to severe soil erosion, with overgrazed rangelands, as observed elsewhere. A women's cooperative from the *tabia* (Sidihadaba Cooperative) has fenced a large area of about 5 ha and a few other smaller areas to allow grasses to regenerate. They practice 'cut and carry' pasture for animal feeding. The *tabia* women also want to start sowing indigenous grasses to improve the pasture areas. Women have fenced the areas by themselves, with some help from their sons.
- **Farming activities:** The recently established cooperative started with some rain-fed farming. Last year they produced a small amount of teff.
- **Awareness and perception of the WSW project:** When consulted about the project, the (male) *kebele* leader responded that he has heard about the project in Chifra town. Women were not aware of this initiative. When consulted about the potential usefulness of this type of projects in the area, one woman, the cooperative leader said: '*we don't need that they pay us, we only need that they teach us how to improve the land'*.

The community appears to have good self-organisation capacity and initiative. At present, they do not have any external support. The rather strong organisation and good self-initiative observed in this community seem to be hindered by the advance of soil erosion that affects the productivity of the communal rangeland and areas destined to farming.

In order to complete the livelihood and gender characterisation and to broaden the analysis picture, the study team visited two other project areas, Kalkasa (in Awra *kebele)* and Gariro *kebele*, where direct and participatory observations as well as open interviews were conducted. In order to understand the agricultural potential of the region, the study team also visited farming areas in Assayta and Hida *kebele*.

4.2. Livelihood systems observed in the visited *kebeles*

During the course of this field work, several livelihood systems were observed in the *kebeles* visited, which are likely present in other parts of the region, including other ASRP intervention areas. Each livelihood system will be described with examples from one or more visited areas.

a) Drop-outs from (agro) pastoralism
b) Pastoralists
c) Agro-pastoralists
d) Farmers
e) Impoverished pastoralists and agro-pastoralists

It should be noted that although these livelihood systems may cover most livelihood systems present in rural Afar, the areas in which these livelihood groups were observed do not cover all the agro-ecological zones found in Afar region. It should also be considered that the areas visited are not the most drought prone *woredas*. In addition, these livelihood groups do not include all the wealth categories that might be found within a pastoralist or agro-pastoralist group.

As observed in pastoral areas of the Somali region in a previous livelihood and gender study[78], the ascribed units of classification by livelihood zones as pastoralists and agro-pastoralists[79] do not cover all current livelihood characteristics and strategies found in Afar. In addition, different livelihood systems may coexist within the defined livelihood zones. Whether this type of rather coarse classification affects the characteristics and suitability of assistance these communities receive should be the subject of further analysis.

a) Drop-outs from (agro) pastoralism

Drop-out households are those that have lost all livestock that they previously owned. Recurrent droughts or particular family/personal conditions (i.e. widowhood, divorce, and disability) are the main causes. Due to the loss of their animals, these former pastoralists have settled in villages or towns. In addition to losing livestock, failing to farm due to lack of access to land, water or farming knowledge may accelerate the 'drop-out' condition. These were the most vulnerable households observed during the fieldwork.

For 'drop-out' households, securing food is their daily struggle, which in turn is almost exclusively a woman's role. Therefore, health and nutrition problems become main and interconnected challenges. In areas where drinking water is not easily accessible or has to be paid, problems obviously exacerbate. Education of children is highly at risk.

In the vicinity of Chifra, employment opportunities are very scarce and limited to sporadic 'cash for work' opportunities. Contrary to other areas, petty trade or firewood sales seem to be limited activities in the areas visited, in particular for Afar people.

No official estimation of number of drop-outs in Chifra was found during the course of the study.

Drop-out households were interviewed in Mosquit *kebele* and in Gariro *kebele,* among the participants of the GIZ watershed training conducted in mid-December, 2015.

b) Pastoralists

Pastoralists depend entirely on livestock production on rangelands for their livelihood. The sole feed input is rangeland vegetation communally owned by clans. Livestock production is practiced extensively in severely degraded rangelands with a frequent pattern of seasonal migration. In almost all interviews people indicated being semi-sedentary: only part of the family, namely the (male) head of household and other male relatives leave with the larger livestock (cows and camels) for periods that range from a few weeks to a year if rains are scarce and grasses are not sufficient to sustain their livestock. Interviewees cite access to health and education services in *kebele* centres as a reason to leave the household behind when migrating with livestock.

Inter-clan conflicts over access to water and pasture, as well as the expansion of the settlement federal programme have decreased transhumance of pastoralists.

The most important livestock species present in the study areas are cattle, goats, sheep and camels.

[78] Conducted by GIZ in 2014 on the framework of the Swiss Drought Resilience initiative financed under SDC HoA Regional Strategy 2013-2016 (PN 12.9761.3)
[79] See Save the Children (2008). Livelihoods and Vulnerability.

Pure pastoralists were found in the entire study area. Livestock sales are the main source of cash.

In most areas visited, there are initiatives of basic animal fattening units. This activity consists on buying young goats and sheep, feeding in the compound and selling them during dry season for a higher price. This has been promoted by government projects (e.g. PCDP), NGOs and other cooperation projects, and is usually practiced by associated pastoralists. The activity has been broadly promoted among women's groups as women pastoralists tend to be responsible for sheep and goats. A bottle-neck observed in most areas visited is the lack of regular (and effective) veterinary services to support animal production. In addition, many respondents requested support in market access. Some veterinary and animal production services are provided by PADO and NGOs, namely APDA and Save the Children, although not covering all the needs.

Although not a widespread practice, some NGOs have promoted the exclosure of grassland areas to allow grasses to regenerate. In the case of Sidihadaba, results of fencing areas have proven promising for the *kebele* residents and they are motivated to continue, not only expanding this practice, but also sowing endemic grasses. These fenced areas are managed by the women's cooperative. At present, the cooperative members cut grasses and feed the livestock they fatten to sell to the market.

c) Agro-pastoralists

Agriculture in Afar includes rain-fed crop production, which is rather limited to areas in the vicinity of settlements, and irrigated agriculture practiced in relatively narrow strips of farming land along permanent rivers (e.g. Mille, Awra and Awash River) where soils are highly fertile. *Rain-fed agriculture* mostly includes maize production and less frequently sorghum and teff[80].

Agro-pastoralists are rural population practicing a mixture of livestock rearing and rain-fed or irrigated crop production. Livestock rearing represents the largest part of their livelihoods.

Agro-pastoralists that were complementing their food needs with rain-fed agriculture (e.g. sorghum, maize) have seen their production failing in the last few years due to recurrent drought or unreliable rainfall. It was also observed that most of the maize varieties used were of long cycle, between 4-5 months to harvest (not recommended for conditions of irregular and decreased amount of rainfall).

d) Farmers

Farmers belong to households depending almost exclusively on farming (near permanent water sources) for their livelihoods. It was noted that most farmers were also keeping animals. Moreover, better-off farmers seem to invest income surplus on livestock.

The study interviewed farmers practicing irrigated agriculture in three distinct locations: Mille River in Mosquit *kebele*, Awra River in Hida *kebele* and Awash River in farming *kebeles* near Assayta. In these areas, there is a tradition of irrigated agriculture for almost 30 years. The main problem indicated by farmers is the destruction of canals and farmland due to river floods. Hydraulic infrastructure to manage river floods is deficient.

[80] Despite some farmers have mentioned to the GIZ M&E team (interviews for the profile description of project areas) producing sesame, this was not reported in this study.

Most farmers in Mille River area are focused on subsistence agriculture. Maize for home consumption is prioritised. Only one grower from Mosquit *kebele* owns an orchard where he produces hot pepper, onion, and some fruit trees such as mango, guava, and some citrus. According to the information gathered during interviews most of the knowledge regarding farming practices for vegetable and fruit tree production was provided by the long-term presence of the Lutherans World Federation (LWF).

Several other farmers, mostly non-Afar, were also found producing hot pepper. In most cases, crops showed poor agronomical practices. Very often, 'highlanders' practice sharecropping with local farmers.

Small-scale farmers interviewed in farming areas of the Awash River basin in the vicinities of Assayta are practicing some commercial agriculture, although not very efficient. Crop species are more diverse than in other places including date palms, fruits, vegetables, pulses, oilseeds, and cotton.

e) Impoverished pastoralists and agro-pastoralists

Impoverished pastoralists are those households that have lost a large amount of livestock; the remaining herds are insufficient to sustain their household needs. Impoverished agro-pastoralists have lost animals and have also suffered recurrent failure of their (rain-fed) crop production due to low or erratic rainfalls, and lack of access to a reliable, permanent water source.

Although all pastoralists interviewed affirmed having lost many animals during the current drought, the reduction in herd size seems to be a process that has taken at least a decade.

Examples of impoverished pastoralists were found in Shaqayi-boro and Gariro. In most cases interviewed, impoverished pastoralists were found settled in the area with only limited migration.

Impoverished (agro) pastoralists sell one animal (sheep or goat) when they are in need of cash for buying food. In most cases, this is their only source of income.

Some impoverished (agro) pastoralists have initiated certain livelihood diversification activities aiming at compensating the loss of animals, i.e. rain-fed farming (example: Chifra; Sidihadaba); animal fattening (example: Anderkalo); fish production (example: Mille). In all cases visited, they have received external support from the government or a cooperation project (see section 4.6).

4.3. Wealth categories

The study team had discussions with community members regarding the definition of wealth. In all cases, people agreed that the primary criterion to define wealth relates to the number and type of animals in possession. Discussions regarding herd size are always problematic and people do not feel comfortable talking about how many animals they have. This may be due to customary beliefs that make them afraid of counting their animals, but also because people do not like to talk about their wealth. In addition, *kebele* residents tend to herd their animals together, which makes it difficult to estimate the number of animals per household.

All pastoralists and agro-pastoralists interviewed stated that they have lost a large part of their livestock due to recurrent droughts. In particular, for the past year people mentioned important losses of animals. In repeated occasions, pastoralists indicated having lost at least about 20-30% of their animals during the

past months, what is difficult to confirm given the reluctance of pastoralists to talk about the number of animals.

Wealth categories appear to have changed in the past decades. The rich category has disappeared and the medium and poor categories have diminished the number of assets. In the areas visited the overall number of animals per household has decreased (Table 2).

TABLE 2 WEALTH CATEGORIES EMERGED FROM THE INTERVIEWS RELATING TO AN INDIVIDUAL AVERAGE HOUSEHOLD

	Rich		***Medium***		***Poor***		***Very poor***
	1990's	*2015*	*1990's*	*2015*	*1990's*	*2015*	*2015*
Shoats	100-300	--	0-300	10-50	30	5 - 15	0-10
Cows	400	--	40-100	10-20	10	0-5	1-2
Camels	0 – 100	--	Many	5-20	0	0 -5	0
Donkeys	?	--	A few	A few	0-5	0-2	0

Source: Interviews to *kebele* residents of all livelihood systems identified (Nov-Dec, 2015)

When asked to compare livestock numbers in the 1990's and current herd sizes, pastoralists invariably indicated having lost a large number of animals, usually more than 10 times the number they used to have. In addition, the type of animals seems to have moved from cattle and sheep to goats with increased degradation of rangelands. A CDC of Chifra illustrated: *'From 400 cows in the past, today only one lives here. From 100 goats, today only 10 live here'*[81]. When a permanent water source is accessible, pastoralists tend to keep cattle.

