Effectiveness of Participatory Approaches in Rural Development

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Case studies of rural communities in Armenia and Georgia

by

Rubina Devrikyan

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DECLARATION

I hereby declare that this doctoral dissertation is the result of an independent investigation. Where it is indebted to the work of others, acknowledgements have duly been made.

Rubina Devrikyan

Yerevan Armenia, January 2019

DEDICATION

I dedicate this research to the rural people of Armenia and Georgia who struggle for a dignified life

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ABSTRACT

The phenomenon of ‘participation’ has become an important notion in developing discourse during the last several decades, and a number of donor organisations and governments apply participatory strategies in their interventions. Many development agencies consider participation to be very effective and important for poverty alleviation programs. The debate regarding effectiveness of the participation includes pros and contras, thus participation becoming a contested term.

The present study has the goal of advancing the state of research regarding interrelationship between participation of local stakeholders and sustainability of rural development projects.

The objective of this study is to provide empirical evidence and insights regarding effectiveness of participatory approaches applied in rural water rehabilitation projects in Armenia and Georgia and their impact on project sustainability.

The dissertation seeks to identify whether participation of the local stakeholders has a significant impact on the effectiveness and sustainability of rural community projects, and to explore the extent of participation of the local people in the selected water rehabilitation projects in Armenia and Georgia, some of which have applied participatory approaches and others have used mainly supply-driven approaches in project implementation.

The research analyses whether the various participatory approaches have contributed to rural development, and if so, which approaches proved to be the most effective in the context of the selected countries.

A combination of qualitative and quantitative research methods has been applied in the study to balance the gaps of the respective approaches and enable the study be more comprehensive.

The research was accomplished in four rural municipalities: two in Armenia and two in Georgia.

In the framework of the present research, household surveys and household socio-economic surveys have been conducted with 206 members of the targeted communities in July and

August 2015, in-depth interviews with 80 stakeholders, four Focus-Group Discussions with the total of 58 participants, and 14 in-depth interviews with Local, Regional Authorities have been held both in Armenia and Georgia in July and August 2016.

The following are some of the main conclusions and recommendations of the research:

Conclusion # 1: Donors' interest in project implementation was mostly nominal (through a donor-led) and instrumental (through engagement of participants for cost-effectiveness), while participation had significant positive influence on the provision of regular water supply in Armenia and Georgia.

Recommendations:

- Self-mobilising state of communities is more cost-efficient and sustainable. To assure this, the donors and implementing agencies should contact the local administration/municipalities/council of elders well in advance to inform about their intention to implement a project.

- It is recommended to start the intervention by needs assessments (regardless of participatory/non-participatory methodology towards implementation) and start a discussion regarding the possible implementation of the project in the specific village/community with the municipality representatives and villagers also accounting for the cultural context.

Conclusion # 2: Peoples' engagement demonstrated a declining tendency showing that the concept of participation applied to the experimental projects' implementation was limited to capacity building. Peoples' engagement with project design and implementation (also in respect to budget planning), monitoring, evaluation and community planning was very limited.

Recommendations:

- Implementation of important (for the village) projects is not the sole responsibility of the municipalities/donor organisations/implementing partners. Villagers' voluntary contributions are important factors assuring overall success. Environmental sustainability and maintenance of adequate and decent livelihood may be achieved if the villagers themselves contribute to and care about formation of social capital.

- All the levels of villagers' participation shall be examined and applied: involving, collaborating and empowering the villagers are important beyond just informing and consulting. Process evaluation (after the needs assessment) is one important evaluation methodology to assure that the desired input in the project implementation is made.

Conclusion # 3: The higher the level of participation and the better its design, the more positive the perception of and trust towards donor organisations, sense of attachment and ownership by the villagers towards the projects, utilisation of the local knowledge and practice, equal participation in and access to the projects will be achieved. Advanced participation leads to increase in social capital, which assures project sustainability.

Recommendations:

-When designing participatory approaches/methodologies for project implementation, the donor organisations/implementing agencies shall aim at "mobilising" and "community planning" concepts of participation which will in turn lead to interactive and self-mobilising types of participation.
- Assessment of participation is itself important: the donor organisations/implementing agencies are recommended to account for the specific contexts of villages, scope of project implementation (avoidance of conflicts of interests, e.g. between villages) and possible influence of various groups of project stakeholders.

Conclusion # 4: Applied participatory approaches were not gender-sensitive leading to important losses/gaps in project implementation and associated benefit for the community.

Recommendations:
- Project implementation is post-Soviet Georgian and Armenian villages, is sensitive in terms of the cultural context and gender relations within a village/community. It is recommended to consult with local experts, as well as the municipality/local authorities when developing an Action Plan for project implementation and the concept of participation.

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Acronyms

AMD	Armenian Dram is the monetary unit of Armenia
ANOVA	Analysis of variance
BMZ	The German Federal Ministry for Economic Cooperation and Development
CB	Caucasus Barometer
CBO	Community-Based Organisation
CSO	Civil Society Organisation
DAC	Development Assistance Committee
ECA	Europe and Central Asia
ENPARD	European neighbourhood programme for agriculture and rural development
EU	the European Union
FAO	Food and Agriculture Organisation of the United Nations
FGD	Focus Group Discussion
GDP	Gross Domestic Product
GINI	A measure of statistical dispersion intended to represent the income or wealth distribution of a nation's residents, and is the most commonly used measurement of inequality
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit, GmbH (German Society for International Cooperation, Ltd.)
GNI	Gross national income
GPM	Green Project Management
HA	Hectare
HH	Household
IAP	International Association for Public Participation
IFAD	International Fund for Agricultural Development
IGO	Intergovernmental Organisations
IRD	Integrated Rural Development
KfW	Kreditanstalt für Wiederaufbau
LEADER	Liaison Entre Actions de Développement de l'Économie Rurale
MoH	Ministry of Health
NGO	Non-Governmental Organisation
NORAD	Norwegian Agency for Development Cooperation
NSS	National Statistical Service
OECD	Organisation for Economic Co-operation and Development
OSCE	Organisation for Security and Co-operation in Europe
PPP	Purchasing Power Parity

PPP	People's Participation Programme
PRA	Participatory Rural Appraisals
RA	the Republic of Armenia
ROM	Results Oriented Monitoring
RRA	Rapid Rural Appraisal
RRD	Regional Rural Development
SDC	Swiss Agency for Development and Cooperation
SDGs	Sustainable Development Goals
SJIDP	Samtskhe-Javakheti Integrated Development Programme
SPSS	Statistical Package for the Social Sciences
TACIS	European Union's Technical Assistance to Commonwealth of Independent States
UN	The United Nations
UNDP	United Nations Development Programme
UNDPCSD	United Nations Department for Policy Coordination and Sustainable Development
UNDSD	United Nations Division of Sustainable Development
UNECOSOC	United Nations Economic and Social Council
US	the United States
USAID	United States Agency for International Development
USD	United States Dollar
WCARRD	World Conference on Agrarian Reform and Rural Development
WCED	World Commission on Environment and Development
WID	Women in Development
WSS	Water Supply and Sanitation
WVS	World Values Survey

CHAPTER 1: INTRODUCTION

"Access to safe water is a fundamental human need and, therefore, a basic human right. Contaminated water jeopardizes both the physical and social health of all people. It is an affront to human dignity"

Kofi Annan

1.1.Author's Motivation

I have initiated the study after more than ten years of practical experience in humanitarian and development projects in Armenia and Georgia. I have seen several cases in my professional life where participatory approaches were not implemented comprehensively.

During the last few years establishment of Community-Based Organisations (CBOs) and Cooperatives in the framework of social-economic projects funded by the international donor agencies became a popular trend in the Post-Soviet countries. The paradigm of participatory approaches on different levels and their application in various stages of the project cycle raises several questions regarding both effectiveness and efficiency of those development interventions.

The successes and failures of different development projects where I was involved, some of which were implemented in a participatory manner and some not, prompted me to start the present research to identify whether the different participatory patterns and approaches can play an important role in improving the effectiveness and sustainability of the development projects, and if the participatory methods mentioned in the guidelines of several development agencies are just for 'fashion' or some of them really 'work' in the rural settings.

During the recent years both Armenia and Georgia have experienced considerable reduction of funding for development cooperation, and many donor agencies have quitted the region.

That said, the issue of effectiveness, efficiency and sustainability of development projects is of great importance, and the aim of this thesis is to explore the realities related to the implementation of development projects with respect to rehabilitation/renovation of irrigation and potable water infrastructures in the context of Armenia and Georgia, and identify the factors leading to improved practice to be considered by both state and international donor agencies for future similar interventions.

The research process and the findings are important for my practical work, that of my colleagues working in the development sector, Civil Society Organizations (CSOs), Government Structures and Donor Agencies, who constantly face the dilemma whether participatory approaches 'should' or 'should not' be applied in rural development projects. Application of different kinds and types of participatory approaches in various contexts and project designs is another important phenomenon.

Though participation has emerged since a long period of time as an approach in development sector, research and studies regarding the pros and contras of bottom-up and top-down approaches, the nature and impact of participatory approaches have not been widely conducted in the South Caucasus countries, therefore the present research is envisaged to fill the gaps by exploring the relationship between participation and rural development in the context of Armenia and Georgia.

My objective with regards to the current research is to enable the respective government representatives, donor agencies, non-governmental organisations (NGOs) and other stakeholders to use the findings of the present research to improve the overall design, implementation, monitoring and evaluation of the development projects, programmes, strategies and policies focused on rural development.

1.2. Problem Statement

This study deals with the relationship between participation and rural development, and aims to provide empirical evidence and insights regarding the effectiveness of participatory approaches applied in rural water rehabilitation projects in Armenia and Georgia and their impact on project sustainability.

The water sector is considered to be one of the most important targets addressed by the efforts of governments of both Armenia and Georgia and the international donor community.

The water sectors of both Armenia and Georgia were left in a state of despair following the collapse of the Soviet Union and the water systems of both countries faced serious challenges related to the dilapidated infrastructure, water wastage, leakage and lack of effective management of water resources. In both countries partnerships were established among the Governments and private sector to introduce public-private partnerships and facilitate reforms

in the water sector. Nevertheless, according to the local environmental NGO Ecolur (2018), in the case of Armenia presently 579 residential areas still lack water supply and the local population has to use the water of the deep wells, which does not undergo chlorine treatment.

A US Department of State Report (2010, pp. 55-56) states that for many years after the collapse of the Soviet economy, most of the water supply and sanitation systems in Armenia and Georgia were in a very poor state. In Armenia almost all sewage is discharged into rivers untreated. In the case of Georgia, one of the main health challenges refers to the spread of infectious diseases by contaminated water supply and inadequate sewage treatment systems.

In both countries water collection is still a "daily job" for many people in the rural settlements, where carrying water in buckets or tanks from the water sources located far away from their households is the only way for their survival.

In the given context the development of the water sector is a priority for the Governments of both selected countries, and the factors related to efficiency, effectiveness and sustainability of the water rehabilitation projects are of key importance as against the very limited availability of financial resources.

The water related rural development projects have been implemented both 'with' and 'without' participation of the local population in the selected countries, however there is no sufficient empirical evidence related to the advantages and disadvantages that the absence or presence of participatory approaches have caused in rural development projects in Armenia and Georgia.

The issues of the effectiveness of participatory approaches with regard to sustainability of impact of the water related rural development projects, in the context of the two Post-Soviet countries' changing rural realities, will be examined in the present research. The research aimed at answering the main research question whether the community participation has any positive influence on the provision of regular water supply in the framework of water rehabilitation projects. The research utilised a mixed methods explanatory sequential design. First, the literature review on the transformative context and the forms of participation was conducted, further the quantitative survey data was gathered followed by qualitative interviewing. Further, the qualitative findings/insights confirmed and made plausible the quantitative results. The

research applied a framework to analyse participation of local stakeholders in the different stages of the project implementation cycle.

1.3. Research Objectives

The research aims to identify the extent of participation of local stakeholders in the selected projects, explore the factors influencing community participation, assessing the sustainability of the accomplished projects and the factors influencing it.

The present study has the goal of advancing the state of research regarding the interrelationship between participation of local stakeholders and sustainability of rural development projects. This dissertation seeks to identify if the participation of the local stakeholders has a significant impact on the effectiveness and sustainability of rural community projects and explore the extent of participation of the local people in the selected water and sanitation rehabilitation projects in Armenia and Georgia, some of which have applied participatory approaches and some having used mainly supply-driven approaches in the project implementation. The projects selected for the research study have been completed several years ago and thus provide a good opportunity to address and analyse both the performance and the overall impact.

The study will provide brief overviews of the past interpretations, practices and of the current debates, empirical evidence and insights regarding effectiveness and impact of participatory approaches applied in the rural development projects. It will derive lessons learned for a better design and implementation of similar development interventions in the future.

The research will explore whether participatory or bottom-up approaches have been effective solutions to the problems earlier identified within the projects using top-town and supply-driven approaches in rural development, and if so, which approaches proved to be the most effective in the context of the selected cases. It will also address the prerequisites for the sustainability of the projects and will identify the factors important for design and implementation of development interventions to ensure their sustainability.

This research is concerned with the potential causal relationship between participation and rural development.

The study will provide useful insights for further development interventions considering the lack of comprehensive research studies regarding the performance and impact of participatory approaches in the targeted countries, as most of the respective literature focuses on power relations and participation. The present research will explore the conditions and factors that motivate the local population to be involved or not in the development interventions accomplished in their communities, and the influence of their motivation and involvement on the overall results of the interventions.

The study proposes the application of an analytical matrix to identify the types of involvement, factors sustaining and hindering involvement, and the results of the participation of the targeted population in the different phases of the project cycle.

The study identifies the main perceptions and motives on the local level with respect to participation of the local population in development interventions. The proposed matrix can be applied to context analysis of any development intervention in any sector, be widely used by the donor agencies, governments and CSOs to conduct context analysis, and identify the influence of a certain type of participation in a particular project phase.

Armenia and Georgia are among the countries where participatory approaches are a fairly recent phenomenon, and top-down and supply-driven approaches are still applied in a number of rural development programs. The researcher selected two projects in Armenia and two in Georgia with regard to several similarities that the two countries have in common including history, and at the same considering their differences with respect to cultural contexts, administrative and governance systems and geopolitical positions.

Considering the increased interest related to bottom-up approaches by the development community, and application of beneficiary participation in many rural development projects, there is a need to provide feedback on the performance of these approaches, including an assessment of the initial results and the effectiveness of the applied participatory approaches.

The mentioned approaches include all efforts to involve the local population in defining their own problems, diagnosing the situations that give rise to the problems, setting priorities for solving them, identifying and formulating project interventions that may help to solve some of those problems, as well as participation in the project implementation, further follow-up and maintenance of the results.

The findings of this study will be useful in assisting rural development projects to apply effective approaches, based on the experience of the targeted countries, to achieve sustainability and improved impact.

1.4.Scope of Research

The present research discusses problems and analyses factors and causes with respect to effectiveness of participatory approaches in rural development interventions, particularly in water related projects. The focus is made on the different levels of involvement of local population in development projects, the effectiveness of projects accomplished 'with' and 'without' participatory approaches, and the various factors promoting participation.

The research applies a framework to analyse participation of local stakeholders in the different stages of the project cycle. The framework can also be applied to program and policy levels to conduct stakeholder analysis with respect to participation and explore the different forms of participation of specific stakeholders, identify the factors leading to participation of local people, assess the effectiveness and the results of participatory approaches (see for example Norwegian Agency for Development Cooperation, NORAD 2013).

The scope of the research included 206 respondents from the selected two similar communities from the same province: Vaghashen and Astghadzor in Armenia and two: Lomaturskh and Turtskh communities from the same province in Georgia. Approximately 52 respondents were interviewed in each community. Most of the respondents were farmers, and although some of the respondents worked in the local municipalities, schools or other institutions, all of them practiced agriculture and/or animal breeding due to the extremely low salary rates. The selection of the communities in each country was accomplished considering the applied 'with and without participation' project implementation approaches.

The limitations of the study include:

(i) predominant number of population as heads of the households and the most knowledgeable on community life were male who were hence overrepresented in the sample, statistical analytical techniques were applied for reporting percentages where appropriate so that the data from males and females could be properly disaggregated;

(ii) many female respondents did not respond to the questions without the presence and guidance of men which to some extent risked their full participation at the interview. This problem was partly solved through interviewing techniques of achieving trust of the female respondents and their husbands. Further, it has to be acknowledged that the research was undertaken in a natural rural context with associated culture-related challenges one of them being hardship of interviewing females/housewives;

(iii) many respondents refused to respond to income related questions in the income survey (123 out of 206 responded, which to some degree risked the generalisability of the findings on income), as it can be seen further in the analytical chapter, the findings on income were not generalised on the villages, but referred to the interviewed villagers only. However, some generalisations in terms of linkages of water access and improved agricultural impact were drawn to inform the phenomenon of project implementation.

(iv) there was a lack of baseline information as it was not collected by the implementing and funding agencies. The absence of baseline data can be regarded as a factor that reduced the validity of the research, however this research itself can already be regarded as providing baseline data also suggesting perspectives for further research.

(v) most of the staff members of the implementing and funding agencies responsible for the targeted projects had left their positions, and in several cases the researcher could not access the required project data. This is a shortcoming of the research itself and can as well be regarded as a finding showing that the project implementers in the countries were difficult to be reached out after the projects closed.

(vi) some of the private companies which had accomplished the water supply rehabilitation activities (providing services to donor organisations) cancelled their state registration and did not function during the time of the field research, while for the plausibility of research findings, it could

(vii) be worth to interview some of them.

(viii) The cases (villages) could not be chosen from a larger sample of potential cases as there were no databases of water rehabilitation projects either in Georgia or in Armenia. Moreover, there was a language barrier. The researcher had to choose those villages in which the villagers spoke Armenian (villages close to Armenia).

The results of the study are subject to generalisation on the villages that were examined (if not otherwise specified in the analysis). On the other hand, the findings can be subject to policy, programme and policy level considerations drawing conclusions on participatory approaches.

Hence, the findings of the research can be used by relevant donor agencies, policy makers and municipalities while making decisions on the formats of similar development interventions.

1.5.Organisation of the Thesis

Chapter one sets the motivation, introduction and background of the research, presents the motivation of the author, research objectives and questions, the statement of the problem and the rationale of the research.

Chapter two presents the study context, develops an understanding of the socio-economic and context of South Caucasus with a focus on the targeted countries: Armenia and Georgia. Thereafter, the chapter describes and analyses the Social Networks in Georgia and Armenia, the gender aspects in both countries and offers an overview of the case study areas.

Chapter three describes and analyses the key concepts in light of the current Literature with a focus on Participation, its various types, forms and levels. It offers an overview of the Social Capital theory; presents an analysis of the pros and contras of participatory approaches and finally develops a conceptual framework of the research.

Chapter four focuses on research methodology, and presents research design, strategy and provides description of the case study area: Armenia and Georgia and the study communities. The chapter also refers to the methods applied for data collection and analysis, and explores research limitations.

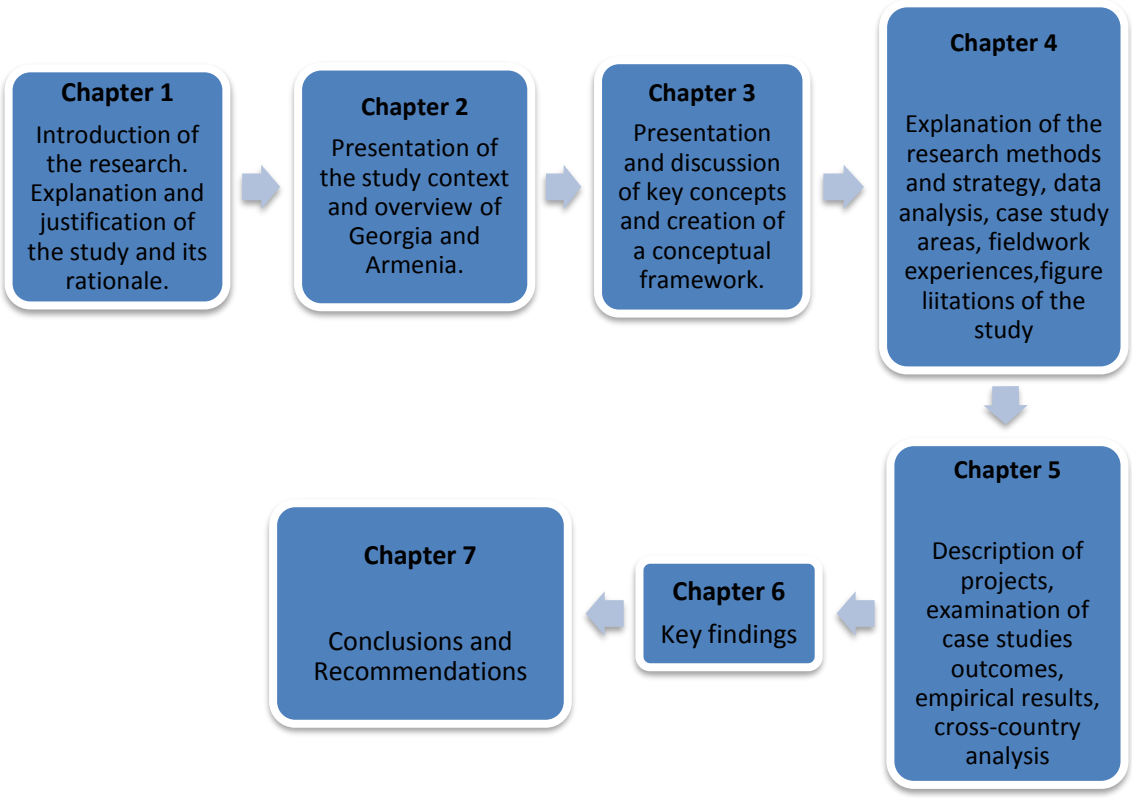
Chapter five focuses on the empirical results, presents the description of the selected projects and examines which factors including participation have an influence on the sustainability of development projects focusing on rural development. It provides answers to the research

questions based on the quantitative and qualitative findings of the research and concludes with a cross-country analysis.

Chapter six presents a summary of the key findings.

Chapter seven draws the conclusion by summarising the research findings and proposes recommendations to the interested and respective stakeholders. The chapter also presents implications for further research.

Figure 1. Thesis Organisation



Source: Author's construct

CHAPTER 2

THE STUDY CONTEXT

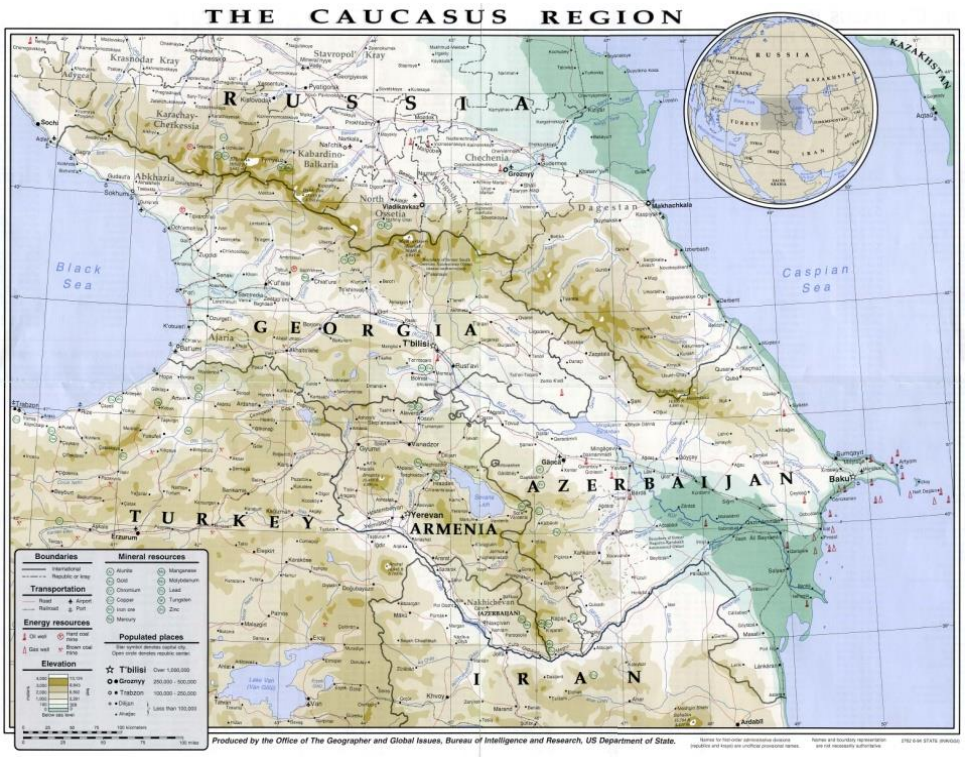
2.1. South Caucasus Overview

The region of the South Caucasus is comprised of Armenia, Azerbaijan and Georgia, and borders Iran, Russia and Turkey. The region has been politically instable since the collapse of the Soviet Union, and faces serious economic and human rights problems (Cornell Caspian Consulting, 2002).

The current research covers two rural communities in Akhalkalaki district of the Samtskhe-Javakheti region of Georgia and two rural communities in Martuni district of Gegharkunik Region of Armenia.

Because of the region's economic and political challenges after the collapse of the Soviet Union, both Armenia and Georgia experienced hardships in their socio-economic development process, which was seriously reflected by the poverty rates of the rural areas.

Figure 2. Geographical Map of Armenia and Georgia



Source: Office of the Geographer and Global Issues: Bureau of Intelligence and Research. US Department of State

The rural poor were in a hopeless situation as they could not address their problems with the own resources, in particular the issues related to the poor infrastructure. The major number of projects related to infrastructure rehabilitation was accomplished both in Armenia and Georgia with external donor funding.

Both Armenia and Georgia are post-Soviet countries and have certain similarities regarding social-economic situation, although Georgia has a better geographical position in terms of being a transit state, having a port on the Black Sea. It has signed an Association Agreement with the European Union (EU), which provides significant development opportunities to Georgia. According to Pearce (2011, p. 8) both countries of the region have poor infrastructures and various levels of access to pipe borne water. Thus in Armenia, the majority of the households have access to pipeline water, while in Georgia it is less than three-quarters of the households. The duration of the water access also varies in the targeted countries, e.g. in Georgia 10%, and in Armenia 8% of the households have access to water a couple of hours per day, which has a negative impact on the quality of life. There are communities which until now have no potable water, for some it is available only a few hours a day and others receive water only on alternate days.

The researcher selected four communities: two from Armenia and two from Georgia, where potable and irrigation water rehabilitation projects were earlier implemented.

The water sector is one of the sectors in both countries which lacks transparency both in terms of physical water supply and distribution of water resources.

The water supply systems of both Armenia and Georgian are in a poor state. According to Gharabegian (2013), "Water losses or nonrevenue water is estimated at 85 percent in Armenia, which according to the World Bank is one of the highest percentages of water losses in the world. More than 50 percent of water losses are due to leaks from old pipes, and the remainder is due to non-payment, underpayment, or theft".

In Armenia and Georgia a substantial number of projects related to water infrastructure rehabilitation have been accomplished by various international and local NGOs, state and public agencies and institutions. The development interventions were implemented by applying both participatory and supply-driven approaches.

The sourcebook for investment in agricultural water management, the World Bank (2005, p. 47) has long ago pointed to the importance of water rehabilitation in Armenia to be

supplemented (i) by measures to foster creation of efficient institutions with the ability to measure and manage water, (ii) consultation with stakeholders and (iii) adequate attention given to beneficiary ownership and their ability to contribute towards the new facilities' maintenance.

An analysis by Chase (2002) has importantly shown that potable water projects in Armenia increased household access to water and had mild positive effects on health; communities that completed a social fund project were less likely than the control groups to complete other local infrastructure projects, suggesting that social capital was expended in these early projects. A similar study in Georgia (Lokshin and Yemtsov, 2005) has reported plausible results regarding the size of welfare gains from a particular infrastructure (including water) rehabilitation project.

According to Vener (2007) Georgia has an oversupply of water, while Armenia has some shortages based on poor management. The countries share problems of poverty, political instability, bureaucratic and structural issues.. Georgia has more water than it needs, while Armenia has a surface water shortage but has a large fresh groundwater stock that it uses for drinking water (TACIS, 2003).

In June 2002 Armenia adopted the water code of the Republic of Armenia (Water Code of Armenia, 2002). The new Code which replaced the 1992 Water Code provides for the adoption of new legal acts for the purpose of detailing regulation and coordination of water policies. In the Republic of Armenia, the National Water Council is the primary policymaking body and the Ministry of Nature Protection is the executive water resource management agency. Georgia's law "On Water" (1997) regulates water in Georgia and envisages balancing the water economy accounts of certain water basins and the elaboration of the general basin and territory complex schemes of water use and protection (TACIS 2003). In Georgia, the responsibility for management of the water resources rests with the Ministry of Environment and Natural Resources (Vener, 2007, pp. 31-32).

The government of Armenia and the donor community apply their efforts for the implementation of the 2010-2020 Sustainable Strategy Programme for Agricultural and Rural Development adopted by the Government and implemented by the Ministry of Agriculture. Farmer organisations are presented to be an integral part of the Strategy, to note however that Armenia lacks a comprehensive law on agricultural cooperatives and the farmer groups are presently paying taxes like any other commercial entities (Millns, 2013, p.14.).

The Strategy is in line with the EU European Neighbourhood Programme for Agriculture and Rural Development (ENPARD) to establish clear, and measurable, long term agricultural and rural development policies, to note however that ENPARD I is finished and there will be no continuation in Armenia.

Georgia's agricultural collapse was severe following the end of the Soviet period and a collectivised agricultural system. From 1991 - 2001 agricultural production contracted by an average of 11% per year, the most profound collapse in the region and reduced Georgian production output to around 32% of its Soviet level. Even after 2001 the Georgian agricultural sector has recovered by only a total of 6%, an average of 0.6% per year, much slower than the rest of the economy. Livestock numbers are less than 36% compared to 1990 and more than more than one third of agricultural land is currently not cultivated (Millns, 2013, p.18).

There are several donor agencies in Georgia providing substantial support for the development of farmer cooperatives, such as the European Neighbourhood Programme for Agriculture and Rural Development in Georgia (ENPARD I Georgia) which is a EUR 40 Million EU-funded programme signed with the Government of Georgia in December 2012 and with a EUR 15 million allocation to support to the establishment of "business-oriented" small farmers' groups, Millns (2013, p.21). Presently ENPARD II and III are being implemented in Georgia.

The Government of Georgia shows its commitment by improving the legislation related to the agricultural cooperative development, provision of state subsidies and applying tax exemptions.

Source: Fieldwork, Samtskhe–Javakheti region, Georgia 2015-Cropping patterns

Despite the evidenced importance of water rehabilitation projects and common water resource management issues both in Armenia and Georgia, very limited scholarly work has addressed the question of whether community participation has any positive influence on the provision of regular water supply in the framework of water rehabilitation projects in the countries. This is the main research question that this analysis intends to address. And although evaluation specialists have long reflected upon context of project implementation (e.g., age of program, accessibility, size of program, timeline, political nature) and the project evaluation context (e.g., stakeholder involvement, method proclivity, measurement tools, purpose, use of results), there is still little discussion on how the participants of a project themselves affect the practice of project implementation (Wanzer, 2017). So far, not enough attention has been paid to assessments of effectiveness of participatory/non-participatory approaches towards water rehabilitation projects' implementation in Armenia and Georgia, so vital for infrastructure and rural development.

2.2.Social Networks in Armenia and Georgia

Informal networks have always been very important for the population of Georgia and Armenia as a means of social support.

According to USAID (2011), despite the strong social bonds in Georgian society which is obvious in everyday life, social capital could still be improved in terms of collective action of the people in agriculture and other sectors of the economy. The study shows that people use more private ties or networks rather than cooperating collectively on a formal basis, which could be beneficial in terms of sharing resources and other benefits, including increased agricultural productivity and improved competitiveness of smallholder farmers for commercial production. One of the reasons of the lack of formal cooperation patters is the overall apathy of the local population caused by the overall poor social-economic state of the country.