The livelihood characterisation defined by Save the Children (2008) considers three wealth categories for Chifra: *poor*, *middle* and *better-off* (Table 3). In 2008, they estimated that 25% of people were better-off, 40% were medium and 35% were poor.

TABLE 3 WEALTH CATEGORIES FOR CHIFRA *WOREDA*, SAVE THE CHILDREN (2008)

	Better-off	***Medium***	***Poor***
	2008	*2008*	*2008*
Shoats	30-50	25-30	10-20
Cows	20-25	10-15	1-2
Camels	20-25	8-10	0-1
Donkeys	1-3	0-1	0

Source: Save the Children (2008)

Although a quantitative analysis of wealth categories was out of the scope of this study, observations from the field indicated that most *kebeles* visited include a few medium households and a majority of poor households. Very poor households were observed in Shaqayi-boro and Gariro.

Examples of pastoralists characterised as 'medium' were found among women taking part of women's cooperatives in Anderkallo *kebele* and in Sidihadaba *kebele*.

[81] In-depth interview to Mariam, Chifra. 23-24.11.15

Regarding land ownership, in farming areas along the Mille River in Chifra, farmers have received the same amount of land per household, proportional to the family size[82]. Individual plots have an average size of 20 x 50 m, 0.1 ha. In the interviews, farmers indicated owning from 1 to 3 plots.

> Interviewees in Mosquit *kebele* were very reluctant to talk about their animals, in particular about number of animals owned individually. Many households practice agriculture; results from the interviews with the existing irrigation association (150 farmers) indicate that residents are in 'good condition', as a religious leader described[83]: *'We have no problems for eating. When our sons marry we give them land. They start producing and having their own wealth. We share production with those people that don't farm. If I get 100 kg of maize, we send for our families in other areas. We share.'*

In all the *kebele*s visited, households have traditional Afar houses, no transportation means (other than animals) and basic farming tools (in the case of farming communities). In the areas of Mille River, oxen were observed to be shared communally or mostly owned by farmers coming from the 'highlands'.

4.4. Incomes, prices and markets

Field results suggest that the main source of income in all the livelihood systems analysed is livestock sale. Incomes from milk sales are very limited due to seasonality of production (during dry season there is very little milk production because of very low amount of animal feed), exacerbated by the current drought[84]. Also, most of the milk obtained from the animals is consumed within the household or shared with poorer families. Anecdotal information[85] also stated that for rural Afar people it used to be shameful to sell milk. In areas with good water and grasses, milk production seems successful (for an example, see Annex 4).

Employment opportunities seem to be very limited in the study areas. Wage labour (cash for work) is available mostly through PSNP. Other government or cooperation projects are sporadic and of short-term. In town as well as in *kebele* centres, a small number of people access government jobs.

In towns like Chifra most of the services, jobs and small business are occupied by non Afar people, coming mainly from the 'Highlands'. Their more entrepreneurial attitude and perhaps some better level of education may contribute to their ability to engage in income generating opportunities easier than Afar people.

At the time of this study the first masonry training supported by GIZ concluded. Although it was still early to evaluate its impact on improving employment opportunities for the trainees, there was a generalised positive attitude among participants. They hoped that the new skills gained would provide them with additional income opportunities (Note: According to project information during a second revision of this report, all participants of this masonry training were able to find work on construction sites. June, 2016).

[82] Interviews to individual farmers, 12-13.12.15, and interviews to farmers from the irrigation association of Mosquit kebele, 15.12.15.
[83] Irrigation association leader. Mosquit *kebele*, 15.12.15.
[84] In 2015, a dairy cooperative located in Chifra discontinued activities due to lack of milk.
[85] Interview to rural women in Mosquit *kebele*, December, 2015.

Livestock markets

Pastoralists in the Chifra study areas sell their livestock in the livestock market in Chifra. All types of animals are sold here. Pastoralists from Awra were selling their sheep and goats in Yalo, Awra woreda, and camels and cattle in Chifra.

Price variations are highly seasonal. Pastoralists interviewed were buying goats and sheep on the market for 300 birr (rainy season), and selling between 800-1,000 birr after fattened (dry season).

4.5. Expenditures

In all livelihood systems analysed, food is the largest household expenditure item. Expenditures are clearly seasonal, following the seasonal production cycle. During rainy seasons, expenditures are reduced as (agro) pastoralists and farmers satisfy their food needs with their own productions (cereals, milk and meat). As usual, poorer households practically spend all what they earn or produce on food.

In terms of agricultural inputs, some pastoralists indicated buying some medicines for their animals if needed. Agro-pastoralists engaged in subsistence cereal productions tend to keep seeds for the following sowing season. Some farmers reported buying improved seeds.

Khat appears to be a regular expenditure of households, in particular of those close to towns. Although quantifications are difficult, anecdotal comments suggested that men spend significant part of the income on khat.[86] It was commonly stated that women spend 100% of the money they get from selling a goat in food and household needs. However, '*when men sell animals, 50% goes for the household and 50% for khat'* [87].

4.6. Livelihood diversification opportunities

A number of organisations have been created in the last years (mostly within the last decade) that have particularly supported income generation activities for women, including women's cooperatives of diverse types. The most frequently ones are credit and saving cooperatives. These organisations were founded by start up capital provided by the government (PCDP) or NGOs and a small money contribution from members on a monthly basis. The cooperative provides revolving loans to the members that they should pay back within a year. In all the cases interviewed, women were using loans to buy animals (goats and sheep).

Although women participating in this kind of initiatives expressed that their situation improved, the income generation potential of some of these cooperatives seems to be limited. On the other hand, the fact of getting organised seems to cause positive effects besides income generation. Forming a cooperative also includes training opportunities, awareness on women rights issues and, importantly, women become aware of their own potential and capacity to get organised and to help the economy of their families.

Selected examples of livelihood diversification options with a brief description of activities are presented in Annex 4.

[86] Female key informant in Chifra, and female beneficiaries interviewed. November-December, 2015
[87] Informal interviews in Chifra animal market, 25.11.15


Photo 1 (left): Animal market, Chifra. **Photo 2 (right):** Anderkalo women's cooperative

4.7. Gender roles and responsibilities

However, results of the interviews and of the document and literature review[88] indicate that dynamics of gender roles and responsibilities may be changing significantly. These changes seem to be greatly influenced by changes in the financial status of the families, in particular due to the generalised impoverishment of rural families. Alongside economic changes, power relations also change. Dynamics of power relations have been influenced over time by a number of issues including: coexistence of traditional, customary leaders and government representatives; degraded traditional governance systems of natural resources; decrease of herd sizes as well as animal types[89]. Large herds in particular those of camels and cattle used to be a sign of male power, as well as a means for purchase of weapons[90].

In all communities visited in the study areas, household gender roles and responsibilities appear to be similar. Women and girls perform the bulk of the household domestic work. A typical rural Afar woman devotes an average of 15 hours per day to activities that are necessary for the functioning of the household, that are physically demanding and do not generate income. By far, fetching water is the most time consuming activity of women (see Table 4). There is a common belief that women have the responsibility to bring water to the household. Except in areas close to a permanent water source (e.g. Mille River), the minimum time spent in fetching water in the study areas was one hour per trip. In terms of livelihoods, the burden of water collection is directly linked to 'time poverty', thus time not spent on an income-generating activity[91] or an activity that contributes to the wellbeing of the household members, in particular of women.

[88] Inkermann, H. (2015). *Diversification of livelihood strategies and the transformation of pastoralist life among Afar women in Baadu - Ethiopia.* MSc, Bonn.
[89] Schmidt, M. & Pearson, O. (2016). Pastoral livelihoods under pressure: Ecological, political and socioeconomic transitions in Afar (Ethiopia). *Journal of Arid Environments,* **124**, 22-30.
[90] Interview to a key informant in Chifra, 27.12.15
[91] REACH (2015). Country Diagnostic Report, Ethiopia. *In:* University of Oxford (ed.) *REACH Working Paper 2.* Oxford, UK.

Women and often also children are responsible for firewood collection. Firewood seems to remain relatively abundant in areas closer to the settlements visited. Many interviewees indicated to take care to collect dry firewood material in order to preserve their forest areas.

Male customary roles do not include any domestic work. It is broadly recognized that women are overloaded with domestic and increasingly with productive work.

TABLE 4 TYPICAL HOUSEHOLD REPRODUCTIVE WORK DISTRIBUTION BY GENDER

Activity	Men	Women (incl. older daughters)	Children	Time spent/day	How often?
Cooking	---	XXX	---	At least 4 hr	3 times/day
Cleaning/Hygiene	---	XXX	---	1-2 hr	Every day
Grain grinding	---	XXX	---	Variable (a)	
Water collection	---	XXX	---	1-7 hr	1 or 2 times/day(b)
Firewood collection	---	XX	X	Variable; up to half of a day	
Hut/house construction	X ('modern')	XXX (traditional)	---	1 day	Variable
Taking care of old people/small children	---	XX	X	Not specified	
Making of utensils and handicrafts	---	XXX	---	Not specified. Done during spare time	

Source: Information from fieldwork in *kebeles* of Afar Region, November - December, 2015

Ref.: *XXX: exclusively; XX: equal share of the work; X: partial amount of work*

(a) If families are better off or live closer to Chifra town, women bring their grains for grading in a commercial mill

(b) If the family have camels or donkeys, women do only one daily trip to fetch water

The degree of women's participation in livestock and farming is influenced by age, marital status and life cycle (i.e. pregnancy, breastfeeding). Women heads of households may be found involved in almost all productive work until children become old enough to help herding and/or farming. Women are found caring for small ruminants. They also milk cows and goats, and work in milk processing when there is any milk surplus. Married women appear to be participating also in animal production decisions related to small ruminants, and taking care of calves. Men are responsible for camels, cattle and livestock migration. Men and women share the marketing of livestock; however, this varies according to type of animal, season, and age of the household member. Several women[92] indicated that they prefer to go to the animal market as they then spend the full amount of sales on household items (mainly food).

Gender division of labour in farming responds to how physically demanding the tasks are, and/or the affordability of paid labour. The farming activities tend to be mostly performed by men. Men are invariably responsible for ploughing land. However, women are involved in several farming duties (Table 5). If there is the option to have a male family member performing farming activities, women seem to limit their farming participation. In addition, as soon as the family can afford it, paid labour replaces female work in farming. Several women interviewed suggested that their lack of farming knowledge

[92] Female group interview in Mosquit *kebele*, November, 2015. Interview to female CDC in Chifra, November 2015.

prevents them from getting involved in agriculture. When consulted about their interest in crop production many respondents said that they would like to participate if they get seeds and knowledge.