The current state and trends of social capital in Georgia are discussed by Hough (2011, p. 2) stating that there is a high level of cooperation between the members of families and friends, and lower cooperation across other groups of society.

It is noteworthy that Georgia has a law on agricultural cooperatives and several financial incentives are provided both by the state and the donor initiatives, including ENPARD to the rural population to be able to establish and develop cooperatives and collective actions.

As shown by Paturyan and Gevorgyan (2014) there was an optimistic expectation to have a fast developing civil society after the collapse of the Soviet Union, however the civil society failed to establish itself as a strong democratic institution representing the needs and interests of the local people.

In the case of Armenia, the number of the registered and functioning cooperatives is much less than in Georgia due to the very limited opportunities created for the establishment and development of agricultural cooperatives. There is no agricultural cooperative law in Armenia and farmer organisations are mainly regulated under and the "Law on Consumer Cooperatives", which does not envisage any incentives for agricultural cooperatives. The state does not provide any assistance for the development of agricultural cooperatives in Armenia, while donor funding is much less than in Georgia.

2.3.Overview of Georgia

Georgia has a territory of 69,700 km² and a total population of 4.4 million people, according to the 2008 census. The population density is different across the country, considering the mountain ranges, which make accessibility difficult for the local population, especially in winter.

Figure 3. Georgia Political Map.

Source: https://www.mapsofworld.com/georgia/georgia-political-map.html

The country has nine administrative units plus one city (Tbilisi) and two autonomous republics (Abkhazia and South Osselia). The country has the following regions: Autonomous Republic of Abkhazia , Autonomous Republic of Adjara, Guria Region, Imereti Region, Kakheti Region, Mtskheta-Mtianeti Region, Racha-Lechkhumi Region, Samegrelo-Zemo Svaneti Region, Samtskhe-Javakheti Region, Kvemo Kartli Region and Shida Kartli Region, (Government of Georgia, 2014).

According to the World Bank Georgia Economic Update (2018, p. 12), "the stagnation in poverty reduction breaks a declining trend that started in 2010, which was propelled mainly by employment opportunities and social assistance. The slight reduction in employment

observed in urban areas translated into an increase in poverty in urban areas, though extreme poverty remained at the same level. Poverty at $3.2/day was estimated at 18.7 percent in 2016, almost one percentage point higher than in 2015. Inequality, as measured by the Gini coefficient, has fallen from a peak of 42 points in 2010 to close to 39 in 2016 (using the consumption aggregate used for international poverty comparison). Nonetheless, inequality is still among the highest in the Europe and Central Asia (ECA) region and is evident along geographic dimension. Similarly, along the urban-rural divide, the gap between rural and urban poverty rates has broadly been stable over the past decade, at an average of around 8 percentage points."

According to UNDP (2013, p. 36) "in Georgia the agricultural market is dominated by small farmers. Land holdings in Georgia average about 1.25 hectares and this is usually spread over several plots, generating the twin problems of size and fragmentation. This has often been blamed as the main reason why the Georgian market is not viable. Arable land in Georgia is now very largely privatized, though much of the grazing land is still community owned by municipalities and 'managed' by villages."

Irrigation is one of the various factors affecting development of agriculture, the latter contributing for 45% to the rural household income.

According to the data provided by Trading Economics (2016), "Agricultural land (% of land area) in Georgia was reported at 36.67 % in 2015, according to the World Bank collection of development indicators, compiled from officially recognized sources."

Table 1: Georgia Agriculture Data

Surface area (sq. km)-69700 sq. Km
Land area (sq. km)-69490 sq. Km
Agricultural land (% of land area)-36.67 %
Agricultural land (sq. km)-25484 sq. Km
Agricultural irrigated land (% of total agricultural land)-4.02 %
Arable land (% of land area)-6.45 %
Arable land (hectares)-448000 ha
Arable land (hectares per person)-0.1205
Poverty gap at rural poverty line 5.7 %
Economically active population in agriculture -365000
Food production index (1999-2001 = 100)-83.22
Crop production index (1999-2001 = 100)-93.93
Livestock production index (1999-2001 = 100)-75.03

Source: Georgia - Agricultural land (% of land area) (2015) . Reprinted from Trading Economics.

Retrieved from: https://tradingeconomics.com/georgia/agricultural-land-percent-of-land-area-wb-data.html

As has been shown by Shinee (2012), only 51% of the rural population has potable water supply, while the rest make use of other water sources, which are not yet connected to the main water supply system. The mentioned problems of water supply result in a number water related diseases in Georgia such as salmonellosis, shigellosis, gastroenteritis, hepatitis A, and amoebiasis.

"Throughout Georgia, inadequate water supply and sanitation poses a potential threat to human health and the environment. Current efforts aimed at improving those services give priority to water supply and urban areas, despite the great need for improvements in both urban and rural sanitation," Leblanc & Eiweida (2010, p. 1).

The challenges related to the poor state of water and sanitation in the rural areas of Georgia are being addressed both by donor community and state agencies, thus improvement of the water supply in the rural areas is a priority for Georgia (Leblanc and Eiweida, 2010).

The region of Samtskhe-Javakheti (see 4.4. Case Selection) which is the targeted region of the present research for Georgia, is located in the South-East of the country, and includes three provinces: Samtskhe, Javakheti and Tori, and six district municipalities: Akhaltsikhe, Adigeni, Aspindza, Borjomi, Ninotsminda and Akhalkalaki. The region includes 353 towns and villages, and boarders with Armenia and Turkey, which according to Samtskhe-Javakheti Development Strategy (GIZ, 2013) creates good opportunities for economic development.

Samtskhe-Javakheti Region was selected as a target region for the research due to the similarities of the communities in Gegharkunik region of Armenia and those in Samtskhe-Javakheti in Georgia, with respect both to geography, environment, economic state, culture and ethnicity. The major part of the population of Javakheti is mainly of Armenian origin. The district of Akhalkalaki is the target municipal district for the research, where 93.6% of the population are ethnic Armenians. It has sixty-one villages, whereas fifty-one are mainly populated by ethnic Armenians (Wheatley, 2004).

The district has a severe climate, mainly due to the high altitude of around 1,700 meters above sea level. The main part of the local population of the district is occupied in agriculture, despite the difficult climatic conditions. The civil society is still in the stage of development, and there are only a few NGOs with a limited scope of activities (Wheatley, 2004).

According to Akhalkalaki District Participatory Assessment and Survey Results (2006, p. 19), the overall population of the district is 61.579, from which 30.036 are male and 31.543 are female. It is noteworthy that 83% of people live in rural areas. The lands of the rural communities are privatised, and each household has approximately 1.21 ha of privatised land. The Survey states that the majority of the local farmers do not form groups or cooperatives for joint actions, and they are not aware of the potential advantages of such unions.

Therefore it is important that the local or international development agencies, which implement projects in those rural communities, clearly explain the benefits of joint projects and collective actions to the local population.

According to UNDP (2013, p. 21) "the structure of land holdings across Armenia and Georgia has not changed to any great extent and they continue to be dominated by farming land-plots of less than 1.5 hectares."

The Samtskhe-Javakheti Regional Development Strategy (GIZ, 2013, p.16) states, "the irrigation system in the region supplies water to around 15% of arable land, which significantly hampers agricultural development and is a big challenge for the local population because its majority is employed in agriculture". The Strategy presents the state of water supply system in the region, according to which 90% of the water supply system is damaged both in Akhalkalaki and Akhaltsikhe.

2.3.1. Gender Aspect in Georgia

Georgia has a very traditional society, where local traditions and religion play an important role. It is especially prevalent in rural areas, where women have traditionally taken care of children, and men have worked. Presently in rural areas, women are mainly involved in schools and health facilities; however most women are not active in job market and are involved in agriculture for self-consumption purposes. According to IFAD (2007), around 20% of the Georgian population have out-migrated, and the number of men is diminishing.

Thus women have to be responsible for the family's earning and taking care of their children without any external support, which is a change in gender roles, and a drastic increase of workload and responsibilities for rural women. To be able to cope with the rural poverty and perceived helpless situation, taking into consideration the limited employment opportunities for the rural women in Georgia, some women also migrate in search of earnings, leaving their

husbands and children back at home (Duban, 2010). Rural poverty, migration of male population and unemployment make the situation of rural Georgian women very vulnerable.

The most vulnerable women are those with children, whose husbands left for Russia and other countries to seek employment, never returned and do not support their families in Georgia. The other category refers to the retired women, who live alone and have to survive with the their pension: the average pension in Georgia is EUR70 per month, pension age being 65 for men and 60 for women, the retired comprise 22% of the total population of Georgia. (Verulava, 2018, p. 171).

The representatives of both categories were included in the interview sample of the present research.

Georgia's Unemployment Rate dropped to 13.94 % in December 2017, from the previously reported number of 13.97 % in December 2016. Georgia's Unemployment Rate is updated yearly, available from December 1991 to 2017, with an average rate of 13.87 %. The data reached an all-time high of 18.30 % in December 2009. In the latest reports, Georgia's Population reached 3.73 million people in December 2017, (National Statistics Office of Georgia, 2017).

According to OC Media (2017) "Georgia's Labour Code does not set a minimum wage, however a 1999 presidential decree set a minimum salary of ₾20 ($8) per month, while a 2005 decree set ₾135 ($55) per month as the minimum salary for government employees. According to March 2016 data from the Revenue Service, 25,000 people receive salaries lower than ₾100 ($40) per month; 63,000 lower than the national living-wage, and 130,000 people lower than the family living-wage. According to the National Statistics office, 21% of the population live in what they define as absolute poverty in 2016. "

2.4. Overview of Armenia

Armenia is located in south-western Asia, and has boarders with Georgia, Turkey, Iran and Azerbaijan. The overall territory is 30.000 square kilometers, and population of 3.3 million, according to the 2013 census. The country has ten marzes (regions) and Yerevan, its capital city.

Figure 4. Armenia Political Map

Source: https://www.mapsofworld.com/armenia/armenia-political-map.html

The territory of Armenia is composed of ten marzes (regions): Aragatsotn, Ararat, Armavir, Vayots Dzor, Gegharkunik, Kotayk, Lori, Syunik, Tavush, Shirak and the capital-Yerevan city.

According to the World Bank Armenia Economic Update (2018, pp.13-14) "Poverty continues to affect a significant proportion of Armenia's population. In 2016 (the last year for which poverty data are available), 14.1 percent of the population lived below the lower-middle-income economy poverty line of $3.2/day at 2011 purchasing power parity (PPP), calculated based on the World Bank methodology for international comparisons. Persistently

high unemployment and poverty remain Armenia's two biggest challenges for social progress and fueled recent political protests (in May 2018). Over one-third (36 percent) of respondents to the 2017 Caucasus Barometer indicated that unemployment was the most important challenge facing Armenia. Just under two-fifths (17 percent) of respondents indicated that poverty was the most important issue, reflecting slow progress towards better living standards. Both issues have topped public concerns since the global financial crisis and, along with widespread corruption and an unequal economic environment, were among the main drivers of the massive nationwide protests in early 2018. "

Rural poverty in Armenia has various causes, including poor infrastructure, limited marketing opportunities, lack of adequate land resources, irrigation problems, migration and many others. "Land holdings are shared between 330,000 households with an average of 1.3 hectares of land each. This land is also fragmented. Out of these 330,000 households who have been allocated plots of land, ACDI/VOCA believes that only around 200,000 are functioning farms with half of those operating on a subsistence basis. ACDI/VOCA estimates that there are approximately 20,000-30,000 farms with at least 3-5 hectares per farmer. Large farms with more than 10 hectares currently represent only six percent of all farms. A rough estimate is that 50 percent of the units produce only for home consumption, 30 percent only for the market and 20 percent both for home consumption and for the market" (UNDP 2013, p. 97).

According to Millns (2013), since the current average size of household plots is 1.37 ha and the plots are located far from each other, land cultivation is becoming difficult and expensive.

According to the data provided by Trading Economics (2015), "Agricultural irrigated land (% of total agricultural land) in Armenia was reported at 9.2279 % in 2015, according to the World Bank collection of development indicators, compiled from officially recognized sources."

Table 2: Armenia Agriculture Data

Surface area (sq. km)- 29740 sq. Km
Land area (sq. km)- 28470 sq. Km
Agricultural land (% of land area)-58.88%
Agricultural land (sq. km)- 16764 sq. Km Permanent cropland (% of land area) 2.01 %
Agricultural irrigated land (% of total agricultural land)- 9.23 %
Arable land (% of land area)- 15.69 %
Arable land (hectares)- 446700 ha
Arable land (hectares per person)- 0.1531

Poverty gap at rural poverty line 4.5 %
Economically active population in agriculture -153000
Food production index (1999-2001 = 100)- 147
Crop production index (1999-2001 = 100)- 143
Livestock production index (1999-2001 = 100)- 136

Source: Armenia - Agricultural irrigated land (% of total agricultural land) (2015). Reprinted from Trading Economics. Retrieved from: https://tradingeconomics.com/armenia/agricultural-irrigated-land-percent-of-total-agricultural-land-wb-data.html

"With 10.2 billion cubic meters (m3) of water per year on average, of which 2.4 billion m3 is used for drinking purposes, the country indeed has abundant water resources. About 96% of drinking water is groundwater drawn through boreholes, wells, and springs. Most raw water is of good quality and requires only disinfection. The typical drinking water infrastructure includes water intakes, transmission mains, pumping stations, and distribution networks. Typical wastewater infrastructure includes house connections, sewer networks, pumping stations, and wastewater treatment plants. However, since Armenia's independence in 1991, the deterioration of water supply and sanitation (WSS) infrastructure and service delivery mechanisms has impacted the quality of water, making it a crucial issue on the development agenda. For almost all Armenians, low-pressure water, which sometimes failed to comply with biological water quality standards, was available for only a few hours a day" (Asian Development Bank, 2011, pp. 1-2).

The Gegharkunik region (marz) is the targeted region of the research in Armenia, located in the eastern part of Armenia and around Lake Sevan. It is the largest region in Armenia, occupying 18 percent of the country's territory, includes the municipalities of Gavar-administrative center, Chambarak, Martuni, Sevan and Vardenis and is comprised of 92 communities. The region has long and cold winters due to its altitude of 2,000-3,500 meters above sea level. Lake Sevan has a unique ecosystem and holds a special importance for the region as well as for the whole country. Sevan National Park (founded in 1978) comprises the lake and its immediate surroundings. Despite a strong recent history of industrial production, agriculture now dominates the regional economy.

2.4.1. Gender Aspect in Armenia

After the collapse of the Soviet Union, the state of women became more vulnerable than before, especially in the rural areas, where the major part of women became unemployed due

to various reasons. One of them is the state's lack of resources and its poorly functioning kindergartens in the rural areas, which became an obstacle for the women with children.

Another factor is the collapse of the previous collective farm systems after the Independence, which made people look for new ways of private farming and employment. The increase of poverty rates in the rural areas led to a drastic increase of male migration for seasonal jobs to Russia, Ukraine and other countries, while women stayed in a poor state alone with their children. Traditionally Armenian women are supposed to stay at home and take care of children, however due to the poor and hopeless situation they became the bread-winners of their families, considering that many of the migrated men established new families abroad and stopped helping their families residing in rural Armenia.

Women constitute 40% of the workforce and head one third of rural households, (IFAD, 2013). Today some of the international and national development agencies pay a considerable attention to the addressing of the needs of men and women in rural Armenia. There are projects which apply participatory approaches and tend to involve rural women in the project activities by building their capacities and making them active members in the decision-making process of the rural communities. To note however, according to the local family traditions and culture, women mostly work in their houses and farms, rarely take part in capacity building events and surveys regarding their community, like in the case of the present research.

Men are the major decision-makers regarding family and community issues. Therefore some of the donor-driven approaches with respect to women empowerment are often not realistic in the context of family traditions, religion and customs, while the approaches which use the local knowledge and listen to the voices of the rural women, are more successful and sustainable.

It is noteworthy that the situation related to vulnerability of women in Armenia and Georgia is quite identical. The vulnerable group refers to (i) women with children, whose husbands left abroad and do not support their families and (ii) the retired women: the average pension in Armenia is EUR80 per month, pension age being 65 for men and 63 for women, the retired comprise 15% of the total population of Armenia (Verulava, 2018, p. 171).

Both above-mentioned categories of women were included in the research; however the number of women respondents is limited in the sample, since many women did not agree to take part in the interview as their husbands were not present.

According to the Statistical Committee of the Republic of Armenia, "Armenia's Unemployment Rate dropped to 15.70 % in June 2018, from the previously reported number of 17.60 % in March 2018. Armenia's Unemployment Rate is updated quarterly, available from March 2008 to June 2018, with an average rate of 17.65 %. The data reached an all-time high of 20.70 % in March 2011 and a record low of 14.70 % in December 2008. In the latest reports, Armenia's population reached 2.97 million people in December 2017" (National Statistical Committee of the Republic of Armenia, 2017).

According to Gabrielyan, Mnatsakanyan (2014, pp. 15-16)"in 2013, the minimum wage rate was set at AMD35.000 (US$85.5) for January-June and since June AMD45.000 (US$110)per month, while the value of the minimum consumer basket was AMD56.200 (US$137) calculated by the Ministry of Health of the Republic of Armenia (RA)(MoH) and AMD43.800 (US$107) based on the results of a survey carried out by the National Statistical Service of the RA (NSS). "

CHAPTER 3

INTRODUCTION TO KEY CONCEPTS AND CONCEPTUAL FRAMEWORK

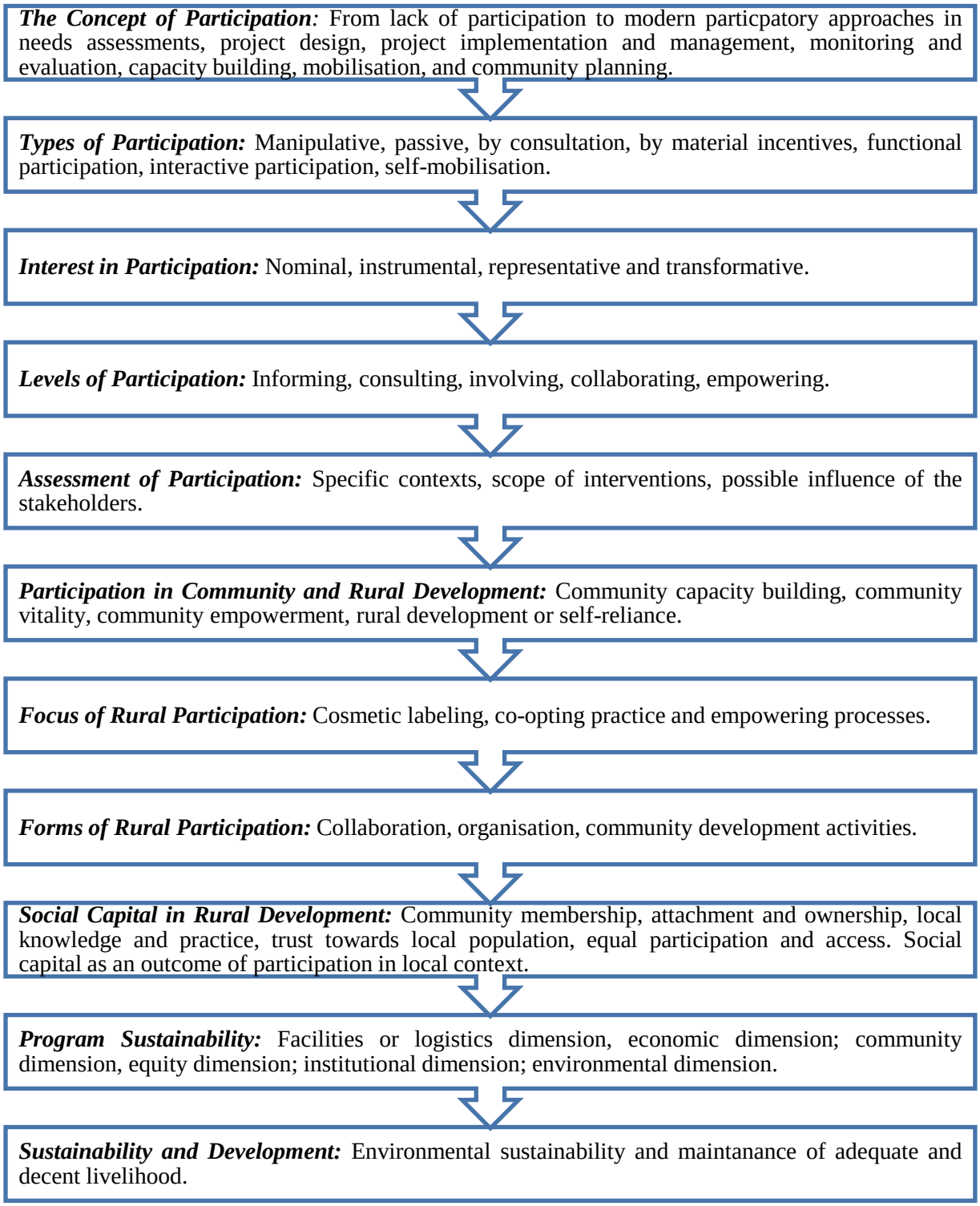
3.1. Conceptual Framework

The NORAD Model (2013, p. 14), which focuses on various forms and types of participation, targets, prerequisites and results of participation, has been considered to be suitable for the present research. It has been considerably revised and adapted to be used as a Conceptual Framework for this research.

The Figure 5 illustrates the Conceptual Framework of this research and presents the analysis of participatory approaches, the various factors, the sustainability aspects and the theoretical background of the present study.

The Conceptual Framework design enables exploring the links among the respective conceptualisations of participation, focus and forms of participation, as well as the interlink of participation and social capital (as an outcome of participation), sustainability and development of rural communities and sustainability of water rehabilitation projects. The Framework provides the scope and role of participation and the required prerequisites for achieving sustainability of development interventions in the rural areas. The Framework has been applied and tested during the field work in the framework of the selected case studies.

Figure 5. Conceptual Framework for the Present Research



Source: Modified from NORAD, (2013, p. 14)

The Framework has been designed to enable better understanding of water rehabilitation projects, the different factors and preconditions influencing sustainability of development interventions. The presented comprehensive approach was developed based on the literature review to guide answering the research questions of the present study. It discusses that the development projects can be more sustainable when an enabling environment is created for the effective participation of the respective stakeholders, including the local communities.

In the context of conceptualisation of participation (the concept of participation, types of participation, interest in participation, levels of participation, participation in community and rural development, focus of rural participation, forms of rural participation), assessment and analysis of participatory approaches (that project may or may not apply) are important. This importance is specifically embodied in various stages and processes related to the developmental interventions and developmental policies (in respect to social capital in rural development, environmental sustainability and program sustainability). Development projects are more sustainable, when participatory approaches are assessed and defined in the initial stages of project planning.

The assessment and analysis with respect to identification of whether participatory approaches should be applied in the given context of a policy, program or a project, and if yes which ones should be prioritised, is closely related to the effective participation of local population in rural areas hence assuring that social capital is an outcome of participation. The factors such as provision of respective information to the targeted groups in the initial stage of the intervention, their involvement in design, planning and budgeting of the project, might lead to increased effectiveness and sustainability of the project and its cost-efficiency, in the cases of contribution to local community enhancement. Participatory monitoring and evaluation (M&E) improves accountability and transparency of development interventions but is largely dependent on the motivation and capacities of local people related to it. The analysis of the factors promoting or hindering effective participation identifies a link between the factors of participation and social capital. The concept of social capital is very broad; therefore this research considers the approaches related to social capital in the context of rural development projects in the selected countries, necessary to achieve project sustainability of rural developments.

The Framework starts with the concept - or one might think of the notion or idea - of participation. Water rehabilitation projects may be associated with lack of (envisaged)

participation to application of modern participatory approaches in needs assessments, project planning, implementation and management, monitoring and evaluation, capacity building, mobilisation, and community planning. Second, the Framework emphasizes types of participation which may differ: being manipulative, passive, by consultation, by material incentives, functional, interactive or self-mobilising. Supposedly, these types of participation may be planned and controlled by water rehabilitation project implementers. However, there is as well a chance that community may self-mobilise despite the project is not applying participatory approaches.

The Framework shows that types of participation originating in the concept of participation are brought into life through interest in participation, which can be nominal, instrumental, representative or transformative. Interest in participation is in turn articulated within the levels/layers of participation, which are developed based on informing, consulting, involving, collaborating, empowering activities directed by project implementers to rural communities.

The Framework shows that all the above mentioned – the concept, types, interests in and levels of participation are to be assessed within specific contexts (here post-Soviet Armenia and Georgia) and in the framework of specific scope of interventions (with or without participatory approaches or intentions to apply such approaches). The assessments should be performed in the context of project implementation and possible influence of project-related interventions on stakeholders or rural communities (their representatives) in this regard.

Based on the analysed literature, the Framework explicates that participation has a positive impact on rural community development. It contributes to community capacity building, vitality, empowerment, rural development or self-reliance. On the other hand, the literature also exemplifies how focus of rural participation (from the side of project implementers participation can be seen as just a cosmetic labeling, co-opting or an empowering practice) is changing qualities of participation. If not a cosmetic labeling, participation may ensure several forms of rural participation: collaboration, organization, community development activities. Participation based social capital in rural development is in turn linked with community membership, attachment and ownership, local knowledge and practice, trust towards local population, equal participation and access.

The Framework shows that participation (operationalised through various approaches as described above) may become a precondition for the sustainability of water rehabilitation projects.

The presented conceptual framework may be widely applied by governments, donor agencies, researchers and practitioners in development cooperation, to examine and identify the most appropriate participatory approaches in both development and humanitarian interventions contexts.

The framework can be applied both to general studies related to participatory approaches, as well as to the programme/project related processes, including planning, implementation, monitoring and evaluation. The Framework presents multidimensional approach to participation and provides a basis for supporting and assessment of causal links between participation and sustainability.

The presented Framework might be used to assess policies, strategies, programmes and projects on rural development, to identify and analyse particular aspects which lead or create constraints to sustainability of the initiated interventions, to enable designing more effective interventions based on the lessons learned. Finally, the framework can become a tool for government and aid donors with respect to sector-wide approaches.

Thus, this literature review-based framework was considered suitable as a conceptual basis for this research, which is both analytical and prescriptive in nature.

3.2. Overview of Participation Methodology

Development researchers and professionals provided various interpretations of the term ‘participation’. The debate regarding the advantages and disadvantages of ‘participation’ includes pros and cons, thus participation becoming a contested term.

The phenomenon regarding the role of participation in development projects has two main schools of development researchers and practitioners, one of which concluded that participation was important for development projects, and the other questioned its importance and effectiveness.

According to McGee, Levene and Hughes (2002, pp. 7-10), for several decades, donors and governments have used participatory strategies in various kinds of poverty alleviation programs, in the belief that participation is one of the most effective means both to deliver and sustain benefits to the poor. Many such programs have now been completed for some time, presenting an opportunity to study the long-term impact of participation on rural development.

In the light of the growing interest in participatory approaches by the development community, and increased application of participatory approaches in development interventions in the rural areas, it is important to provide evidence regarding the effectiveness and impact of participatory approaches in the context of the implementation of rural development projects (African Development Bank Handbook, 2001).

In the 1980s, development institutions and Governments started to examine the reasons why the livelihood of the beneficiary population was not improved from the development cooperation which had been delivered for more than thirty years.

As Chambers (1983, p. 14) posited, some of the failures in development projects were due to the application of the standardised approaches by the donor agencies, without much taking into consideration the needs and interests of the local population. The top-bottom approaches led to the low or no participation of local people in the implementation of development projects; have challenged both contribution of resources by the local population, and sustainability aspects of the development interventions with respect to the further maintenance of projects' results.

"Participation" has three uses and meanings: cosmetic labelling, to look good; co-opting practice, to secure local action and resources; and empowering process, to enable people to take command and do things themselves. Its new popularity is part of changes in development rhetoric, thinking and practice. These have been shifting from a standardised, top-down paradigm of things towards a diversified, bottom-up paradigm of people. This implies a transfer of power from "uppers" - people, institutions and disciplines which have been dominant, to "lowers" - people, institutions and disciplines which have been subordinate."
Source: (R. Chambers 1994, p. 2)

As Rahnema (1992) stated, international, governmental and non-governmental agencies have gradually realised that one of the reasons of many failures in development interventions could be attributed to the absence or an insufficient extent of stakeholder participation. Later on, a number of development agencies started to introduce the participation of people through various programs.

According to Francis (2002), one of the reasons was a lack of mobilisation of local people and their limited opportunities for participation in the planning and accomplishment of development interventions.

The poor performance and results of many development programs and growing poverty brought a shift away from the modernization paradigm of development in the 1970s, and paved a way for modern participatory approaches (Reyes, 2001). The main themes of

international development agencies were related to increasing the awareness of the poor and oppressed of asymmetric power relations and of their own situation, creating or reinforcing networks of solidarity, gradually building up their confidence in their own knowledge and abilities.

The major donor agencies started to adopt and apply people-centered or people-oriented approaches, the concept of ‘participation’ or ‘participatory development’ in order to improve the effectiveness, efficiency and sustainability of their development interventions and promote stakeholders empowerment (Narayan, 1995).

According to Uphoff (1992, p.11) "A participatory strategy for promoting sustainable agricultural and rural development proceeds on the assumption that rural people have more to contribute to the development process than just their money or labour power. They have ideas, management skills, technical insights, and organisational capabilities that are needed for development. They are to be regarded as partners more than "beneficiaries" or (worse) "target groups"".

Presently participatory practices are applied in many stages of development work, such as needs assessment, project implementation and management, monitoring and evaluation, capacity building, mobilisation, community planning, and others.

According to IFAD (2012, p.33), more attention should be paid to the involvement of the public in decision-making regarding infrastructure investments. It should also ensure ‘wider participation from the rural groups’ and ‘developing a culture of trust of this group in IFAD’s activities in the future’.

A participatory study of the poverty situation accomplished in 47 countries states that participatory assessments are effective tools to explore the reality of the poor and make changes in their lives, - "We contend that participatory methods can provide unique insights into the complexity, diversity, and dynamics of poverty as a social as well as economic phenomenon" (Narayan, Patel, Schafft, Rademacher and Koch- Schulte, 1999, p. 25)

To address the issue of effectiveness of application of participatory approaches in development project, and whether the empowerment and involvement of the rural poor can ensure greater success of the development interventions, an assessment study organised by the World Bank (Narayan, 1995) was undertaken, where development researchers studied 121

water supply projects in 49 developing countries. According to the study, the participation of projects beneficiaries was the most significant factor for inquiring well-functioning water supply.

The study had also identified that besides the functionality of the water supply and economic benefits of the local population, the participatory approaches applied in the assessed projects had also a positive influence on empowering the rural population and institutional strengthening of the local institutions. The major shortcoming identified by the study was referring to the goal of the projects related to targeting women, which was not achieved in most cases, since the assessed projects could not ensure a high level of involvement of women due to a number of reasons, which hinders participation of women in community actions in many developing countries.

3.3. Overview of Participation since 1950

Participatory approaches have been developed since 1950 by the efforts of researchers, development workers, government agents and local populations as opposed to the traditional top-down and supply-driven approaches which were considered the causes that the development did not result in significant results with respect to poverty eradication and empowerment of the vulnerable population (Platteau, 2006, 1-47).

The community development approach originated in India after 1950 and spread to other developing countries in the 1960s, with its underlying modernization ideology and its practical combination of adult education, institution building, social welfare and development projects (Chambers, 1994).

The People's Participation Programme (PPP) originated from the 1979 World Conference on Agrarian Reform and Rural Development, aiming to develop methodology for people's participation to be incorporated agricultural and rural development programmes (FAO, 1990, p. 10). The roots of the PPP emerged in 1975, as "FAO called for the preparation of a framework for research and action by local institutions in developing countries, to assist them to start a Rural organizations Action Programme for the Involvement of the Poor in Development", (FAO, 1990, p. 12)

Starting from 1980s and 1990s, the major development agencies prioritised participatory development for their interventions. Hence, from the 1980s, and through the 1990s, onwards,

the general consensus among development agents was that top-down approaches were to be discarded in favour of involving local populations directly in the process of development (Chambers, 1994).