A summary of the average gender distribution of production work within pastoralists, agro-pastoralists and farming communities is presented in table 5.

TABLE 5 TYPICAL HOUSEHOLD PRODUCTIVE WORK DISTRIBUTION BY GENDER

Livestock management	Men	Women (a)	Children	**Agricultural work**	Men	Women	Children	Paid labour
Feeding animals	Whoever has time			Land preparation (c)	XXX			XXX
Animal health care		XXX		Sowing	XXX			XXX
Milking	X (camels)	XXX		Weeding	XX	XX	X	
Moving herds to pasture areas (b)	XX	X	XX	Harvesting (d)	XXX	XX	X	XXX
Bringing animals to market	XX	XX		Cleaning seeds	X	XXX	X	
Buying new animals	XX	XX						
Selling animals	XX	XX						

Source: Information from fieldwork in visited *kebeles* of Afar Region Ref.: *XXX: exclusively; XX: equal share of the work; X: partial amount of work.* (a) Women are found performing all productive activities when husbands or older sons are absent. (b) This varies according to animal type: camels and cows are usually moved by adult male, in particular when migrating; cows, goats and sheep can be moved by women and most often by boys. (c) In cases where the family can afford it, paid labour is used for certain farming activities. There are also cases of sharecropping, where the landowner does not perform farming activities but gives 50% of the harvest to the tenant. (d) Men harvest in groups and women cook for them; women and children are also found harvesting.

When men and women were asked about decisions regarding production or sale of animals, responses varied with age. Young married women tend to consult with husbands while older married women, widows or female heads of households tend to make all decisions by themselves (or in agreement with husbands when present). Anecdotal observations from the field indicate that when women increase their share of production responsibilities (e.g. getting information, going to market, deciding on livestock or crops), they may be having greater decision making over livestock, their major assets.

Results from this study also indicate that women in Afar do not have a strong role in trading, in contrast to women from the highlands or from other lowland (predominantly Muslim) areas such as the Somali region, most probably because they have not developed the necessary skills. Even so, an increasing number of women participate in animal trade in the animal markets, selling the livestock under their control (goats and sheep) and deciding the use of money they receive.

Men are usually found performing family and community representation activities, i.e. religious duties, *kebele* meetings and conflict resolution activities. Elder women and female heads of households were also found participating in consultations or other activities requiring *kebele* female representation. Married

women with their husbands present seem to have the least share of decision-making power and community participation. In addition, they tend to be economically fully dependent.

Boys are mostly found herding animals. Girls usually get married at relatively early ages[93] (starting from 16-18 years old). Both assume adult responsibilities if the mother or the father is absent. Children are also frequently found fetching firewood. Regarding school attendance, there is an affirmative policy action towards promoting schooling for girls, for example, providing a can of oil every two months if the girl attends school daily. However, it is very frequent to find boys skipping school and herding goats and sheep.

Photo 3 (left): traditional house construction, Mosquet *kebele*. **Photo 4 (right):** watershed management, Gariro.

4.8. Food and nutrition

Although a detailed analysis of food and nutrition was out of the scope of this study, some general aspects, common to all groups interviewed, were identified.

In all the livelihood systems identified, food consumption varies with season. During rainy seasons, milk is the base of the diet consumed with traditional Afar bread. Agro-pastoralists consume part or all of the cereal they produce (mostly maize). Pastoralists supplement their diet with some grain purchase. During dry seasons, pastoralists and agro-pastoralists sell animals according to food needs and purchase different food items, which may include sorghum, *shiro*, oil, wheat flour and teff.

Among the poorer households, daily meals include only breakfast and dinner. Most of these meals are based on *shiro* and maize during the dry seasons, adding milk and butter, during rainy seasons if they have any animals. Some women indicated eating only maize if they do not have enough cash. Meat seems to be an item consumed for special occasions such as celebrations. Some better off households may include some meat in their diets on more regular basis.

Although statistics of food aid are difficult to obtain, as described elsewhere in the study, field observations indicate a high reliance on food aid during the dry seasons.

[93] There is widespread awareness that very early marriage of girls (under 15) is condemned. There were a few occasions during this study when the study team was unsure about responses of young girls or their relatives whether they were married or about their real age.

Fruit and vegetables are items mostly absent in the diet of rural Afar people. Their consumption increases with the vicinity to urban areas and markets.

4.9. Communication profile and participation by gender

Of interest for this study was to understand gender patterns of communication among project beneficiaries in order to determine if men and women should be approached differently by the project implementation. Results from the study indicate:

- *Means of communication used by gender.* When men migrate, communication with their families is based on the traditional '*dago*' system and by mobile phones. Usually, men have mobile phones and the household has one at home. Women are less used to have a mobile phone with them. In one women's group discussion[94], participants mentioned that it is expensive for them to have a mobile phone.
- *Gathering information about new projects.* Men participate in public activities more often than women. Women tend to have less mobility than men due to cultural constraints but more importantly, because they are very busy all day long. For this reason, men are usually better informed about new projects, government activities and any other information of interest for the community. Many women express that their lack of education prevents them from interacting with other people outside their families.
- *Communication and power relations.* In past times, Afar clan structures were the most important communication channels between communities and government. According to interviewees, nowadays *kebele* officials are the persons in charge of gathering community concerns and needs as well as informing *kebele* residents regarding new projects, support or any relevant information from the *woreda* and in turn, from the region. Anecdotal observations indicated that not all *kebele* leaders are trusted.
- *Communication and women's representation.* Gathering relevant information about new projects, food distribution or training opportunities seems to happen most often through *kebele* and clan leaders, DAs and associations. Anecdotal observations from this study indicate that husbands or male relatives may not necessarily pass information to their wives or female relatives. Women receive information about new projects through one or two women representatives. This is likely to be the case in most *kebeles*.

[94] Mosquit *kebele*, 23.11.15

Men and women are found getting together to fulfil different community roles and to take part in diverse supporting activities (Table 6).

TABLE 6 TYPICAL PUBLIC ACTIVITIES FOR MEN AND WOMEN TO GET TOGETHER

Men get together for	Women get together for
Going to mosque, learn the Koran	Traditional house making
Herding animals	Supporting when a woman gives birth
Marriage and funeral ceremonies	Marriage and funeral ceremonies
Organising conflict resolution strategies	Washing clothes; fetching firewood or water
Chewing khat	Collecting grasses for fodder or construction of houses, usually in areas further away from home
Searching for animals when they are stolen	Milling grain and cooking
	Praying together

Source: Fieldwork interviews for this study; personal observations and interviews.

Customary organisations and clan leaders coexist with government representation at the *kebele* level.

- *Kebele* chairpersons are the government representatives at the *kebele* level; they rule all administrative issues and are the focal points for all government and development projects.
- Customary or clan leaders participate in supporting conflict resolution within the community members; mediate conflicts between clans and sub-clans, and lead the communities.
- Religious leaders: they have the role of moral leaders; teaching and guiding on the observation of the Koran. Religious leaders may also advise customary leaders and *kebele* authorities on issues of community interest.
- Elders (male and female) usually represent the community in public meetings and consultations and then transmit the information to the other community members.
- No females were found in *kebele,* clan or religious leadership positions.

In terms of appropriate ways to access women in community participation projects, it is important to note that the degree of women participation in the visited *kebele*s tends to be specific for each community and closely related to age and local specific social relations. For example, in Mosquit *kebele*, older, married women were chosen as women representatives based on their knowledge of community affairs and problems, and also based on their religious knowledge. As Mosquit is a religious centre of importance around Chifra *woreda*, key informants observed that some women have similar level of knowledge about the Koran than men. Being knowledgeable about the Koran instills respect. In Shaqayi-boro, female participation was found to be rather passive and women's knowledge about new projects or their husbands' activities was very limited. In Sidihadaba *tabia*, women were found playing a key role in financial support of households, getting organised and searching for diversification opportunities. This was particularly true in more influential households. A few men interviewed in this community appeared to respect and support women's initiatives.

Formal and informal organisations are present in different communities. Every community imposes their own rules and regulations, thus it is very important to learn about specific dynamics of power relations, priorities and rules in each group of users of the GIZ project.

Conclusions of this section

Findings from the fieldwork indicate that the broad livelihood classifications of pastoralists and agro-pastoralists do not cover all current livelihood characteristics and strategies in Afar. Five livelihood systems were identified in the visited *kebeles*: (a) drop-outs from pastoralism; (b) pastoralists; (c) agro-pastoralists; (d) farmers, and (e) impoverished pastoralists and agro-pastoralists. These livelihood systems are likely to cover most livelihood systems present in rural Afar. The identification and characterisation of livelihood groups is important for at least two reasons: 1) it helps understand the potential for livelihood diversification, and 2) it helps differentiate interventions according to the needs and potential of each group.

Livestock is the most important asset for Afar people in all study areas and livelihood systems observed. The 'rich' category has largely disappeared and the 'medium' and 'poor' categories have now fewer assets. This has mainly occurred because the overall number of animals per household has decreased. Agro-pastoralists and farmers who are able to keep livestock seem to be the most successful livelihood systems.

Women are important users of natural resources with limited decision-making power and high vulnerability. Women and girls perform the bulk of the household domestic work, and an increasing, large share of the productive work. Increasingly, women are found to be the bread-winner. Securing water is by far the most time consuming activity of women.

A number of organisations have been created in the last years (mostly within the last decade) that have particularly supported income generation activities for women, including women's cooperatives of diverse types. The most frequently ones are credit and saving cooperatives. Income generation opportunities are mostly related to livestock production (livestock fattening, milk) and farming. Most of the pastoral and agro-pastoral cooperatives and associations visited are characterised by lack of basic skills in marketing, planning, and financial management. In most of the cases observed, the number of members is too high, with profit per member very low. This field can be improved considerably.

Action item:

- Prioritise initiatives to promote a more rational use of water and livestock.
- For project implementation and community participatory activities with women, address women head of households but also married women non-head of households.
- Dynamics of women participation are site-specific. It is important to gain a clear local understanding in order to define communication and participatory approaches.
- Working with established IGA groups will require advice in reducing number of members and developing realistic cost/benefits analyses.

5. Analysis of findings

Field study results indicate that the observed current management practices and dynamics of social relations are strongly challenged by the continued population growth, unpredictability of climate change impacts and shifts in the balance of power relations between customary institutions and government. Evidence of this is seen in the severe degradation of the landscape, increase in poverty levels, erosion of household assets and chronic long-term food insecurity. Under these circumstances, resilience of communities becomes limited.

5.1. Gender access, use and control over resources

Results and findings were analysed under the perspective of gender access, use and control over critical resources for Afar people: land, water, and livestock.

5.1.1. Land

In the Afar region, rangelands are de-facto controlled by clans.[95] However, communal land tenure rights are not supported by land titles. Clan members use rangelands communally in all the *kebeles* visited. Although pastoralists do not refer to their land size in units of land (e.g. hectares), they have a clear idea of the limits of their communal land. The traditional marriage systems, *absuma* (inter-cousin marriage) and the custom of a widow to be married with her husband's brother, ensure access to rangelands in different areas as well as land ownership remaining within the same family.[96]

In all areas visited, rangelands appear to be severely degraded due to overgrazing and firewood extraction. To a minor degree, conversion to rain-fed cereal production in the visited areas is an additional reason for rangeland deterioration. Invasive species of *Acacia* and *Parthenium* are problematic in large areas of rural Chifra. Even though *Prosopis juliflora* as a major invasive species is not yet a widespread problem as it is in other parts of the region, its expansion is becoming a threat for rangelands and farming land.

Traditionally, Afar people have used a rangeland management system based on restricting access to certain pasture areas during defined periods in order to allow vegetation to regenerate ('*desso*' in local language)[97]. However, interview partners in this study scarcely mentioned this practice. On the other hand, what was emphasised during the interviews was the clans' authority to define grazing areas. In cases where fenced areas for rain-fed agriculture were found, *kebele* residents were managing them individually. An exception was found in Sidihadaba *kebele* were the women's cooperative manages fenced areas collectively.

Soil erosion protection measures have been promoted and implemented by government and cooperation projects with diverse degree of success, technical appropriateness and community participation. PSNP is the major government programme involved. Examples of failed rangeland rehabilitation practices are widespread, including techniques adopted from the highlands.

[95] For details regarding traditional land use and property rights, see Schmidt, M. & Pearson, O. (2014). Research Study on Natural Resource Management, Ecosystems and Biodiversity in Afar, Ethiopia - Socio-economic assessment. *In:* GIZ (ed.). Institute for Economic and Cultural Geography, Leibniz Universitaet Hannover
[96] Schmidt and Pearson, 2014
[97] Schmidt and Pearson, 2014; 2016.

In the irrigated farming areas of Mille River a process of registering land and acquiring land certificates started about six months ago. Farmers with a history of farming their lands are in the process of receiving a land certificate. This includes also highlanders that have been working the land for a long time. However, many *kebele* residents do not yet seem familiar with the land certification process. Acquiring a land certificate also means starting to pay taxes. In the riverside areas visited, there is no more free land to start farming and therefore, nobody can claim land rights anymore. Although land to be cleared for agriculture (pasture areas) is suggested to remain abundant, lack of irrigation water precludes its use. An additional problem preventing the use of uncultivated land is the presence of wild animals, dangerous for people and problematic for crop success.

In rain-fed farming areas, fieldwork findings suggested that any *kebele* member can fence an area and start farming, without need of a permission.[98] The only apparent requirement is to be Afar, from the same clan or even same sub-clan. Permission from the *kebele* leaders in agreement with clan leaders seems only necessary if there is a conflict of interest over use of the land for pastoralists or a change in the environment, e.g. necessity of cutting trees for farming. These rules seem to be linked to social relations within the communities, i.e. clan alliances; thus context specific.

Women in Ethiopia and more notably in Afar region have disproportionally low access to land and other productive assets, which directly implies that gender equality policies and practices have gendered constraints to be effectively implemented. In 2009, only 18.8% of landholders in the country were women[99]. Although women are not legally excluded from accessing farming land ownership, they are customarily excluded. While women have legal right to access farming plots and land certificates, in Afar[100] farming land inheritance is still managed according to customary laws that include *Sharia* rules. A farming plot is inherited from the father to all sons and daughters; however sons receive more land or have more rights than daughters as they are supposed to sustain their own families. It is assumed that daughters will get married and be sustained by their husbands' clan. For example, in Mosquit *kebele* from 150 farmers associated in the irrigation association (owning one or more irrigated plots) only three were women. All of them were widows.

When local informants related to the project implementation were asked about the possibility of conflict over use of improved land due to the ASRP, most of the respondents indicated that it is improbable that such conflicts will arise. However, when project beneficiaries were consulted about who could use the rehabilitated land, thus who could claim rights, the answers were not clear for *kebele* residents. Two issues called the attention of the study team. One is the fact that the lack of farming tradition for most pastoralists interviewed prevents them from envisioning how the potentially improved/rehabilitated land can be distributed or used and what claims could they make. The second is the fact that in areas of good soil and reliable perennial water sources processes of land concentration are evident. A small number of persons with farming skills, market information and capital are the ones farming most of the land. Pastoralists lacking the necessary mind-set of (sedentary) farmers may not be successful in claiming

[98] Interview to kebele representative and the leader of irrigation water users' association, Mosquit kebele. 15.12.15
[99] MoA (2011). Guidelines for Gender Mainstreaming in Agricultural Sector. Addis Ababa: Women's Affairs Directorate - Ministry of Agriculture.
[100] Group interview to Gifti Awal Kabeer, religious leader and several *kebele* residents, Mosquit *kebele*, 15.12.15

rehabilitated land. Apparently, there are no formal or informal mechanisms to prevent land concentration. These observations are confirmed by a previous study.[101]

5.1.2. Water

Rural residents use water from perennial and seasonal rivers communally. Access to water cannot be restricted to people and livestock, except when irrigation schemes are in place. In irrigation schemes, water access is restricted to irrigation water users. Most of the time, *kebele* residents use the same water source for multiple uses, e.g. water river for irrigation and livestock, but also for drinking, cooking and other domestic uses.

Domestic water

Women bear the responsibility for securing water for the household needs, sometimes assisted by children, in particular girls. The presence of a permanent water sources, e.g. Mille river, or a water reservoir near the communities obviously reduces vulnerability of women and children. Examples were found in Mosquit *kebele* (deep well with a fuel pump) and in Shaqayi-boro (piped water supplied by an electric pump). However, *kebele* residents indicated that pumps are not always functional. In Sidihadaba, the existing two birkads are used by women during the rainy season and after some erratic rains (Photos 5 and 6). Although with the limitations that these constructions have, their usefulness was obvious.[102] When *birkads* carry water, walking distance diminishes from 4 hours (return trip) to 10 minutes.

Photos 5, 6: Birkads in Sidihadaba tabia after a rain event in November, 2015.

Drinking water quality is of paramount importance, and precarious in all areas visited. When piped water is not available in the visited *kebeles*, women collect water directly from the rivers. When asked about what treatment they apply to this water, only in some cases people mentioned boiling water. Personal observations indicated that most people, in particular children, drink river water without any treatment. It

[101] Schmidt and Pearson (2014) indicate that Afar rural pastoralists in their areas of study (Zone 4), are unaware of the potential changes that the sedentarisation programme may bring to their life style and livelihood strategies.
[102] Similar observations were made in Somali region during 2014, where the massive use of birkdas apparently makes a difference improving the wellbeing of the residents and their livelihood options.

is commonly observed that the rivers are used by animals and human simultaneously for many different purposes.

Production water

When a permanent water source is available, agriculture can sustain livelihood systems. However, irrigation systems and water use practices observed during this study were found to be inefficient.

In irrigated areas bordering Mille river, farmers divert river water using traditional hand dug canals. No pumps were in use in the areas visited. Hand dug canals are by far the most time consuming and physically demanding activities of farmers in this area. In addition, the maintenance of these canals is permanent, as farmers have to dig them after every river flood. Irrigation efficiency is very low with considerable losses of water.[103]

Photo 7*:* Irrigation scheme, Hida *Kebele.*

In the riverine areas of Hida *kebele*, a Canadian cooperation project supported the construction of a cement canal and a water diversion weir that significantly improved water use and distribution. However, the use of irrigation water still seems highly inefficient (Photo 7).

In regards to the ASRP project, pastoralists perceive as a tangible benefit that water is available in areas where it was running away before after a rain or flood (Photo 8, 9). In fact, once pastoralists got used to having this resource available, they started to demand that the same actions were extended to other areas.[104] The presence of a water point closer to households is a direct benefit for women. Pastoralists are using this water for their animals but also for household use. Before the construction of the WSW, women were fetching water from Awra River, about 4-5 hours walking time. With the project, they have water available at a maximum of 30 minutes walking time.

Photos 8 and 9: Water reservoir in Kalkasa, Awra *woreda*. Field visit with technical team, 16.12.15.

[103] Fieldwork observations for this study estimate that about 70% of the irrigation water is lost under current irrigation management conditions.
[104] Interview to *kebele* residents in Awra, Kalkasa area. 16.12.15

5.1.3. Livestock

For most of the (agro) pastoralists who participated in this study, livestock represents the primary source of income to cover household needs, in particular during the dry season and under extended droughts. In addition, rearing livestock is the only productive asset that allows using communal rangelands and to get some benefit from degraded land. For most rural women, owning livestock represents the sole financial security under their control to cover family needs. During rainy season, milk production is basis of food consumption for pastoralists. For many households interviewed, animals (in particular cattle and camels) guarantee the financial capacity to provide children with higher education levels. Hence, keeping livestock will continue to be a priority for rural Afar people. As observed in this study, when people have any income surplus, they purchase animals.

As a coping strategy to deal with an increasingly degraded environment, (agro) pastoralists herd a mixture of livestock, namely sheep and goats, cattle and a few camels. In doing so, different strata of vegetation are used. In addition, splitting wealth in different types of animals allows managing it according to the household seasonal needs.

As mentioned elsewhere in the study, the wealth of Afar pastoralists and agro-pastoralists has been eroded with the increasing loss of animals (see section 4.3). Pastoralists who used to be wealthy are now having much less flexibility to utilise destocking and restocking coping strategies. Pastoralists who used to be of medium size are only able to maintain their remaining livestock with extended migrations. Pastoralists who were poor have become poorer and live at subsistence level. As a result, any intervention that deals with management of natural resources must incorporate strategies to help improve (rational) livestock management. This includes prioritising water and rehabilitated land for sustaining livestock.

Despite the dominant role of livestock in the livelihood composition of most households in Afar, animal production conditions are very poor in all key production aspects including animal health, nutrition management, animal fertility and linkages to market.

Livestock ownership imposes a clear and immediate gender inequality constraint on women. During this study, no women were found owning oxen. Also in the entire region, as well as in other pastoralists areas, customary practices impose that women do not have the right to manage, produce or get their own profit from high value livestock sales, e.g. cattle or camels, even though women may have access to these animals and are found taking care of calves. Only ownership of relatively small herds of sheep and goats is culturally accepted for women.

5.2. Gender participation in natural resource management

One of the questions to address with this study referred to the interest of pastoralists and agro-pastoralists to use the potentially rehabilitated land resulting from the ASRP implementation. Findings from the fieldwork indicate that community members have an obvious interest in practices that work and make sense. Both pastoralists and agro-pastoralists are interested in preventing land erosion. As one could expect, pastoralists mentioned that they would like to see more pasture and available water in the

recovered areas. Agro-pastoralists seemed also motivated with the possibility of producing food crops in those lands. The presence of water in areas where before it was lost is highly valued by everybody.