Participation is one of the major principles of the rights-based approach, which was developed as a "Common Understanding" of a human rights-based approach (Human Rights Based Approach to Development Cooperation, 2003) by development agencies following the statement of the UN Secretary General in 1997, to mainstream human rights into all work of the United Nations. According to the human rights-based approach, "People should be involved in decisions that affect their rights".

Both multilateral and bilateral international development agencies adopted policies, procedures and guidelines to address the potential environmental and social risks of their operations since the late 1970's. During the 1980's and 1990's most development agencies adopted formal environment policy and procedures, e.g. Integrated Safeguard Systems, Policy and Performance Standards on Environmental and Social Sustainability, often supported by technical guidance (Horberry, 2014, p. 3).

According to the same source, the agencies have also developed independent mechanisms to enable individuals or groups, likely to be harmed by projects because of inadequate compliance with the safeguards systems, to bring a complaint against the organisation.

Gender is another important aspect of participation. The United Nations Charter of 1945 and the Universal Declaration of Human Rights in 1948 established the first official worldwide recognition of women's equality and non-discrimination on the basis on sex (UN, 2015). Until 1960's the focus was mainly on women's reproductive roles, while from 70' and 80' women's equality and the role of women was promoted as an aid for economic development. The First World Conference for Women held in Mexico 1974, the UN decade for women "76-85" and the promotion of the Women in Development (WID) approach emphasised women's right to development, recognition of women's economic role in national economies and, most significantly, gave a voice to women in developing countries.

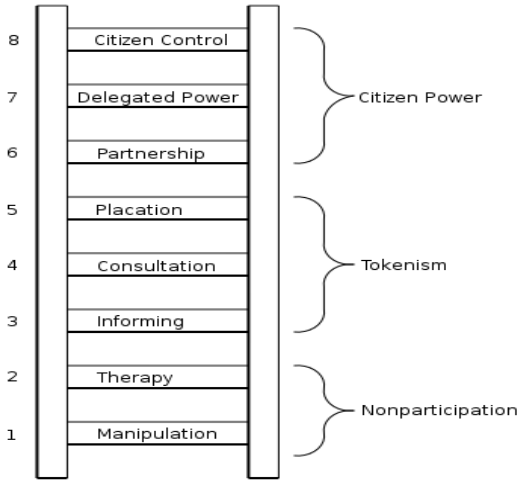
According to the Beijing Platform for Action "women's equal participation in decision making is not only a demand for justice or democracy, but can also be seen as a necessary condition for women's interests to be taken into account. Without the perspective of women at all levels of decision-making, the goals of equality, development and peace cannot be achieved," (UN, 1995, Para. 181, p. 119).

3.4. Types and Forms of Participation

The different types of participation include Arnstein's (1969) ladder of participation, which is one of the most famous expressions of participation with respect to the degree of power of the participants. The eight levels of the ladder are manipulation, education, information, consultation, involvement, partnership, delegated power and citizen control, where the top of the ladder is marked with 'Citizen Power', referring to citizen control, power delegation and partnership, with 'non-participation' on the bottom of the ladder, indicating therapy and manipulation.

According to Arnstein (1969), one of the most important notions of participation is 'redistribution of power' aimed at empowering the powerless people.

Figure 6. A Ladder of Participation



Source: Adapted from Arnstein, (1969, p. 217)

According to Oakley (1987), participation is considered to be one of the project's inputs for the achievement of the project's objectives, in the context of rural development programs, as it mainly includes rapid mobilisation and is considered to be a facilitation tool. As a process, participation is not only a managerial technique, but more a tool enabling local people to be involved in the rural development projects. There is a dispute whether participation in rural development should be considered a programme, a technique or a methodology.

Oakley (1991) presents the following categories of participation in rural development:

1. ***Participation as Collaboration***, where rural people are informed about the development programmes, however do not have direct control over them.
2. ***Participation though Organisation***, where organisations facilitate participation of the targeted population.
3. ***Participation in Community Development Activities***, where the community members are envisaged to be actively involved in addressing problems in their community.
4. ***Participation as a Process of Empowering***, which refers to educating and building the basis for participation.

The typology of participation by Pretty (1995) considers the quality and extent of participation. Pretty shows different levels of participation, including 'Manipulative Participation', which refers only to the presence of local people, and 'Self-Mobilization', referring to the self-initiations of local people and even further, where local people develop contacts to get resources and technical advice and maintain their own control over usage of resources.

Table 3. Pretty's Typology of Participation

Typology	Characteristics of Each Type
1. Manipulative Participation	Participation is simply a presence, with `people's' representatives on official boards but who are unelected and have no power.
2. Passive Participation	People participate by being told what has been decided or has already happened. It involves unilateral announcements by an administration or project management without any listening to people's responses. The information being shared belongs only to external professionals.
3. Participation by Consultation	People participate by being consulted or by answering questions. External agents define problems and information gathering processes, and so control analysis. Such a consultative process does not concede any share in decision-making, and professionals are under no obligation to take on board people's views.
4. Participation for Material Incentives	People participate by contributing resources, for example labour, in return for food, cash or other material incentives. Farmers may provide the fields and labour, but are involved in neither experimentation nor the process of learning. It is very common to see this called participation, yet people have no stake in prolonging technologies or practices when the incentives end.
5. Functional Participation	Participation seen by external agencies as a means to achieve project goals, especially reduced costs. People may participate by forming groups to meet predetermined objectives related to the project. Such involvement may be interactive and involve shared decision making, but tends to arise only after major decisions have already been made by external agents. At worst, local people may still only be co-opted to serve external goals.

6. Interactive Participation	People participate in joint analysis, development of action plans and formation or strengthening of local institutions. Participation is seen as a right, not just the means to achieve project goals. The process involves interdisciplinary methodologies that seek multiple perspectives and make use of systemic and structured learning processes. As groups take control over local decisions and determine how available resources are used, so they have a stake in maintaining structures or practices.
7. Self-Mobilization	People participate by taking initiatives independently of external institutions to change systems. They develop contacts with external institutions for resources and technical advice they need, but retain control over how resources are used. Self-mobilization can spread if governments and NGOs provide an enabling framework of support. Such self-initiated mobilization may or may not challenge existing distributions of wealth and power.

Source: Pretty (1995)

Mansuri and Rao (2013, p.60) mentioned the following kinds of participation: (i) participation in decision making through consultative processes or deliberative bodies without the authority to make or veto resource allocation decisions; (ii) the contribution of cash, material goods, or physical labor to construct public goods or provide public services; (iii) the monitoring and sanctioning of public and private service providers; (iv) the provision of information and involvement in awareness raising activities.

Another typology of participations was discussed by White (1996), who refers to the various interests in different forms of participation. White points out four types of participations: nominal, instrumental, representative and transformative, which explains how participation is being used at specific phases.

Actors in 'Nominal Participation' level are 'more powerful', while those on low level are 'less powerful', thus revealing the phenomenon of bottom-up and top-down participation and interests, where both parties have a mutual consensus to make decisions.

Table 4: Forms of Participations

Form	Top-Down	Bottom-Up	Function
Nominal	Legitimation	Inclusion	Display
Instrumental	Efficiency	Cost	Means
Representative	Sustainability	Leverage	Voice
Transformative	Empowerment	Empowerment	Means/End

Source: White (1996)

In the context of different types of participation, Cornwall (2008) raised the important issue of 'who are the participants?' which was not much examined in various levels and degrees of participation.

A more recent description of various levels of participation was developed by the International Association for Public Participation (2017).

Table 5. Levels of Participation

Increasing Impact on the Decision

	INFORM	CONSULT	INVOLVE	COLLABORATE	EMPOWER
Public Participa tion Goal	To provide the public with balanced and objective information to assist them in understanding the problem, alternatives, opportunities and/or solutions.	To obtain public feedback on analysis, alternatives and/or decisions.	To work directly with the public throughout the process to ensure that public concerns and aspirations are consistently understood and considered.	To partner with the public in each aspect of the decision including the development of alternatives and the identification of the preferred solution.	To place final decision making in the hands of the public.
Promise to the Public	We will keep you informed.	We will keep you informed, listen to and acknowledge concerns and aspirations, and provide feedback on how public input influenced the decision.	We will work with you to ensure that your concerns and aspirations are directly reflected in the alternatives developed and provide feedback on how public input influenced the decision.	We will look to you for advice and innovation in formulating solutions and incorporate your advice and recommendations into the decisions to the maximum extent possible.	We will implement what you decide.

Source: Reprinted from International Association for Public Participation, 2017.

A noteworthy approach related to participation has been presented by the Nobel Laureate, the Indian economist and philosopher Amartya Sen, who challenged the accepted notion that famine was caused by lack of food, and has introduced the 'Entitlement Approach'(Sen,

1981, p. 45) discussed the causes of starvation and analysed 'entitlement systems'. According to Sen (1981, p. 45), "the entitlement approach to starvation and famines concentrates on the ability of people to command food through the legal means available in the society, including the use of production possibilities, trade opportunities, entitlements vis-à-vis the state, and other methods of acquiring food." The author discussed the entitlement approach which is distancing from economic phenomena into social, political, and legal issues and is "a person's ability to command food-indeed, to command any commodity he wishes to acquire or retain-depends on the entitlement relations that govern possession and use in that society. It depends on what he owns, what exchange possibilities are offered to him, what is given to him free, and what is taken away from him."(Sen ,1981, pp. 154-155).

In 1980s Amartya Sen introduced the Capability Approach which was widely applied in the context of human development. In his writing "Capability and Well Being", Sen acknowledged that people are different with respect to their capacity to convert goods into valuable achievements, which is due to personal and social arrangements. The Capability Approach is defined by its choice of focus upon the moral significance of individuals' capability of achieving the kind of lives they have reason to value. It also addresses the access of people to high quality education, real participation, community activities which support them to cope with struggles in daily life. (Sen 1993, p. 30)

Participation being at the core of a human rights based approach is further stated in the Human Rights Based Approach to Development Cooperation (2003, p.91) that "all programmes of development cooperation, policies and technical assistance should further the realization of human rights as laid down in the Universal Declaration of Human Rights and other international human rights instruments". The programming of development cooperation should be guided by human rights principles, including those related to water and sanitation.

Further in 2008, according to the SDC (2008, p.6), General Comment No. 15 of the UN Committee on Economic, Social and Cultural Rights not only describes the normative content of the human right to water but also provides some guidance for its practical application: "drinking water must be safe and acceptable, it must be affordable, it must be accessible and it must be sufficient." To note however in the context of Georgia or Armenia, there is a lack of functioning mechanisms to ensure the safety and acceptability of drinking water in terms of quality and the affordability with respect to the income. Moreover, the price of drinking water according to the UNDP (2006, p.11), should not be more than 3% of the income. That said, the accessibility of drinking water with respect to the location close to house, working place,

kindergarten, school, and other key venues is not ensured in many remote rural communities of Armenia and Georgia, where several rural settlements face lack of water.

On July 28, 2010, the General Assembly of the United Nations formally recognised water and sanitation as basic human rights and thus fully endorsed the General Comment No.15 that had earlier been issued in 2002. That General Comment had noted that "Article 11, paragraph 1, of the International Covenant on Economic, Social and Cultural Rights specifies a number of rights emanating from, and indispensable for, the realisation of the right to an adequate standard of living 'including adequate food, clothing and housing'. The use of the word 'including' indicates that this catalogue of rights was not intended to be exhaustive. The right to water clearly falls within the category of guarantees essential for securing an adequate standard of living, particularly since it is one of the most fundamental conditions for survival". (WaterAid, 2011, p. 7).

Water Aid (2001, pp 19-20) presents a revealing summary of the differences between a rights-based approach and a needs-based approach, see Table 6.

Table 6. Summary of the differences between a rights-based and needs-based approach

	Needs-based approach	**Rights-based approach**
Vulnerability	Vulnerability is addressed as a symptom of poverty or marginalisation.	Vulnerability is seen as a structural issue, both caused by, and leading to, unequal power relations in society.
Justice	An increase in justice may be achieved as a by-product of meeting needs, but it does not explore the injustices that led to the deprivation in the first place.	Justice is the focus of the efforts. Thus, it tends to challenge traditional, social, cultural and even legal practices and norms that may foster injustice.
Discrimination (i.e. based on gender, creed, caste, economy, etc.)	Tends to work with the symptoms of discrimination, rather than the causes.	Deals with the causes of discrimination, as it works with the power equations that support such discriminations.

Power relations	Does not engage with power equation issues. In fact, they are likely to approach the current power holders for help, thus unconsciously enhancing their power.	Focuses on addressing the differential power issues that underlie poverty and disadvantage and tries to re-draw the power equations.
Accountability	In NBA projects, accountability is only in terms of use of funds – so that the funding agency (governmental or non-governmental) is satisfied that funds are used for what was intended.	Works towards ensuring the accountability of the State and other service providers and pushes them to fulfill their obligations to respect the rights of all, especially the marginalised.
Citizenship	Citizens are perceived as beneficiaries who hopefully enjoy the largesse of the government.	Citizens are seen as significant actors in a democratic state, and so emphasis is placed on opening up direct channels of communication between citizens (and other people living within a state's jurisdiction, e.g. refugees) and the State's officers/institutions.
Conflict	The aim is to avoid upheaval and discontent by somehow arranging to satisfy the needs of the community.	By opening up space for expressing demands and multi-way communication among stakeholders, rights-based approaches create possibilities in conflict prevention, though at times they may also function in a conflicting manner. Grievances simmering beneath the surface can be and are brought into open debate for negotiation or challenge.

Source: Reprinted from WaterAid (2011, p. 19-20)
Retrieved from: https://washmatters.wateraid.org/publications/rights-based-approaches-to-increasing-access-to-water-and-sanitation-0

The three duties of a state enshrined in the Human Rights Declaration include the duty to respect, the duty to protect and the duty to fulfill, indicating that the Human Rights Declaration consolidates and unifies the needs-based and the rights-based approaches.

The human right principles were also been introduced in the 2030 Agenda for Sustainable Development, which was adopted at the UN General Assembly In September 2015. The

Agenda 2030 provides a comprehensive and universal framework, uniting the environmental, social and economic dimensions of sustainable development (Danish Institute for Human Rights, 2018). More than 90 % of the Sustainable Development Goals (SDGs) targets are linked to international human rights and labour standards. According to UNDP (2018), with the adoption of the 2030 Agenda, UN Member States pledged to ensure “no one will be left behind” and to “endeavour to reach the furthest behind first”. "People get left behind when they lack the choices and opportunities to participate in and benefit from development progress. All persons living in extreme poverty can thus be considered ‘left behind’, as can those who endure disadvantages or deprivations that limit their choices and opportunities relative to others in society"(UNDP, 2018, p. 3).

UNDP states that participation is an involvement of local people in the initiatives related to their local development. "People are involved in all the processes affecting their lives, and participate in decision making regarding their own development, “(UNDP, 1993, p. 21).

According to the Human Rights Based Approached to Programming, "Participation means ensuring that national stakeholders have genuine ownership and control over development processes in all phases of the programming cycle: assessment, analysis, planning, implementation, monitoring and evaluation".

In the context of the present research, my definition of participation is subscribed to the definition of the UN Human Rights Based Approach to Programming: "Participation is a means of development. From a human rights perspective, participation goes well beyond mere consultation or a technical add-on to project design. Rather, participation should be viewed as fostering critical consciousness and decision-making as the basis for active citizenship. Development strategies should empower citizens, especially the most marginalized, to articulate their expectations towards the State and other duty-bearers, and take charge of their own development. "

3.5. Overview of Participatory Approaches

People’s participation as a concept was formulated in the 1970s, as a result of the awareness that many approaches applied so far in rural development did not often lead to a significant poverty reduction due to the assumption that the targeted population, especially poor people, were not much involved in the development interventions (Frey, 2008). The concept was mainstreamed later on in the 1990s.

According to NORAD (2013, p. 5), "In arguing for a stronger ownership of development and aid processes, the focus has primarily been on recipient governments rather than the local populations in villages, towns and cities that are the ultimate target group and end users of most development aid".