Communities seem aware of their land management problems; many are willing to incorporate soil management and water conservation practices. However, findings from this study indicate that community members still need to be made fully aware and convinced that important causes of the current severe land degradation arise from their own poor management practices (e.g. unrestricted extraction of wood; pastoralists using whatever grassland areas they can to feed their animals). This is only possible if communities become fully engaged at every stage of the process in order to create a sense of ownership with the project but also with the decisions made by the project. Critical for this process is that communities feel that their opinions are not only heard but also taken into account.

Apparently, women were not well represented in the consultations and decision processes of the ASRP as none of the women interviewed indicated knowledge of the project. In many rural settings like Afar, this low female participation is usually assumed as 'normal'. However, it is the result of cultural and social barriers to participate in public and in community participatory organisations. These barriers are usually lack of land titles, limited acceptance of women in public or heavy workloads within the household. Additionally, women have rarely been recipients of extension services related to technical aspects of soil and water conservation management. However, as main water users, firewood collectors and livestock carers, women have traditional knowledge that often remains underused. This low participation may be even exacerbated by projects that fail to understand the dynamics of social relations of gender.

On the other hand, the motivation of women to actively participate in natural resource management committees or associations (e.g. attend meetings and speak up) can have multiple reasons. Severity of resource constraints has been observed as one of the most influential factors for women to participate and raise their claims regardless of how restrictive their cultural settings are[105]. In other words, the level of pressure to find solutions conditions the response of women to traditional barriers to participation. In the study areas, this was noted for example in Sidihadaba *tabia*, where women decided to take the lead in managing their resources. Likewise, when women were individually consulted regarding their understanding of the environmental problems of their land and the potential benefits of the WSWs, in most cases, women showed understanding and willingness to get skills to improve.

5.3. Social relations of gender and their impact on livelihoods strategies

Rural people in Afar have reached a point where acute survival needs outweigh traditions and cultural restrictions. The loss of large parts of the animals, loss of the traditional pastoralist role and diminished role of the male in securing income and wellbeing for the families, have a strong impact on all, men and women. For women, the overload of work and worries about securing water and food for the family is a constant source of physical and psychological distress (see section 4.7 for details). They have increasingly become 'bread-winners'. Male pastoralists, on the other hand, have reduced their involvement in production activities, while there are very limited alternative livelihood options to replace what they were

[105] Bennett, V., Dávila-Poblete, S. & Rico, M. N. (2008). Water and Gender: The unexpected connection that really matters. *Journal of International Affairs,* **61**, 107.

doing before. Men must confront a mental image imposed by cultural patterns and the changing reality (one of the reasons to become khat chewers). All combined make men physically and psychologically vulnerable, leading to conflicts within their families and financial struggles. In contrast, male farmers or, for example, participants of the GIZ masonry training, appear motivated, feeling useful and with a more optimistic attitude. Equipping men with skills that could help them earn income makes it easier to re-adapt to the social and economic changes.

It was noted that Afar women have a strong capacity to get organised, to establish collaborative relationships with other women and men and to learn quickly. As one key informant observed in this respect: *'you tell women a new thing only once. They don't forget'* [106]. In addition, several rural men interviewed seemed very open and supportive of women participating in activities that may contribute to securing incomes for the family. This may include attending training activities away from home.

Conclusions of this section

Impoverishment of Afar pastoralists and agro-pastoralists has hindered the wellbeing of all. The ability of women and men to participate in and benefit from the ASRP is greatly dependent on their access to key resources (land, water and livestock), their capacity to use the resources (knowledge) and to effectively participate in decision making about interventions. In practical terms, this may requires establishing specific and explicit community agreements, as well as adapted capacity development efforts.

It is evident that the current interests of male and female pastoralists and agro-pastoralists on natural resource rehabilitation focus on water, food crops and fodder. At present, alternative livelihood options are very limited. However, there are many opportunities to improve the existing key assets of people: rangelands and farmland, use of water and livestock.

This chapter discussed key issues related to what sort of social relations are established in the studied communities, and how those relationships may influence the use of the resources generated by the project. Even though social relations of gender have been usually negative for women, at present the critical survival needs of Afar people seem to be shaping alternative roles for men and women.

Recommendations to address key findings presented in Section 6 will be linked to the livelihood diversification options offered by the current environment and how people can access those opportunities, including how people get the necessary knowledge.

[106] Chifra, December, 2015.

6. Conclusions and recommendations: Integration of a gender perspective into the GIZ/ASRP

The overall goal of the gender and livelihood analysis was to provide a description of gender roles and relations in the project areas as well as of the livelihood strategies that men and women use to meet their needs. As the ASRP had recently started when this study was conducted, insights, conclusions and recommendations of the study aimed at assisting the Project Management Team to incorporate a gender strategy into the ASRP as stated in the GIZ Gender Policy.

The current assessment, as well as other studies previously conducted[107], has provided significant evidence confirming that the current natural resource systems under continued degradation and population growth are not able to sustain the long-term survival of the traditional pastoralist livelihood systems. In areas where farming is possible and there is potential for reliable irrigation water sources, agriculture can provide significant contributions to the livelihoods of households. However, small-scale farming seems under threat with the advancement of investors and large-scale commercial agriculture.

Throughout the assessment, it was difficult to differentiate between problems arising from gender-based constraints and those being the result of the generally difficult struggle to ensure livelihoods in several occasions. For example:

- Women are found to access fewer assets and opportunities than men. However, Afar male pastoralists and many farmers are also marginalised from development and their traditional property rights are increasingly threatened.
- In all areas visited women suffer important constraints and restrictive cultural barriers to access livelihood diversification options. Nonetheless, opportunities for livelihood diversification are very limited for both men and women.
- Women are recognised to play a significant role in management of natural resources but they usually have a limited share in decision-making power and face systematic constraints that hinder economic empowerment and well-being. These systematic constraints in the ASRP areas include limited access to land, water, credit, inputs, equipment, and information. Results from this study indicate that impoverished male Afar pastoralists suffer similar systematic constraints.

These issues, in addition to the limited sense of vision and future that most people seem to have regarding what they can do by themselves and what alternatives they have, deepened by chronic food aid support define a complex context within which meaningful interventions must be devised.

Not less critical is the fact that institutions and governance systems in place suffer from insufficient resources and technical skills.

[107] Schmidt and Pearson, 2016; Alemu, G. (2015). Accompanying Pilot Participatory Land Use Planning in Pastoral and Agro-pastoral Areas in Chifra Woreda, Afar. Addis Ababa: GIZ.

Key findings of this livelihood and gender analysis suggest that an effective approach to promote gender equality should include:

- Addressing systemic constraints of rural women in the ASRP areas (lack of secured access to production resources, information, and markets);
- Engaging men as stakeholders and partners in gender equality efforts; this includes community representatives; community facilitators; project team members and government officials that demonstrate genuine interest in gender equality;
- Reinforce the integration between the 'engineering', the community development and the socio-economic aspects of the project.

Such an approach demands to integrate gender considerations in both the institutional and technical activities of the project across all tasks and components. This should be reflected at each stage in the project management cycle and across project documents (work plans, performing monitoring plan, etc.).

Recommendations at implementation level: Opportunities for developing livelihood strategies with a gender equality perspective

This section presents recommendations for integrating a gender equality approach within natural resource management in three key aspects:

i. Improvement of critical people's assets: *water, land, livestock, knowledge and social capital*
ii. Opportunities for livelihood diversification
iii. Approach to bring practical knowledge into the system

i. Improvement of critical assets of Afar people in the ASRP areas:

Drop-outs and impoverished (agro) pastoralists live with a chronic livelihood vulnerability that threatens their survival. Most of these communities depend on food aid and other forms of assistance. Better-off (agro) pastoralists and farmers, while not depending on food aid for their survival, are challenged to protect their existing livelihoods. Women's tasks are closely dependent on the amount and condition of the natural resources they access. As natural resources compose the base of livelihoods of most Afar households, any improvement in natural resources directly improves the life and wellbeing of people.

- **Water availability and water use**
  Water is the most important asset for all communities. Any intervention that leads to an increase in water availability becomes number one priority for all people.

Action item:

An increased amount of water available as a result of ASRP activities can be used cost-effectively if it sustains the main asset of people, livestock, in addition to the household needs. Accordingly, improved forage production is a priority. Use of "in-situ" rainwater management, e.g. micro-basins for shrubs and trees (currently not much used in Afar), is recommended.

- **Land and vegetation management**
  Restoration of rangelands limits the offtake available to pastoralists due to, for example, areas occupied by WSW constructions or grazing exclosures. Therefore, alternatives to compensate what they lose will help to ensure commitment of communities to restoration efforts.

Action item:

Support for firewood production for own consumption with appropriate species and technical assistance to produce reserve forage (using adapted rain-fed species for lowlands) are recommended. These two elements also bring direct support to women. The use of native species should be promoted.

Field observations indicate that in large parts of the Afar rangelands seed banks have already lost valuable forage species, especially perennial grasses due to overgrazing and prolonged dry periods. Even though more moisture becomes available, without an **assisted vegetation restoration** project beneficiaries may not be able to see benefits in their lifetime. For example, residents in Sidihadaba *kebele* were aware that despite a successful enclosure of extended pasture areas with grasses 'coming back', not all valuable species were restored. For this reason, they have been discussing with a cooperative producing *malif* (*Andropogon canaliculatus*) to access seeds. However, the problem is lack of technical knowledge. They recognised the need to know how to appropriately manage restoration activities.

The interview with ICRISAT indicated that the institution is experienced in supporting this type of initiatives in other countries. Their technical support should be supplemented with an understanding of how to transfer farming knowledge to pastoralists communities not used to think and produce as farmers. The Awra Research Centre seems to be a potential appropriate partner in this matter.

Action item:

Implementing **detailed rangeland inventories of species** should be part of the resource mapping proposed by the recently developed manual for *Woreda* Participatory Land Use Planning (WPLUP)[108]. This can create a skill development alternative. A selected number of community members in the project areas could be trained as field assistants in rangeland inventory, which in turn would create local capacity to take over the rangeland management work after the project is concluded. Both women and men should be included.

According to field observations, communities seem to be well aware of the necessity of restoring their rangelands, improving their soils and of course, increasing water in their systems. However, it was also observed that unless all community members agree on which conservation management measures they need, how improved resources will be used and by whom, and commit to respect those agreements, success and sustainability of those efforts are uncertain.

[108] MoA (2014). Manual For Woreda Participatory Land Use Planning In Pastoral And Agropastoral Areas - Volume I. *In:* Rural Land Administration and Use Directorate - Ministry of Agriculture (ed.).

Action item:

The project should provide women and youth with meaningful representation. Development of leadership skills must be part of the participatory land use planning. Selection of representatives of pastoral groups should consider:

- Consultation with both *kebele* and clan leaders, and community facilitators.
- Not only female heads of household should be included in participatory activities, but also married women who are not head of households.
- Youth representatives, boys and girls, should be included.