Rapid Rural Appraisal (RRA) was introduced in late 1970s and immediately became popular among the major development agencies, despite limiting the role of the local people to information provision, and leaving decision making in the hands of others (Chambers, 1992).

During the 1980s, Robert Chambers developed Participatory Rural Appraisals (PRA) with similar methods and tools as RRA, changed objective, as its main principle was the sharing of results of analysis, planning and decisions via meetings with the community members. This approach built up the capacities of rural people to identify and analyse their living conditions, opportunities and problems to decide on the ways to solve them (Chambers, 1994).

After the World Conference on Agrarian Reform and Rural Development (WCARRD) in the 1980s and 90s, participation in rural development became more concentrated among governments, donors and international organizations, which developed or adapted participatory approaches to involve bottom-up planning.

A number of different stakeholders involved in development cooperation ranging from consultants and academics to developing country governments, NGOs and international organisations chose and adapted various approaches and methods to apply in their development programs according to their needs and interests. Participation thus became what some describe as a 'new orthodoxy of development', but one lacking an ideology (Henkel, Stirrat, 2001, p. 168).

According to Oakley (1995) applying participatory approaches in development projects aimed to reach the poor and most marginalised layers of the local population in order to improve the accessibility of the targeted population and the overall impact of the development interventions.

Oakley (1995, p. 1) mentions two major schools of thought, which consider participation an important keystone in development cooperation.

Mansuri and Rao (2013, p.8) state that "transferring management responsibilities to a resource or an infrastructure scheme does not usually involve handing over control to a cohesive organic entity with the requisite capacity; often it requires creating local management

capacity. In the absence of deliberate efforts to create such capacity and provide resources for ongoing maintenance and management, investments in infrastructure are largely wasted and natural resources poorly managed."

Aforementioned authors of the first school of thought consider participation important in terms of inclusion of local population in project implementation to ensure effectiveness of the development initiatives.

The second school has a different point of view; it focuses on the causes of human poverty and underscores a causal relationship between the poverty of people and their exclusion from involvement and participation in the development projects. This school of thought considers that exclusion hinders them from being empowered and obtaining access to the basic resources and services.

Chambers (1983, p. 140) points out the issue of redefining rural development 'to enable poor rural women and men to demand and control more of the benefits of development'. According to Chambers, the development professionals and rural poor should cooperate with respect to development interventions, although development agents usually consider, they have the solutions to the problems of the poor, and that the latter are not able to address their interests.

The necessity for a change from authoritarian to participative development interventions is pointed out by Chambers (1983), who demonstrates necessity to learn from the rural poor, from their indigenous knowledge, and considers that putting the last first, will empower the rural poor and increase their chances of benefiting from the results of the development interventions. The development professionals should change the way of exploring and identifying the needs of the rural poor, and despite the deadlines and the planned actions, should work together with the rural people on the identification of their own needs and interests.

Chambers points out three uses and descriptions of participation (1994, p.1): 'cosmetic labeling, co-opting practice and empowering processes.'

Participation became popular due to various reasons. According to Chambers (1994, p.2), those reasons included development failures experienced in top-down projects, cost effectiveness, sustainability and shift in development thinking.

Development trends shifted from top-bottom to bottom-up approaches, thus trying to put the rural poor first and not last, making a change from the top-down and supply-driven

approaches. The donor agencies started to apply more flexible ways of development planning and programming, and practiced empowerment tools to make the voices of the rural poor heard.

Chambers addresses the added value of participatory monitoring and evaluation (2007), mentioning that it is useful for the local people to analyse their own situation and identify their priorities, which is a learning process and enables them to raise their voices. The local poor, who participate in the group work, are empowered and motivated to accomplish further monitoring of the development interventions, having been involved in the overall planning process.

According to Uphoff (1992), it is very effective to involve the local population in the initial planning stages. The author points out the importance of solving the local problems, which have been prioritised by the local population in order to achieve sustainability of institutions, thus underscoring the relationship between participation and institutional sustainability.

Uphoff (1992, p. 11) demonstrates that the development practitioners should apply 'problem-solving approach' in promoting participatory approaches, considering that the local people can provide many added-values to the sustainable development process, such as their ideas regarding development, organisational skills, indigenous knowledge and many others.

He posited that it is important to ensure the involvement of local people already in the stage of identification of needs and problems, to identify which problems can be solved by the local people and organisations and for which they need the resources from other institutions. The involvement of the local organisations in the problem identification stage will enable them to conduct problem identification and addressing their own needs in a self-reliant way on a regular basis.

Meanwhile, a number of development theorists and practitioners questioned the effectiveness of 'participatory approaches'.

One of the most impressive collections of criticism against certain conditions under which participation is "granted", has been incorporated in the book entitled Participation: The New Tyranny? by Cooke and Kothary (2001) criticising participation by various authors. The book provides a critical insight to the already developed concept and understanding of participation. It explores the major limitation of participatory discourse, lack of evidence regarding promotion of empowerment and inclusion by participatory approaches, failure to achieve

social change. The authors of the book's articles describe the phenomenon of participation as a form of power where control and dominance on behalf of development agencies, professionals and researchers are prevailing, serving a number of political agendas and not the development goals or achievement of social change.

The book explores the notions of three types of tyrannies: 'the tyranny of decision-making and control', 'the tyranny of the group', and 'the tyranny of method'. The authors of the book state that due to the high prevalence of participation in development cooperation, it is becoming impossible to explore innovative and creative approaches for identification of the local needs and the relevant development interventions. They argue whether the local knowledge and the local needs are considered by the donors, or participation is just a manipulative way of imposing the pre-planned development interventions, and that the western development professionals shape and produce the knowledge to be applied in the development programs and neglect the local knowledge. The consensus over the identified needs and decisions made, is becoming more important than the diversity of needs and interests of different community members.

The book criticises participatory approaches for not ensuring equal power distributions and relations among the donors, beneficiaries as well as other internal and external groups. The authors of the book state that participatory approaches do not consider the existing inequalities available in the targeted communities, which means the projects do not empower the excluded and marginalised rural poor, and build the project activities based on the existing internal and external relationships, leaving the voices of the poor and excluded unheard. In this context the institutionalisation of participation in the context of the local communities does not lead to the sustained inclusion, which can be achieved also within the non-formal relationships.

The authors of the book name participation tyrannical, as they make a parallel among the power used by the development professionals, practitioners and policy makers, who misinterpret empowerment of local population by using and prescribing their own power to the beneficiaries of their development interventions.

Mosse (2001) questions the potential of Participatory Rural Appraisal (PRA) in promoting local knowledge and empowering local poor, as opposed to Chambers (1994), according to whom the PRA enables more local, bottom-up approach to development.

As Mosse demonstrated through a number of examples of development projects, the development practitioners and project officers shape the local needs of the communities in accordance with their projects' criteria, thus in many cases neglecting the local knowledge and the real needs of the people. Similar problems were registered during the decision making stage, as the projects were selecting the predefined activities, according to the already elaborated development models and approaches, and not those proposed by the community members.

The standardised project procedures do not take into consideration the local realities, needs and interests of the local population. The donor agencies do not apply up-to-date flexible solutions to the existing problems, but rather focus on their planned and preliminary approved procedures and clichés.

A similar argument points out Cleaver (2001) related to little or no evidence on the positive impact of participatory approaches on the improvement of the living conditions of the poor.

The criticism by Cleaver questions the involvement of the marginalised population in the participatory projects, including women and excluded groups.

The author disagrees with the importance of notion of institutionalisation in the context of participatory development, which is considered to be an important model to promote participation of the local poor, leading to empowerment and ownership. The examples of institutionalisation can refer to the establishment of community-based organisations and all kinds of community groups and structures.

Participation creates such organisation models which do not consider the interactions and relationships of local population externally from institutional settings, Cleaver (2001, p. 42).

The book questions the effectiveness of the participatory approaches in the examined development projects, considering that no evaluation has been conducted to identify the relationship between participation and livelihood impact. The contributors and editors of the book express the diversity of criticism, at the same time provide a large number of aspects that should not be neglected, however do not provide recommendations and solutions to the mentioned problems caused by the phenomenon of participation and its application.

Hickey, Mohan (2004) point out, that the project-based applications of participation, such as PRA and many others limit the overall diversity and inclusiveness of the notion of participation, which has a much wider meaning and application.

Mohan (2006) criticises the usage and application of the local knowledge in participatory approaches, pointing out that participatory research does not promote power relations in favor of the poor and marginalised, and development expert remains the main decision-maker.

At the same time some authors point out that often participation is not a voluntary action on behalf of the community residents, but is being forced by the donor agencies. Thus, according to Oakley (1991, p.31) development agencies and governments put the financial burden on the shoulders of the poor thus achieving cost-effective development strategies, or as Cooke and Kothari state (2001), participation can be forced upon a community, against its will, reduce work and leisure time of the local population. Therefore, the question is in which cases participatory approaches are beneficial and which are the individual opportunity costs for the community residents themselves.

Participatory approaches are useful for the inclusion, ownership of the local population and further maintenance of the results of the development projects. Considering the multi-level and broad scope of the concept on participation, the role and importance of participatory approaches should be assessed with respect to i) specific contexts, ii) scope of interventions, and iii) possible influence of the stakeholders on the effectiveness of the envisaged results.

There are a number of questions to be addressed to assess the effectiveness of participatory approaches. Who should be involved in the projects: the overall local population? Municipalities? Women?

When should the local people be involved? In all stages of the project cycle? Does it make a difference in terms of effectiveness of the projects?

What *are the incentives* or *factors* influencing participation of the local poor? Are they important to be considered prior to the start of the projects?

And finally what are the *results* of participation? Do they influence efficiency or effectiveness of development interventions? How?

The diversity of the participation concept makes it a generalised term and leads to many discussions. A comprehensive analysis on the importance of applying *certain types of participatory approaches*, depending on the given context and the nature of the interventions, with involvement of *identified stakeholders* in *certain stages* of development interventions should be prioritised.

These notions and the different types of participation, applied in the context of the four selected rural development projects in Georgia and Armenia, will be developed further in the next chapters.

3.6. Contextual Overview of Participation in the Caucasus before and during the Soviet Union

Participation of local people was not practiced in the times of the Soviet Union due to the highly centralised planning and management. Rural development was understood at that time mainly as ‘agriculture’, being managed by the created bureaucratic structures and institutions.

According to the Soviet Union: Policy and Administration (1989), collective action was practiced in the form of a ‘forced collectivization’, which started in 1929, when all the land, agricultural machinery, livestock, and anything else owned by the villagers was confiscated, and already by ‘1937 approximately 99 percent of the countryside had been collectivized’.

"Collectivisation" had a goal to produce enough food for everyone and free people to factory workers. It was considered that fewer people would be able to produce more food under the system, but actually productivity dropped, and peasantry was destroyed as a class and a way of life (Hays, 2008). Stalin forced peasants into collective farms against their will and imposed impossible quotas.

According to Harrison (1996, pp. 192-208), in 1920s agricultural resources and food surpluses were not well accessible for the urban population, as food surpluses were retained within the village, even more than before the revolution, which could possibly be due to the "large scale commercial farming".

The author states that in July 1928, Stalin decided to secure a "temporary tribute " from agriculture, leading to "collectivization". A new procurement system was introduced for obtaining rural food surpluses; the system of compulsory food first led to the increase in peasants’ food deliveries, later to a crisis of rural subsistence. The peasants had to kill their livestock in large amounts due to fodder shortage, experience harvest failure and other challenges. In 1929 more than half the peasant farms in the country had been incorporated into collective farms within three months, resulting in suffered arable sector and failed to increase the “tribute” from agriculture (Harrison, 1996, p. 3).

This was followed by Stalin's initiative of "the liquidation of the kulaks (the more prosperous stratum of petty capitalist farmers) as a class" in 1930 (Harrison, 1996, p. 4) to reduce the resistance to the new rural system, by confiscating their property and deporting them to remote areas and labour camps. This destroyed the phenomenon of individual prosperity, as kulaks were the most prosperous and well-respected people in the rural areas and since then any person in the rural areas who wanted to be successful had only the opportunity of being a member of a collective farm (kolkhoz). To note that collectivisation was achieved by pushing around 120 million peasants and uncontrolled expansion of forced labour camps.

Cienciala (1999, pp. 192-208) states, that "in August 1942, Stalin told British Prime Minister Winston S. Churchill that collectivization had been imposed because agriculture had to be mechanized to avoid famine. The peasants, said Stalin, had in a few months "spoiled all the tractors" they were given, so they had to be collectivised. He claimed there was no alternative to collectivisation, but admitted it had been "a terrible struggle," involving 10 million "kulaks." Still, he said, "many of them agreed to come in with us." Some of these were given land of their own to cultivate in the provinces of Tomsk or Irkutsk (Siberia). "But the great bulk were very unpopular and were wiped out by their labourers." To note that collectivisation did not increase Soviet agricultural output, but reduced it catastrophically, while the losses in livestock were not made up until the early 1950s.

Following the 1930s and during both the World War II and the early post-war period, as well as during the Khrushchev period (1956-64) through the Brezhnev period (1964-82), the agrarian policy did not undergo major changes with respect to kolkhozes and the collective ideology, although during this period more attention was paid to the sovkhoz (nationalised farm) and mobilising resources into agriculture.

Hays (2008) mentioned that there were 40,000 collective farms and 9,000 state farms. Approximately two third of all farmland was worked by collectives. A typical collective farm covered an area of one square kilometer and included 720 people, 470 houses, 20 tractors, 4 harvesters, and 5 combines. The largest collective farms covered more than 62,000 acres.

"The state farm, called (sovetskoe khoziaistvo – sovkhoz) which was a type of an enterprise funded by the government was established as a model for socialist agriculture", states Soviet Union: Policy and Administration. The collective farm (kollektivnoe khoziaistvo-kolkhoz) was a self-financed agricultural cooperative whose members were paid according to their

work, resulting in a considerably low income of the ‘kolkhoz’ members compared to the ‘sovkhoz’ ones.

According to Service (1997), kolkhoz was functioning as any other state structure, and the members were rewarded according to the results, thus the farm members did not get any payment in case the required quotas were not met.

In the case of ‘sovkhoz’, farmers were hired to work for fixed salaries, not depending on the results of their work and the number of labor days.

Although ‘sovkhoz’ was to promote the concept of state ownership, and ‘kolkhoz’ - the collective ownership, the latter did not happen, since after the confiscation of the property of the peasants, the distrust between the local people and the authorities did not enable formulation of collective ownership on behalf of the members of ‘kolkhozes’. According to the Charter of the collective farms, the ‘kolkhoz’ was to function based on cooperation fundamentals, where the peasants were united on voluntary basis to produce joint agricultural production (Service, 1997). In reality the members of ‘kolkhoz’ did not experience any traits of collective action, since the profit of the kolkhoz had nothing to do with the remuneration received by the ‘kolkhoz’ members, as they were paid based on the labor days and their results, i.e. the concept of ownership was not applied in the case of ‘kolkhozes’ and thus their members were not involved in any processes affecting their lives, nor participated in decision making regarding their own development.

"In Stalinist ideology the sovkhoz was a higher form of organisation than the kolkhoz which was “only” a cooperative, and there were periods both under and after Stalin when policy encouraged absorption of existing kolkhozes into the public sector" (Harrison, 1996, p. 8),

Structural transformations in the Soviet economy and restructuring of the agrarian system led to the development of the Soviet Food Policy, while in 1970s the large-scale imported meat and animal feed stuff comprised a considerable percentage. To note however, during all those years the agricultural production did not meet the local needs at large, although the number of trained agriculture specialists considerably increased from 1940 to 1970.

The Soviet economic system did not provide sufficient incentives in the agricultural sector, especially with respect to the "payment system, which did not motivate the farm workers, the irrational structure of procurement prices, pressure for quick results and overcentralisation of supply of inputs and targets for output" (Harrison, 1996, p. 11).

After 1979, Gorbachev did not accept hierarchy of ownership from individual peasant agriculture through the kolkhoz to the sovkhoz; and according to Gorbachev the "state would contract with the kolkhoz for a fraction of farm output, the rest being delivered through voluntary marketing" (Harrison, 1996, p. 12), which was not developed due to the collapse of the Soviet Union at the end of 1991.

All these reforms resulted in the decline of trust of the rural population towards the Soviet government, which exists until these days. In the context of Armenia and Georgia, participatory approaches were not widely applied after the collapse of the Soviet Union, and people were often neither involved in all the processes affecting their lives, nor participated in decision making regarding their own development.

In both Georgia and Armenia, a series of initiatives of donor organisations and national governments addressing establishment and facilitation of development of agricultural cooperatives face considerable challenges. The reasons refer to the mindset of the farmers regarding the Soviet experience, in particular the confiscation of their overall property and forced collectivisation by the means of establishing two types of basic agricultural production units in the context of the socialised farm sector: state farms and collective actions.

With respect to the post-Soviet situation, according to Millns (2013, p.12), "Following the disintegration of the former Soviet Union, in Armenia the former 869 large collective and State farms on some 147,000 separate parcels were privatized during the early 1990s to create 338,000 farms/rural households with relatively small pieces of land. The rapidity and disorganization of land reallocation led to disputes and dissatisfaction, with conflicts particularly arising particularly over allocation of water rights and distribution of basic materials and equipment. Agricultural reforms are continuing and there are a number of problems yet to be solved. More than 150,000 ha of arable land and 50% of former pasture land across the country is still out of use. 95% of agricultural machinery is more than 10 years old. "

3.7. Community and Rural Development

Community development is often associated with terms such as community capacity building, community vitality, empowerment, rural development or self-reliance. The basic elements of collective action, ownership and improved circumstances are common to all these ideas.

Local people build social and human capital, learn new skills, develop economic opportunities and financial capital in the process of their participation in the local development interventions.

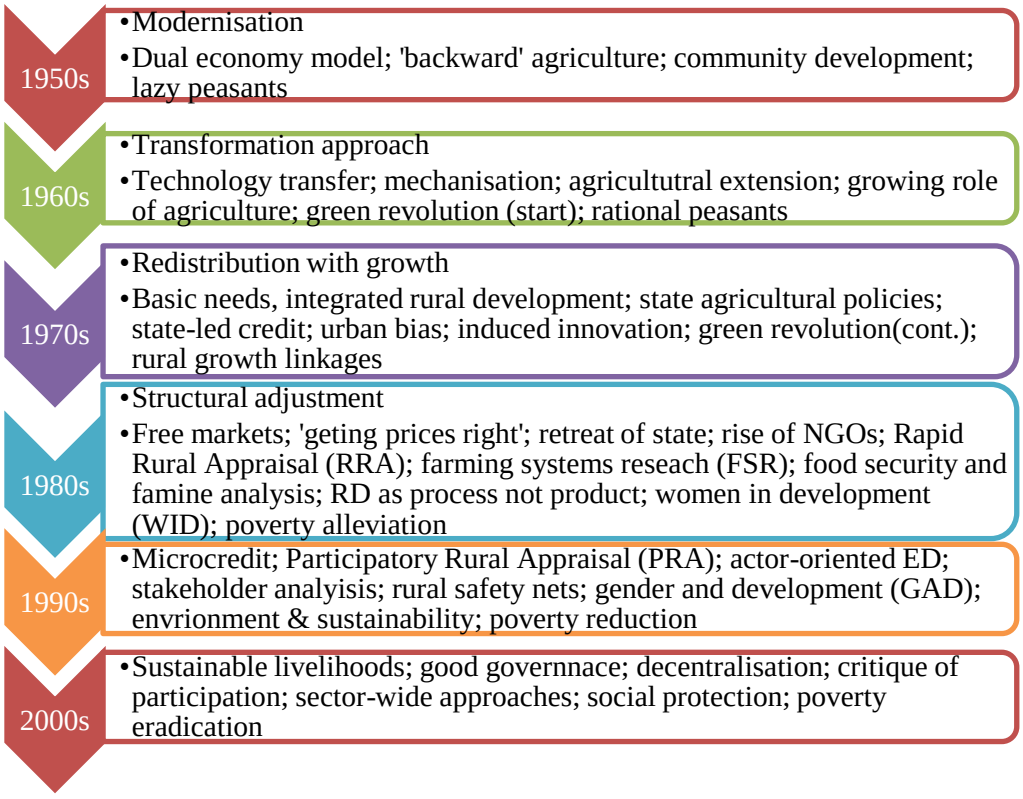
> *"Community development – means that a community itself engages in a process aimed at improving the social, economic and environmental situation of the community."*
> *Source: (Cavaye 2001, p 1).*

According to Cavaye (2001, p. 16) "community development is more than a planning process; it is an ongoing learning process where new attitudes and networks develop from action and reflection. "

Rural development includes several disciplines, including agriculture, forestry, fishing, rural tourism, landscape management, nature conservation, organic farming, production of high quality and region-specific products, and many others.

According to Ellis and Biggs (2001), rural development has been influenced by several theories, approaches and policies since 1950s, see Figure 7, which presents the evolution of rural development in decades.

Figure 7. Evolution of Rural Development (RD)



Source: Ellis and Biggs (2001, p. 3)

With respect to participation in rural development, it is noteworthy that Robert McNamara, World Bank President from 1968-1981, made a substantial contribution to global food, agriculture and poverty reduction, by establishing a comprehensive long-term public strategy and public institutions at the global, regional and country levels (Maddux, 1981).

Chase (2015) implies that in 1973, Robert McNamara was one of the pioneers to address the challenges related to the wide-spread poverty in the development world and presented the strategy to address it, thus highly contributing to the development of the concept of the Integrated Rural Development (IRD).

According to Ruttan (1984), the widespread poverty raised the concerns of the governments and development agencies, and the community development assistance which was widely practiced in 1950s and 1960s was followed by 'integrated rural development' (IRD) and 'basic needs' programmes. Kuhnen (1977) mentions the following main factors to be considered while applying IRD: "(i) Natural resources, agricultural and non-agricultural; (ii) Human resources (quality and quantity); (iii) Pattern of social organization(values, social stratification mobility, power structure land tenure system); (iv) Economic structure(agricultural production structure, industry, market relations, etc,); (v) Technology in agriculture and in the non-agricultural sector; (vi) Infrastructure(physical infrastructure, transport and communication, social infrastructure, spatial order); (vii) Institutions and organizations (administration, people's organization, etc.); (viii) Services (marketing, credit extension, social security); (ix) Education and training (formal and informal) ".

"IRD focused on participation, community empowerment, and the decentralization of local institutions", succeeded in some parts of the world and failed in others due to several reasons, including but not limited to agriculture being considered as a declining sector, the complicated nature of IRD projects, some of the projects applying top-down approach and many others, (Ruttan,1984). IRD was practiced mainly until 1990s, when most donor agencies preferred supporting human development sector.

The integrated rural development approach should reinforce different sectors and is thus a multi-sectoral approach. It is one of the approaches widely applied in rural development, which according to FAO (2005, p. 10), includes integration of the environmental, social, economic, political, cultural dimensions of the actors' visions of the territory. In many development projects this multi-sector approach is applied in the context of rural

transformation, across sectors, geographic regions and addresses broad needs of the communities and households by employing a vertical integration of development strategies.

Chambers in his work ‘Rural Development: Putting the Last First’ (1983), discussed the different types of development practitioners and researchers, referred sometimes as to ‘outsiders’, who have their own view on rural development to influence the people of the local poor. Some of those practitioners working in the field of rural development have very little or sometimes even no proper understanding about the lives, needs, priorities, cultures and perceptions of the local population. Often the development practitioners use surveys, which Chambers (1983, p. 51) calls ‘Survey slavery’, which is a critique of purely quantitative survey approaches during rural development diagnostics, meaning that the development workers ask sociologists to conduct various surveys, which in turn minimise their own communication with the rural population, hindering their comprehension of the rural reality specific to the respective context. Some of the surveys are known to have ‘misleading findings’ although there are also ‘useful ones known to have involved several disciplines’ (Chambers, 1983, p. 58).

Proper usage and application of the local knowledge, named by Chambers as ‘peoples’ science, which can be used to describe the knowledge system of a group of rural people’ (1983, p. 82) is another important pillar in rural development, the application of which increases the relevance, effectiveness, efficiency and sustainability of the rural development interventions.

It is noteworthy to mention the "Concept for Rural Development" of the German Federal Ministry for Economic Cooperation and Development (BMZ) as a regional response to rural poverty. The Regional Rural Development (RRD) is a concept for rural development interventions in a given region; both regional and multi-sectoral, focusing on people and poverty (Rauch, Bartels, Engel, 2001, p. 1). According to the authors, the regional rural development focuses on: (i) identification of new and better opportunities, (ii) capacity-building for service institutions, and (iii) capacity building for people, especially disadvantaged groups, so that they can utilise what opportunities and services come their way, Rauch, Bartels, Engel (2001, p. i).

The guiding approaches of the regional rural development concept published in 1983 were widely and successfully applied by several development agencies in many countries.

"RRD pursues a people-oriented development approach rather than a resource-,

sector-, technology- or growth-oriented one. This type of approach harmonises with the circumstances common in rural regions, where people earn a living directly through trades or small farms. Under such circumstances, what people decide and plan themselves determines the course of development", (Rauch, Bartels, Engel, 2001, p.1).

RRD approach is highly participatory and prioritises involvement of local people in decision making regarding their own development, which is considered as one of the important preconditions for a long-terms improvement for the lives of the poor in the context of the RRD.
According to the 'Working group on sustainable development of rural areas' (1999, p 4), which is a working group led by German Society for International Cooperation (GIZ) and development consulting companies, the numerous identified gaps of the sector approached led to the development of integrated initiatives, including a multi-sectoral approach of the development of rural areas. The publication states that a multi-sector approach can better target the needs of the rural people, since all their problems are interrelated and refer to different sectors.

Social scientists argued in 2000 that rural development is a practice without a theory, and the Organisation for Economic Co-operation and Development (OECD) made a statement referring to the need of research in rural development, considering that the nature and dynamics of rural development and their application in practice are not adequately expressed in theory, OECD (2005), which was followed by the tender call announced by the European Commission for development of conceptual aspects of sustainable and integrated rural development.

To summarise, rural development refers to the development of the rural, and therefore it deals with all the rural stakeholders and processes that take place in the rural areas.

My definition of the rural development is: "Rural Development is a process aimed at improving the quality of life of rural people by promoting social inclusion, poverty reduction and economic development in rural areas."

3.8. Social Capital in Development Discourse

The concept of social capital has attracted attention of many researchers and professionals from various fields for a number of years.

Social relationships have been important phenomenon in community development projects, for the purposes of community mobilisation, organisation of formal or informal groups and structures. The social networks and relations refer to as social capital.

Concepts of social capital have been developed by Bourdieu, Coleman and Putnam, which have common notions, however there is a difference among the ideologies of the developed concepts.

The concept of social capital developed earlier in the 1970 by Bourdieu (1984, 1989), focused on the following three dimensions, which have an interrelation with class: economic, cultural and social capital.

Bourdieu defines social capital as "resources that are based on membership in a group" (Bourdieu, 1983, p.191) The important contribution to the theory of social capital was the development of the concept on 'bonding and bridging social capital' by Bourdieu (1983), which explores the reinforcement of people's identities, ethnic groups and linking people from different social groups, thus forming a background and platform for solidarity.

> *'Social Capital is defined as the aggregate of the actual potential resources which are linked to possession of a durable network of more of less institutionalized relationships of mutual acquaintance or recognition'.*
> *Source: (Bourdieu 1986, p. 248)*

Bonding capital refers to bringing together the people who know each other, meaning to make the weak relationship stronger, while bridging capital is about introducing people who do not know each other in order to establish social networks (Woolcock, 1998).

> *"Social Capital is the information, trust, and norms of reciprocity inhering in one's social networks". Source: (Woolcock 1998, p. 153).*

> *"Social capital is defined by its function. It is not a single entity, but a variety of different entities having two characteristics in common: they all consist of some aspect of social structures, and they facilitate certain actions of actors – whether persons or corporate actors – within the structure".*
> *(Coleman, 1988, p. 98).*

The concept of the social capital developed by Coleman (1988) refers to social structure and cooperation of actors in the framework of the structure and considers social capital to be a productive collective resource.

The idea of public goods is well-positioned in the concept of Coleman, meaning that the overall structure benefits from the contribution of all the actors. The concept was criticised, and one of the critiques was related to the transition from individual to community-level relationships, its preconditions and necessary structures, which is not well explained in the concept (Portes, 2000).

Putnam's concept refers to the following components: moral obligations, social values, social networks, which have diverse forms, such as formal and informal, very well connected and not much connected networks, Putnam (1993a, 1993b). The author posited that there is a correlation between social capital and economic development, bringing the example of regions in Italy, where there is higher level of economic development in the regions with high level of social capital compared to the ones of low level of social capital.

> *"Social Capital features of social organization such as networks, norms, and social trust that facilitate coordination and cooperation for mutual benefit".*
>
> *Source: (Putnam 1995, p.67)*

Putnam's definition of social capital is related to networks, norms and trust which promote coordination and cooperation for mutual benefit (Putnam, 1995).

According to Putnam (2000), the decline of the social networks is related to the reduction of the social capital, and the more effective is the participation, the greater is the social capital.

Criticism against Putnam's concept was related to the formulations and the causality among the sources of the social capital, its outcomes and causes, and to the exclusion of the various factors that can lead to economic growth and democracy development (Portes, 1998).

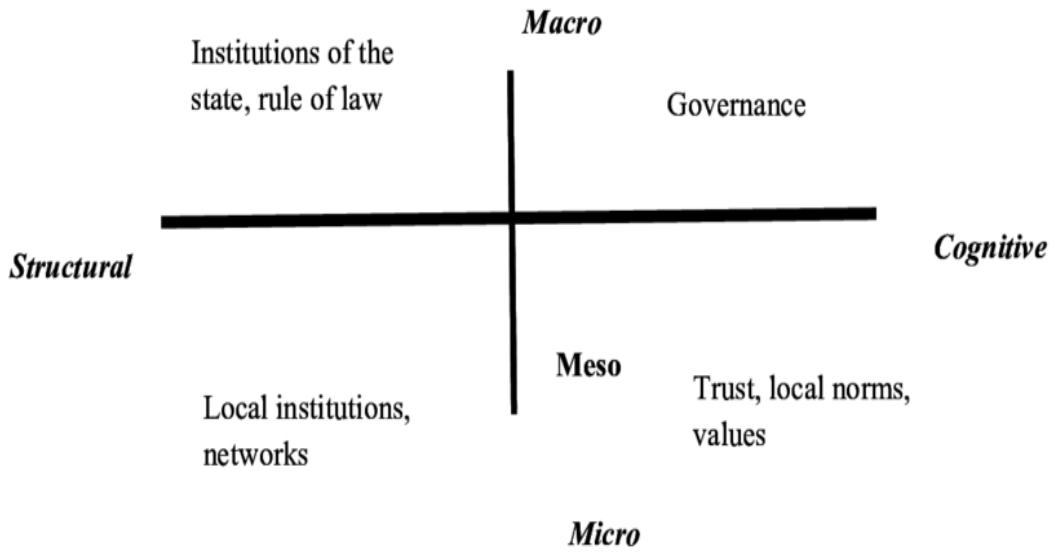
Social Capital has been referred by various authors and researchers to different levels, including individual, family, group, community, network and society levels.

The present research will apply the following definition of social capital, developed by Woolcock, Narayan (2000, p. 3) 'social capital refers to the norms and networks that enable people to act collectively'.

As a summary referring to the types and forms of social capital, there are two major approaches regarding social capital. One is developed by Coleman, who states that social capital is a result of individual investment in a network, and the other one refers to Putnam's consideration of social capital, which considers it to be a result of people's interactions.

Grootaert and Van Bastelaer (2002) developed a framework including micro, meso, and macro levels of social capital, allowing important effects of complementarily and substitution between the three levels.

Figure 8. The Forms and Scope of Social Capital



Source: Reprinted from Grootaert and Van Bastelaer (2002)
Retrieved from https://openknowledge.worldbank.org/handle/10986/14098

Social Capital being a complex theory with multiple dimensions is very complicated to be measured and conceptualised (Claridge, 2004, p. 15). To note, there is limited research regarding how social capital benefits can be maximised in participatory methodologies as various participatory tools might have different impacts on social capital in terms of gain or

loss and social capital types and levels will interact to effect participation (Claridge, 2004, p. 30).