- **Livestock**

  For Afar livelihoods, livestock is the pivotal asset. Although this is not an area of direct support of ASRP, it is obviously interconnected. Efforts to improve rangelands and water access should integrate a rational livestock management approach, in terms of land enclosure and reduction in the number of animals. This requires technical support in reproductive management and the provision of veterinary services. Throughout the study, it was evident that any improvement in water and fodder motivates pastoralists to have more animals. This includes also any income surplus from farming. Good support for pastoralists and agro-pastoralists in improving their livestock productivity (e.g. improving health condition and fertility rates of local livestock) and reducing number of less productive animals is very important. In addition, the only rational option for livestock producers to reduce the size of their herds is to increase the monetary return. Thus, complementary to improving livestock productivity it is important to improve market access and profit.

Action item:

It is recommended to use practical, targeted trainings, integrated into the watershed management activities. Such animal management training may involve training of local trainers that could spread these practices. Both men and women should be included. Indigenous knowledge should be assessed, valued and incorporated in such capacity development initiatives.

As these activities are outside the mandate area of the ASRP, agreements of collaborative partnerships with other organisations are recommended.

- **Knowledge:**

  Most people interviewed in the project areas suggested that their most important constraint is their lack of knowledge and education. This is true in all areas of natural resource management, agricultural production and access to livelihood diversification opportunities. For example, when conditions are favourable for agriculture, food production and incomes from farming seem to be acceptable to sustain households. However, the key limiting factor is knowledge. Most interviewees strongly emphasised the need of technical support to improve their productions.

Action item:

Recommendations on how to address needs of knowledge and capacity development of project participants will be further addressed in point iii) of this section.

- **Social capital[109]:**
  For a meaningful impact of a NRM programme, support and promotion of collaborative forms of participation of beneficiaries and community mobilisation are critical. Afar people see themselves as having a strong sense of collaboration and support for community members in need. However, informants also deplore an increasing loss of the traditional networks, mainly due to households becoming poorer and the continuous erosion of the traditional pastoralist lifestyle and governance systems. The long-term provision of food aid and cash for work programmes are also important contributing factors.

Action item:

Support for community empowerment and mobilization should be advanced as follows:

- Providing technical knowledge (as already discussed in NRM, livestock and agriculture).
- Advocating with government institutions on the need of long-term land use access rights. Otherwise, communities and individuals will lack the incentive to improve the land or to take over construction maintenance responsibilities after the project is completed.
- Ensuring that impoverished women and men who use rangelands are equally represented in community institutions for sustainable rangeland management (WPLUP recommends 'rangeland management units'). A careful and early discussion with communities is essential in order to avoid conflicts or unequal distribution of project benefits.

It is important to note that the social dynamics of a community may not be the same everywhere, even if people belong to the same clan and sub-clan. Social relations and balance of power between *kebele* residents are highly site-specific. Therefore, it is recommended that in order to pilot methodologies a careful selection of suitable communities is conducted. Selection criteria that include gender and community equity considerations could increase chances of including communities that will effectively share project benefits equally.

Action item:

Suggested selection criteria for communities may include:

- Willingness to share communal resources and intervention benefits equitable (agreements are made on how rehabilitated areas will be utilised).

[109] The term 'social capital' is used to describe one of the vital assets for sustaining livelihoods of people. The concept refers to the social relations, norms, agreements and regulations ensuring that natural, physical, human or financial assets truly contribute to sustain livelihoods of the people in the study areas.

- Willingness to allow equitable representation and decision making power of all community members, including women (agreements are made to form community organisations with equal participation of men and women)
- Willingness to engage in long-term project activities even when project support is discontinued (agreement to contribute labour and materials before and after the project is completed)

In addition, identification and involvement of community facilitators or 'community mobilisers' who are trusted, whose knowledge is legitimised by the community and who have a good understanding of intra-social dynamics is critically important[110]. For example, (fair) targeting is a very difficult issue for most projects. It is common that *kebele* leaders are consulted by projects to select participants for training or paid labour opportunities. Often selections are not fair and opportunities are restricted to a small group of people. This is also observed when the same group of women of a community is selected repeatedly for interviews, to participate in trainings or IGAs because they cumulate some knowledge or experience and project managers ensure a good performance.

Action item:

Fair and equitable targeting of project participants could be ensured with an effective community facilitator. The community mobiliser should also have knowledge of technical aspects of the project, e.g. watershed management; agriculture; livestock.

Finally, technical aspects of the project should not be separated from community development, community mobilisation and integration of gender. In fragile natural and social environments such as in Afar, failing to implement a comprehensive approach will jeopardise potential project success. It is critically important, for example, that project engineers (even if they are not expected to be social experts) are trained to discuss with local communities, listen to their opinions and openly communicate their findings with the implementation teams.

Action item:

In issues of integrating a gender equality perspective into the project, it is important that technical staff members are equipped with skills and abilities to support the process.

[110] For example, during the fieldwork for this study, the research team had two distinctive experiences when approaching communities. Initially, the study team visited *kebele*s with a female translator that was not from the area. Although it was possible to interview groups of women alone, interviewees did not provide much information. In successive visits, the study team was accompanied by a local young man, who has relatives in several of the communities visited, who has worked as agricultural extension officer for many years in the area of Chifra and whose personal integrity was highly valued by all. Having him supporting the field work allowed the team to gain immediate trust and willingness to collaborate among all people interviewed.

ii. Opportunities for income generation alternatives and livelihood diversification

As discussed in other sections of the study, in Afar, livelihood diversification opportunities are limited for all men and women. However, a number of opportunities for improving productions and incomes are directly linked to **the underused potential of their existing assets**.

- ***Piloting integrated watershed - livestock management model***

Underused opportunities exist for improving livestock production and therefore, incomes from the activity. Afar is recognised as one of the traditional livestock sources for export markets. In particular, lowland sheep and goats have a high demand for Ethiopian export markets. Still, problems in productivity, quality and marketing of live animal and meat remain largely unresolved.

Although there are many organisations working in livestock fattening with rather positive economic results, support in animal health, nutrition and fertility is still critical. A recurrent limiting factor observed during the fieldwork is the poor access of pastoralists and agro-pastoralists to markets of higher value for their livestock and livestock products. Individual pastoralists face difficulties to access markets due to the long and complicated channel of actors along the value chain (animal collectors, middlemen, traders, trading cooperatives, exporters) and fundamentally, because of lack of access to information and organisational and managerial skills. Efforts to improve livestock management and get advantage of market opportunities are more efficiently achieved through the development of organisations of pastoralists, such as animal trade associations or cooperatives. Although there are many opportunities for improvements in this area, a significant challenge is to help pastoralists to produce according to the required quality standards and volumes. An important constraint is the weakness of veterinary services accessible by livestock producers. Limited effective work seems to be in place.

Action item:

As direct support to livestock activities are outside of the scope of the ASRP, agreements of collaborative partnerships with other organisations are recommended. For example, it is suggested to explore alternatives of collaboration with Save the Children in aspects of livestock marketing and value chain improvement. By the time of the interviews for the study, Save the Children was negotiating with traders of other regions about support for Afar producers. Apparently, the opportunity is beneficial for local producers as some exporters may also cover transportation costs.

A **livestock producers' need assessment** among project beneficiaries is recommended. Such study could serve as a baseline to support piloting integrated watershed - livestock management model, targeting the different needs of different types of project beneficiaries in terms of rangeland management and production aspects.

- ***Agriculture***

In terms of farming practices and opportunities for diversification, two key aspects are important to address: (a) technical support and (b) approach for assistance:

(a) Technical support is needed at all levels:

- *Basic farming practices*, such as soil nutrient management (manure was virtually not used in most of the places visited); sowing; plant protection; storage of grain and seeds for the next campaign,

– *More specialised skills* such as selection of appropriate crop varieties, use of pruning and grafting techniques, use of appropriate varieties and mother stocks for fruit production; issues related to post-harvest management.

(b) The second remarkable issue relates to people's mentality and attitude towards projects and assistance. The long-term presence of cooperation projects and chronic food aid has worked in detriment of self-initiative of people and willingness to lead their own solutions. For example, some farmers in the vicinity of Mille river, owners of land and accessing water, indicated that they would diversify their agricultural productions (from low value crops such as maize or sorghum) if someone gives them seeds.

In terms of farming alternatives in areas where the WSWs are constructed, careful assessments and trial of alternative crops needs to be performed. For example, while promoting high value crops such as vegetables is desirable, it is key to consider specific crop agro-ecological requirements. Crops that need irrigation in specific amount and timing, good drainage of soils and specific pest management may result difficult to produce in areas recently rehabilitated, where water is not permanent or soils lack structure. It was observed that even in good soils under furrow irrigation in areas of Mille river, farmers lacked basic knowledge of tomato and hot pepper production and their crops were failing.

Action item:

Opportunities for successful agriculture exist in areas where soil and water is available and reliable:

- Men are usually responsible for cash crops. Upgrading their farming skills would increase yields with direct improvement of incomes. For example, there is a need to spread the use of short cycle maize varieties.
- Use of conservation agriculture, i.e. low tillage in order to avoid soil inversion and therefore, decrease erosion and improve water retention. This requires weed management, which is usually performed manually (and tends to be a task performed by women).
- Use of crop species and varieties suitable for production under the water restrictions of rain-fed agriculture.
- Crop rotation should also be promoted in order to increase yields (most farmers indicated cultivating maize continuously during several years)
- Field results indicated that there is a need to improve grain storage facilities, both of seeds and grains. Seed banks are not in use in the areas visited.
- Many women are eager to get farming skills and knowledge. Opportunities exist for example, in training selected women in agricultural activities such as nursery production of fruit trees; production of vegetable seedlings of high value such as tomato and hot pepper; management of onion and garlic seeds and bulbs. Garlic has good market value. It is important to note that these initiatives should be accompanied by market assessment and market creation support.
- Fodder production using irrigation should be promoted.

These initiatives should be complemented with extension services adapted to the specific training and learning requirements of specific groups of project beneficiaries. This aspect will be further addressed in part iii) of this section.

- ***Producer associations***

This field can be improved considerably. Most of the pastoral and agro-pastoral cooperatives and associations visited (see Annex 4) are characterised by lack of basic skills in marketing, planning, and financial management. In most of the cases observed, the number of members is too high, with profit per member very low. In most cases, cooperative members are very motivated and committed to improve. They have clearly understood that working together is better than producing individually.

Action item:

In project areas, a number of already existing associations could be selected to provide or facilitate assistance in the development of basic business plans, realistic cost/benefit analyses and provision of necessary technical and managerial skills (for examples, see Annex 4). It is recommended to identify experienced local women and men with skills to be trained as leaders and mentors for newly formed groups.

In terms of finance management support, it is recommended to explore the use of alternative financial and saving instruments. For example, mobile money as a financial tool to support formal and informal associations appears promising. This service is provided by the Commercial Bank of Ethiopia and is available in Chifra[111]. In order to access this service, an individual or an association needs to open a bank account with the sole requirement of presenting an ID, two photos and an amount of 50 birr. A simple mobile phone is sufficient as the system only uses the SMS service.

- ***Non-farm income alternatives***

Non-farm income opportunities are at present rare in the study area. In general, female and male pastoralists lack skills that could allow them to make an additional income. Or, if the skills exist, they are not used for generating income. For example, in several occasions rural women showed the study team handicrafts and utensils made by them for the household or personal use. When asked if they would like to make those items for selling, invariably women said 'no'. Reasons given were that the making of these pieces is time consuming and they need them in their homes. It is suggested to explore this alternative more in detail in order to truly understand if there is a (viable) potential for income generation.

Action item:

An opportunity of limited use in the visited *kebeles* is the opening of small shops and selling of household items in the *kebele* centres. A few women interviewed suggested that they would like to do it but they do not know how to get started and how to manage a business. Women's local cooperatives could be linked to farmers and food providers in town in order to establish small business units in *kebeles.*

When opportunities for paid labour exist within the project construction or watershed management activities, planning and selection of jobs for women is recommended.

[111] Interview to Chifra branch of Commercial Bank, November, 2015.

iii. Approach to bring practical knowledge into the system

The technical recommendations provided for improving assets of project beneficiaries and creating livelihood opportunities must be implemented through capacity development activities that are adapted to the local learning needs of project beneficiaries.

This capacity development approach should be based on field days, short courses and vocational training. A suggested priority of topics include:

TABLE 7 PRIORITY OF TOPICS FOR TRAINING AND CAPACITY DEVELOPMENT ACTIVITIES

Training /capacity development activity	Target population	Implementation approach	Suggested duration	Priority
Short training in rangeland inventory: skills in vegetation surveying and inventory	- Selected women and men from different kebeles of a project woreda	One trainer, specialist in rangeland ecology. Consider use of the existing plant knowledge of local men and women.	According to project needs	Medium
Short training in vegetation restoration	- Selected groups of (agro) pastoralists from all project kebeles. - Members of livestock production associations	- Partnership with Awra Research Centre for field activities - There are cooperatives working in indigenous fodder seed production	1 - 2 weeks	High
Training in basic livestock management subjects	- Male and female youth members of project *kebeles*	- Collaborative partnership with local institutions working in this sector. APDA has long experience in these activities.	1 month and short follow ups (2 days) every 6 months	High
Training courses in crop production of interest and market opportunity, e.g.: - vegetable production for markets - fruit tree production	- Selected female and male farmers from farming *kebeles* who own land (groups of 10-12 persons). Also, priority should be given to women who are encouraged by family members to use farmland.	- Part of the training in an experimental field (e.g. Awra Research Centre), and - Part of the practical training using plots owned by community members	1 week in the research centre and 2 weeks in their *kebeles*, with regular follow up during the crop cycle	High

Short field training in diverse agricultural practices: - improved crop varieties - crop rotation - irrigation skills - pest management - preparation for market	- Groups of male and female agro-pastoralists and farmers	- Selected local trainer with good communication skills and good knowledge of the communities (e.g. PADO expert; NGO specialists)	1-2 days/field practice	High
Internship programme for girls from project *kebeles* on topics related to the ASRP activities.	- A selected number of girls from project *kebele*s, graduated from secondary school	-Training in Gewane ATVET - Scholarships covering small allowance, transport and accommodation	1 year	Medium
Training modules related to water supply and irrigation. Suggested topics: -watershed management principles -maintenance of structures - pump and equipment repair - electric/power installations repair - small scale community project management (e.g. access to inputs; communal savings)	- Selected groups of male and female youth members from farming project *kebeles*	- Trainers that mobilise to the communities - Support from Adadale Polytechnic College	Variable	Medium

Training poor, illiterate women under heavy cultural and workload pressures is difficult. This is the usual reason why the short timeframe of many projects targets only groups with promising chances of success in the short available periods of time. This clearly reproduces gender gaps in skills and deepens gender inequalities.

Skill development for rural women (and men) requires a combination of training in formal settings (such as training institutions), non-formal settings (such as community groups and NGOs) and informal ones (such as learning from rural peers). A successful example is the masonry training conducted by the

project.[112] While this training proved to be successful to train men, it was not possible to involve women. Interviews of participants of the training and other community members indicated that there would not be any issues in sending their wives for an extended training. However, the topic of the training should be appropriate for them. Interviewees in Adadale College indicated that the lack of proper accommodation facilities to host women is a limiting factor to conduct a similar training activity with women.

Important considerations for training women in new practical skills include:

- Appropriateness of subject matters and working opportunities after skills are gained; they must fit women's needs. In Afar for example, project beneficiaries need to ensure food and/or incomes
- Market demand for the acquired skills
- Logistics and accommodation facilities
- Low literacy of participants
- Domestic responsibilities
- Cultural constraints to mobility and 'empowerment' through knowledge[113]

In order to address these challenges, it is recommended to consider the following aspects:

(1) **Training facilities:**
   - To use local infrastructure, such as local elementary schools, present in most *kebele*s. Women would not need to travel long distances and be away from home for extended periods of time. In addition, costs are reduced.
   - Appropriate facilities include proper, safe accommodation (if necessary), childcare services and tool kits.
   - Use flexible training times that allow for household work or seasonal agriculture.

(2) **Curricula:**
   - Develop curricula that match rural women's needs. Consider the different kinds of indigenous knowledge and skills that women have and complement with new knowledge and skills. Both men and women in the communities visited asked for training opportunities for women in natural resource management and agriculture. This is an opportunity to raise the awareness among rural communities about the benefits of not only including women in training and work, but also in allowing women to have autonomy in deciding over their incomes.
   - Any vocational and technical training for women should be complemented by numeracy and literacy training for the women who need it. Some women, in particular the most disadvantaged, may also need training on gender issues and life skills, such as health and nutrition, confidence building, and basic finance management. Overcoming livelihood vulnerability involves a much wider set of abilities than just technical knowledge. While this is not a mandate of the ASRP, it may help to achieve project goals. Support from BoWYC could be sought.

[112] Masonry training conducted to 29 male trainees during 2015 by the ASRP-GIZ project in collaboration with Adadale Polytechnic College.
[113] It is not uncommon to hear men complaining if women start voicing their complains once they are aware of their limitations

(3) Trainers and extension personnel:

- Women trainers and agricultural extension workers should be pivotal for this type of training. It may also prove important that trainers can mobilise and train rural women at home or in their communities. The BoWYC and APDA may support with recommendations.
- As finding female trainers can be extremely challenging in Afar, a careful selection of 'gender-sensitive' male trainers, trusted by the community is an alternative solution. A 'gender-sensitive' male trainer is a man that understands the different needs of women and men, and has the openness to accept that cultural patterns are not necessarily static and can be modified. In addition, a 'gender sensitive man' understands and accepts that gender equality is desirable and should be promoted at every stage of the project implementation.

(4) **Trainer-of-trainers:**

- Provide gender-awareness trainings to male and female trainers and other staff of the project. Topics may include the diverse impact of unequal customary traditions and gender stereotypes in households and in fulfilling productive roles.
- Develop training manuals for trainers that include considerations to local literacy levels, language and gender diverse production needs
- Develop an internship programme through scholarships to facilitate girls to be trained as DAs and encourage them to pursue technical careers in the fields of NRM and agriculture. The internship programme could be developed in collaboration with BoPAD and NGOs working in the area.

(5) **Support for existing (formal and informal) associations:**

- Solid, already established women's groups would be good entry points to collaborate and support, by upgrading and diversifying skills.

(6) **Support youth, boys and girls:**

- Throughout the areas of the study, it was observed that boys and girls who do not continue education have time available. Young people may prove to be more amenable to adopt new knowledge and practices. In addition, they have less household tasks and obligations. Topics may include:
  - Basic watershed management principles and structure maintenance.
  - Other subjects that could be introduced to boys and girls who have received some education should include training in practical basic skills such as pump and equipment repair, electric/power installation repair, and plumbing for repairing local buildings.
  - Training mixed groups of boys and girls in basic knowledge about animal health and nutrition, identification of animal problems, and basic management aspects may be a useful approach to introduce necessary livestock practices that may be difficult to adopt by older pastoralists.

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Annexes

Annex 1: List of key informants interviewed

N.	Date	Location	Name	Organisation	Position	Contact information
1	19.11.15	Samara	Abbahina Kooba	BoPAD	Deputy Bureau Head President of Women Federation	
2	19.11.15	Samara	Workaferu h/Mikael	BoPAD	Biodiversity expert	
3	19.11.15	Samara	Zainab Abdurahman	APDA	M&E – Gender Department	09 12647233
4	20.11.15	Samara	Zeinozale	BoWYC	Child protection core process owner	09 20704161
5	22.11.15	Chifra	Mariam	CDC - APDA	Community development committee member	
6	24.11.15	Samara	Kamil	Water Bureau	Consultant in Irrigation and water supply from Ministry of Water	Mobile: 0911713880 E-mail: kamillucy@yahoo.com
7	24.11.15	Samara	Mohammed Sirage	Water Bureau	Water supply core process	Mobile: 09 11570800 e-mail: mamesi06@yahoo.com
8	25.11.15	Samara		WFP	Vice-Director	
9	25.11.15	Samara	Ahmed Mah	UNICEF	Chief of Field Office	
10	27.11.15	Chifra	Abdul Kader	GIZ-ASRP	Chifra Field Officer	
11	01.12.15	Addis	Tilehum Amede	ICRISAT	Dry land crop Expert	Mobile: 0911230135
12	08.12.15	Samara	Wasye Hassen	DPPC	Early warning, emergency and response Senior Officer	Mobile:0913226567 Email:0913226567. samara
13	08.12.15	Samara	Yayo Mohammed	DPPC	Capacity building technical assistance expert.	Mobile No:0913440823 Email:yayoilg@gmail.com samara
14	08.12.15	Samara	Aydahis Yassin	DPPC	Food security Senior Officer; Early warning, food security core process owner	Mobile N.:0913932907 Samara E-mail: aydahisyassin@yahoo.com
15	08.12.15	Samara	Various team members	Save the Children		Regional Office Samara
16	09.12.15	Assayta	Hussein Ahmed	Adadale Polytechnic College	Dean of the college	Mobile: 0920207574

17	09.12.15	Assayta	Tafari Ayyaalow	Adadale Polytechnic College	Technology transfer and industrial extension Vice dean	Mobile:0910340776 - 0911073899
18	09.12.15	Assayta	Arefaine Adane	Adadale Polytechnic College	Business, small enterprise expert	
19	10.12.15	Mille	Said Mohammed	PADO	Cooperative core process owner	Mobile: 0920571007
20	12.12.15	Chifra	Mohammed Bashir	Save the Children	Chifra Field Office manager	Mobile: 0911766131
21	15.12.15	Chifra	Tsehay Anteneh	Save the Children	EC share ECO program manager	Mobile:0913169644 E-mail: tsehaye.ante@gmail.com
22	15.12.15	Chifra	Yohannis Assefa	Save the Children	EC share project coordinator	Mobile: 0912752459 E-mail: Yohannis.assefa@savethechildren.org
23	16.12.15	Awra	Habib Musa		Chairman of Udali kebele	Mobile:
24	16.12.15	Hida Kebele	Mohammed Debale	Field research sites Awra Research Centre	Chairman	Mobile: 0940202456
25	16.12.15	Chifra	Mohammed Jamale	Afar Institute of Pastoral and Agro-pastoral research	Director Awra Research Centre	Mobile:0920545362
26	17.12.15	Chifra-Gariro kebele	Tedy Kebede	Teacher 5th grade	Gariro elementary school	Mobile: 09 68342687
27	17.12.15	Chifra		Commercial Bank	Executive officer	
28	18.12.15	Samara	Nur Mohammed	BoWYC	Women participation and development, and youth assurance Core process owner	
29	18.12.15	Samara	Saada Mohammed	BoWYC	Technical assistant WYC-UNICEF joint programme UNICEF Focal person	Mobile:

Annex 2: Demographic information of Chifra *woreda*

Source: Office of Finance, Chifra (December, 2015)

Kebele	**Total population**	**Female**	**Male**	**Under 5 age**	**Under 1 age**	**15-49 female**	**Pregnant**	**Households**
Chifra 01	10221	4497	5724	1028	275	2334	293	1793
Chifra zuria	4320	1901	2419	435	116	986	124	758
Jara	7071	3111	3958	711	190	1614	203	1241
Merole	5520	2429	3091	555	148	1260	158	968
Adear	4952	2178	2774	496	133	1131	142	869
Mesgid	3956	1741	2215	398	107	903	114	694
Askoma	6322	2782	3540	636	170	1443	181	1109
Geriro	5408	2380	3028	544	145	1234	155	949
Teaboy	5559	2446	3113	559	150	1269	160	975
Meglala	3805	1674	2132	383	102	869	109	668
Tegri	4641	2042	2599	467	124	1060	133	814
Anderkelo	7789	3427	4362	783	110	1778	224	1366
Waneba	6203	2729	3474	624	167	1416	178	1088
Amuli	5434	2391	3043	547	146	1241	156	953
Semsem	4470	1967	2504	450	120	1020	128	784
Dergera	4291	1883	2403	432	115	980	123	753
Yealu	3196	1406	1789	322	86	730	92	561
Guraele	7293	3208	4084	734	196	1665	209	1279
Afuma	5540	2438	3102	557	149	1265	160	972
Woama	4007	1763	2245	403	108	915	115	703
Total	**109998**	**48399**	**61599**	**11066**	**2857**	**25113**	**3157**	**19297**

Urban population: 14,541

Rural population: 95,457

Female population: 44%; Male population: 56%

Annex 3: Satellite images of kebeles visites and photos

Image 1. Shaqayi boro *tabia.* 11°36'53"N 40º02'04"E - Elev: 916 m. Ref. 'CH1W' represents WSWs

Image 2 (left): Shaqayi boro *tabia, fenced areas.* **Image 3** (right): WSW in Shaqayi-boro

Image 4. Mosquet *kebele.* 11°38'27"N 40°04'42"E - Elev: 887 m. Ref. 'CH4W' represents WSWs

Image 5 (Left): farmers in Mille River. **Image 6** (right): Mille River, women loading water

Image 7 (Left): irrigation water distribution; farmers in Mille River. **Image 8** (right): 'modern' hot pepper crop production, Mille River

Image 9 (Left): Traditional house construction, Mosquit kebele. **Image 10** (right): Traditional utensils made by women

Image 11. Sidihadaba *tabia,* settlements and seasonal river. 11º41'43.93"N - 39º57'05.25"E, elev1041m.

Image 12: Excluded pastoral area. Sidihadaba tabia.

Image 13. Hida *kebele* 11º55'56"N - 39º59'01"E, elev 982 m.

Image 14 (Left): Improved forage, Awra Research Centre, experimental field. Hida *kebele*. **Image 15** (right): Farmer in Hida kebele, *cassava* experimental production

Image 14. Kalkasa, WSW, ASRP. Awra *woreda* 12º06'57"N - 40º09'11"E, elev 780 m.

Image 15 (Left): Pastoralist household. Near Kalkasa. **Image 16** (right): Kalkasa, water reservoir after flood (December, 2015)

Annex 4: Examples of livelihood diversification opportunities in Afar region

- **"Dalo" Women Saving And Credit Cooperative - Anderkalo *kebele***

This cooperative has 58 members, all women from the Anderkalo *kebele*. They started 8 years ago contributing 2 birr/month per person, with support of PCDP. At present, they pay 10 birr/month per person. They work with revolving loans. Each woman receiving the loan decides individually on how to use it. During the group interview with cooperative members, most of the women explained that they use the loans to buy goats. During the dry season they reported selling half of their animals.

The typical number of animals that women said to have was between 5-10 goats per person.

When asked about their situation before and after the formation of the cooperative, all participants agreed that they are satisfied with the improvements.

- **Fikola fishing cooperative - Mille**

The study team visited the Fikola fishing cooperative in Mille town[114]. The cooperative is one year old and is composed of 52 members (14 women and 38 men). The members obtain fish from the Tendaho water reservoir. Their main markets are located in Mille town (27 km from the dam), and in Logia. The cooperative received financial and technical support from GIZ and Vétérinaire sans Frontières (VSF) Germany.[115] The fish production is seasonal: when the water level of the dam is high (after the rainy seasons), fish are abundant and cooperative members extract them with nets. During the dry season, boats cannot enter into the dam due to the low water level, and the members fish traditionally.

The main commercial fish species present in the Tendaho water reservoir are tilapia (*Oreochromis niloticus*), catfish (*Clarias gariepinus*), common carp (*Cyprinus carpio*) and *Barbus intermedius*[116]. In terms of total biomass, catfish seems to be the most abundant (70%)[117].

According to the interviewees, average fishing yields are:

- High season: 120-180 fish/day with maximum of 200 fish
- Low season: 10-20 fish/day

The production and marketing of fish in the area face several constraints identified by the cooperative members:

- Fishing yields are not constant during the year, forcing the cooperative to resort to other options during the low season. During the high season income from the fish production are enough to sustain the livelihood; however the situation is challenging in the low season. At present, this is the only income activity for most members. According to the interviewees, they used to have animals but they

[114] Interview to Fikola fishing cooperative chairman, and three other cooperative members in Mille town, 10.12.15
[115] Cooperative members were trained in fish production, processing and marketing. The cooperative received a solar refrigerator, which is located in the fishing area.
[116] Tesfaye, G., Cheffro, A. & Abegaz, H. (Year). Fish species composition, abundance and production potential of Tendaho Reservoir in Afar Regional State, Ethiopia *In:* Lemma, B. & Getahun, A., eds. Impacts of climate change and population on tropical aquatic resources, 2011 Haramaya University. The Ethiopian Fisheries and Aquatic Sciences Association (EFASA).
[117] *Ibid*

lost almost all. The maximum number of animals that members indicated having was about 10 goats per household.

- **Transportation** of the fish from the water reservoir to town (about 27 km to Mille) is problematic as the cooperative does not have a transportation mean.
- **Handling of fish** in terms of processing and storage facilities seems to be poor. Fish is refrigerated after fishing but it is then transported to town without refrigeration.
- In terms of **equipment and materials** the cooperative members mentioned not having enough appropriate containers for the fish.
- Regarding **market and marketing strategies** there is no tradition of eating fish among Afar society. Cooperative members affirmed that they need to expand awareness and knowledge about eating fish in order to expand markets.

Interviewees explained that they are trying to produce some irrigated crops (banana, mango and hot pepper). PADO provided two pumps, seeds and training. Interviewees indicated that crops were unsuccessful as they could not irrigate them during the dry season. The low water level of the dam was not enough for a proper functioning of the pump.

Regarding division of labour within the cooperative, the following roles were identified:

- Women are mostly involved in net making, fish cleaning, weighing and filleting fish for refrigeration;
- Men are involved in fishing, transporting and distributing fish in town. Men do the commercialisation and management of the money from sales.

- **Women's income generating activity (IGA) group – Mille town**[118]

The fishing cooperative promoted the creation of an income generating activity group (IGA) for a women's group to sell fish in Mille town. The group has 23 female members. They started activities in mid 2015, opening a coffee shop. The group is planning to sell food (fish dishes). They started with support of GIZ with furniture for the coffee shop. They also received training in fish handling and cooking. The group rents a place for the coffee shop in Mille town. At the time of the interview, they were only selling tea and coffee as there was not enough fish.

Regarding fish prices, commercialisation and marketing, the informant explained:

- IGA group buys fish from Fikola Cooperative for 25 birr/kg[119]
- The group expects to sell fish for 30 birr/kg. According to this interview, this women's IGA group committed to buy 30 kg/day of fish from Fikola cooperative.

- **Livestock fattening**

The government as well as NGOs has supported several fattening cooperatives, especially those run by women. However, in 2015 it has been reported[120] that a large number of those cooperatives are not functional due to the current drought and consequent loss of most of their animals.

[118] Interview to IGA's chairperson. 10.12.15
[119] By the time of the interview the members could not explain the conversion rate from a fish unit to kg.

The study team visited a women's cooperative in Sidihadaba *kebele*[121]. This cooperative was formed 8 years ago as a credit and saving cooperative. The cooperative members buy goats and sheep at the Chifra animal market. Animals are fattened with 'cut and curry' forage from their fenced areas during the rainy season; they do not buy additional feed. Animals are sold during the dry season. Goats are bought for 300-400 birr/animal and sold after fattening for about 1000 birr/animals.

- **Arrado Milk Cooperative (Assayta)**

The study team visited Arrado Milk Cooperative in Assayta. The cooperative is composed of 17 members (15 women, 2 men). One of the men is accountant; the other has a *bajaj*[122] and collects milk from producers. Members contributed 700 birr (start up capital) plus 100 birr/month. The cooperative rents a house in Assayta town for office space, milk processing and sales. They also have a milk collection centre in a nearby farming *kebele*.

Production and prices

- During rainy season, they receive 60 litres of milk/ day; during the dry season, they receive 20 litres of milk/day
- Purchase price: 40 ETB/3 litres; sale price: 60 ETB/3 litres
- Only during rainy season they have some milk surplus to process (butter and yogurt)
- Afar people buy milk without pasteurisation; for non-Afar people the cooperative sells boiled milk
- They received support from FAO (donation of a refrigerator)

According to the extension advisor[123], the main problems faced by the cooperative are:

- Transportation problem: the current transportation system (by bajaj) is precarious as it breaks often
- Lack of financial capital for acquiring improved technology for milk processing and necessary materials (aluminum milk jars)

When asked about their situation before and after the formation of the cooperative, all participants agreed that they are very satisfied with the cooperative. The female chairperson of the cooperative said that the only thing she would improve is access to more markets, as at present they are not well known in the area.

[120] PADO cooperative expert, Chifra. November, 2015
[121] Interview to cooperative members including chairwoman, 26.11.15
[122] Small, three-wheeled Indian car.
[123] Advisor for income generation activities from Adadale College. 09.12.05