According to various studies, social capital has an important role in development cooperation and a strong interrelation with the effectiveness of the development interventions related to agriculture, water and sanitation and other sectors.

Isham and Kähkönen (1999) accomplished a study of community water projects in Indonesia that aimed to identify success and failure factors of the projects.

The study revealed that high level of social capital resulted in better impact of the water supply projects at household level.

According to Beresnevièiûtë (2003, p.5) "Social participation could be described as one of the dimensions of social integration, i.e. participation in the construction and reconstruction of social reality or in the production and reproduction of social life." The author mentions that 'social capital is the outcome of participation in the social context; it is the interrelation of social agents (both individuals and groups) based on trust, communication, and activities that comprise the grounds for material or symbolic exchanges or deals, as well as for different associations.' In the context of the social capital, the author discusses the social empowerment of individuals or social groups and the level of individuals' participation in the social sphere, and also states that social capital is broader than that and includes relations, principles, norms, social trust, promoting mutual communication and cooperation. Beresnevièiûtë (2003, p.9).

"Social capital is the civic society, in the context of which people, as the result of mutual communication and co-operation create and get involved in a network of voluntary associations for the sake of their families, beliefs, interests, ideologies, etc.", (Beresnevièiûtë, 2003, p.10).

In the present research the "social capital" is defined as a valuable resource that is based on membership in a group, presupposes cooperation of social actors in the framework of water rehabilitation projects implementation. Social capital is observed as a productive collective resource that enables constructive implementation of the projects for the well-being of villagers and their village, self-mobilisation of the village communities and leads to forms of ownership towards the projects and associated water supply systems. It is assumed that there is a correlation between social capital and rural development as social capital forms sense of mutual

benefit among the villagers and the more effective their participation in the project implementation, the greater is the social capital. Hence, participation is viewed as a prerequisite of increase in social capital which in turn contributes to improvement of water infrastructure and leads to improved water supply. Social capital consequently promotes social cohesion of the local population during their involvement in the project implementation ensuring social justice by enabling the people claim for their needs and rights; build ownership towards projects; promote equity among the different groups of villagers through cooperation.

3.9. Overview of Sustainability and Sustainable Development

The concept of sustainable development has become very popular in the last decade, and includes social, economic, environmental and institutional objectives, United Nations Department for Policy Coordination and Sustainable Development -UNDPCSD (1995), United Nations Division of Sustainable Development -UNDSD (2000), United Nations Economic and Social Council - UNECOSOC (2001).

In 1987 the World Commission on Environment and Development (WCED) promoted the concept of sustainable development to reduce the gap between environment and development goals.

Since the publication of the final report of the WCED, Our Common Future, sustainability has occupied a prominent place in development agenda.

In the 1980s, the concept of sustainable development became one of the core elements of national and international development policies and a key goal for many international agreements, such as Maastricht Treaty on European Union; the European Union (EU) Fifth Environmental Action Programme; the Rio Declaration; Agenda 21; the Framework Convention on Climate Change; and the Convention on Biological Diversity (Carpenter, 2012, p. 186).

> *"Sustainable Development is Development that meets the needs of the present without compromising future generations from meeting their own needs."*
> *Source: (UNWCED 1987, p.41)*

The Agenda 2030 comprises three main elements: the 17 Sustainable Development Goals (SDGs) and 169 targets to be achieved by all countries by 2030; the means of implementation

which specify the resources and partnerships that are necessary to reach the agreed goals and targets; the follow-up and review processes and mechanisms that will monitor and guide the implementation, including the global indicators framework.

The SDGs, otherwise known as the Global Goals, include 17 Goals which build on the successes of the Millennium Development Goals, and are a universal call to action to end poverty, protect the planet and ensure that all people enjoy peace and prosperity, (United Nations, 2018, p. 7). The following SDGs are relevant for the theme of "sustainability" in the framework of the present research:

According to the UN Resolution (2015, pp. 1-19) "***Goal 1. End poverty in all its forms everywhere***, particularly 1.4:
By 2030, ensure that all men and women, in particular the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technology and financial services, including microfinance ".

"***Goal 2. End hunger, achieve food security and improved nutrition and promote sustainable agriculture***, particularly 2.3:
By 2030, double the agricultural productivity and incomes of small-scale food producers, in particular women, indigenous peoples, family farmers, pastoralists and fishers, including through secure and equal access to land, other productive resources and inputs, knowledge, financial services, markets and opportunities for value addition and non-farm employment".

"***Goal 3. Ensure healthy lives and promote well-being for all at all ages***, particularly 3.3:
By 2030, end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water-borne diseases and other communicable diseases".

"***Goal 5. Achieve gender equality and empower all women and girls***, particularly 5.5:
Ensure women's full and effective participation and equal opportunities for leadership at all levels of decision-making in political, economic and public life".

"***Goal 6. Ensure availability and sustainable management of water and sanitation for all***, particularly 6.1:

By 2030, achieve universal and equitable access to safe and affordable drinking water for all".

The report (United Nations, 2018, p. 7) presents the current state of the Goal 6 of the SDGs, according to which: "Too many people still lack access to safely managed water supplies and sanitation facilities. Water scarcity, flooding and lack of proper wastewater management also hinder social and economic development. Increasing water efficiency and improving water management are critical to balancing the competing and growing water demands from various sectors and users". According to the same source, 3 in 10 people lack access to safely managed drinking water services and 6 in 10 people lack access to safely managed sanitation facilities.

“Sustainable development might best be characterized as a contested discursive field which allows for the articulation of political and economic differences between North and South and introduces to environmental issues a concern with social justice and political participation,” (Becker, 1999, p.1).

Sustainable Development concept has three essential aspects according to Holmberg (1992):

1. Economic system refers to production of goods and services on continuous basis, keeping manageable government and external debt, and avoiding damaging agricultural and industrial production.
2. Environmentally sustainable system includes a stable resource base, exploiting non-renewable resources to the extent the investment is enough for substitution, and maintenance of biodiversity and atmospheric stability.
3. Social aspects include equal opportunities and distribution, access to social services including health and education, gender equity, political accountability and participation.

The above-mentioned three aspects of sustainable development, which form the base for the construction of sustainability, present multi-dimensional goals which are more challenging and complicated compared to the comprehensive definition of economic development.

The term ‘sustainable’ is presently widely used in development discourse, and it is sought that development interventions should be sustainable.

Guttenstein, Scialabba, Loh and Courville (2010) developed the dimensions and the key issues related to sustainability.

Table 7 . Sustainability Dimensions

Dimensions of Sustainability																				
Good Governance					Social Development							Environmental Integrity				Economic Resilience				
Core Sustainability Issues																				
Participation	Transparency	Ongoing Assessment	Prevention of Corruption	Rule of Law	Rights (to food, resources and labor rights)	Non-Discrimination and Equity	Access to Education and Knowledge	Health and Sanitation	Cultural Identity	Water	Biodiversity & ecosystems	Land & Soil	Air & Climate	Eco-efficiency	Secure Livelihoods	Social Capital	Resilience to Economic Risk	Inclusive Value Chains		

Source: Reprinted from Guttenstein, Scialabba, Loh, Courville (2010)

The above-mentioned core sustainability issues include Participation as a part of Good Governance, Social Capital and Economic Resilience, thus indicating the interrelation of both notions to Sustainability and its dimensions.

The followers of the livelihood concept, such as Robert Chambers and Gordon R. Conway, consider two dimensions of sustainability.

The first dimension, related to the external impact of behavior and its further impact for ecological system is often called ‘environmental sustainability’. The second dimension refers to actors’ internal capacities to face pressures and to ‘maintain an adequate and decent livelihood’ (Chambers, Conway, 1991, p. 9). There are several contexts where sustainability is used, while in the present research sustainability refers to the social context, where it will refer to the ability of the rural population to maintain and improve livelihoods, assets and capabilities which are important for their livelihoods (Chambers, Conway, 1991).

3.10. Program Sustainability

According to Sabini (2016), sustainability became an important phenomenon being prioritised not only in development cooperation but also on political agenda, and it has widely developed

not only as an academic field of research but also as an area of political practice. Both sustainability at macro-level and micro-level with respect to the role of the development professionals in sustainability of development actions was also taken into consideration and emphasised , since sustainability of both economic and development projects was realised to be important for sustainable economy and society.

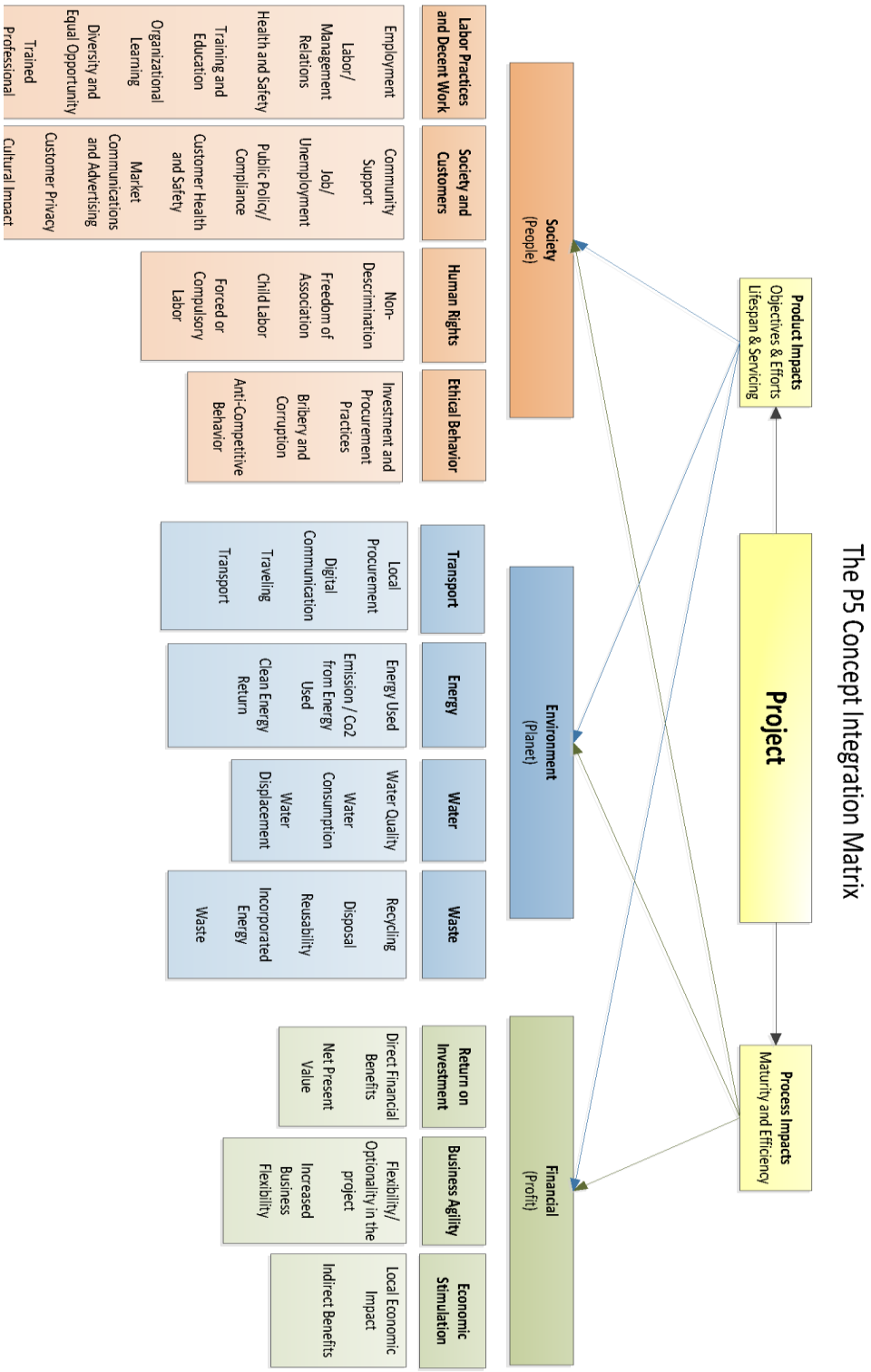
Nevertheless, program sustainability has become a major challenge for a large number of development programs and projects in developing countries. Many of the initiated development interventions have problems with respect to their sustainability, maintenance and follow-up to ensure access of the services/products produced by the Programs and Projects for the beneficiaries in the long run.

According to the European Commission Directorate General for International Cooperation and Development of the EC's Results Oriented Monitoring (ROM) Handbook (2017, p.45) 'Sustainability is the continuation of benefits from a development intervention after major development assistance has been completed, the probability of continued long-term benefits, and the resilience to risk of net benefit flows over time'. The ROM checklist regarding program/project sustainability covers the following pillars: (i) institutional and human capacities; (ii) leading role of the partners; (iii) access to the benefits for the target group in the long run; (iv) relevant authorities taking financial measures; (v) involvement of private sector; (vi) addressing environmental sustainability, and (vii) enhancement of the role of women.

According to Khan (2000), some of the factors causing poor sustainability of development projects should be addressed at the phase of program/project design, and the necessary corrections should be taken during implementation with the help of monitoring tools. Khan (2000) introduces the following dimensions of project sustainability: (i) Continued operation and maintenance of project facilities or Logistics Dimension; (ii) Continued flow of net benefits or Economic Dimension; (iii) Continued community participation or Community Dimension; (iv) Equitable sharing and distribution of project benefits or Equity Dimension; (v) Institutional stability or Institutional Dimension; (vi) Maintenance of environmental stability or Environmental Dimension.

The author mentions that all the mentioned dimensions are important for the sustainability of projects and weakening any of those might threatens the sustainability of the project in the long run.

Figure 9: The P5 Concept Integration Matrix



Source: Reprinted from GPM Global 2014, First Edition, p. 11. Retrieved from: https://www.researchgate.net/publication/282816191_The_GPM_P5_Standard_for_Sustainability_in_Project_Management

The Green Project Management (GPM) P5 Standard for Sustainability in Project Management is a tool developed to support Portfolios, Programs and Projects with organizational strategy for Sustainability and focuses on the Impacts of Project Processes and Deliverables on the Environment, Society, the corporate bottom line and the local economy, (GPM Global, 2014). The P5 stands for people, planet, profit, project processes and products.

The importance of the interrelations among the Project, its Impact and the 3 key elements: Society (People), Environment (Planet) and Financial (Profit) for the project sustainability presented in the Figure 9, is important in the context of the present research, particularly with respect to the interrelation between sustainability and involvement of community members, quality, consumption and displacement of water in rural development projects.

Sustainability in the context of the present research and the four potable and irrigation water-rehabilitation projects is defined as the provision of the required financial and other resources by the local population to accomplish the necessary repairs and maintenance of the water-systems rehabilitated in the framework of the project, to ensure the sustainability of the system and services.

Sustainable water supply indicator is defined for the present study 'as the provision of water of sufficient quantity and quality to meet water needs for health and economic well-being and functioning after the end of the project', (Shilling, Khan, Juricich, Fong, 2013).

3.11.Research questions

Reviewed literature and theoretical concepts explored how participation of people in rural development projects has a positive impact on social sustainability of rural development interventions. This theoretical assumption was to be tested through the research in a specific context of Armenia and Georgia.

The thesis of the study is postulated as follows:

There is a positive interrelation between participation and sustainability of rural development projects in Armenia and Georgia. Participation is observed as the independent variable and the sustainability of the rural projects is observed as the dependent variable.

Research Question and Sub-questions

The research question takes into consideration the problem statement (see Chapter 1).

The main question and the research questions are the following:

Main Question:

- Does community participation have any positive influence on the provision of regular water supply in the framework of water rehabilitation projects?

Research Sub-Questions:

The questions that the research intends to address in the contexts of Armenian and Georgian communities are as followed:

1. *What are the prerequisites of participation?*

   Specifically:

   - Were people's priority needs identified by project implementers?
   - Did project implementers account for people's participation and in what ways?
   - Was Household (HH) socio-economic status related to participation?

2. *What is the influence of Participation?*

   Specifically:

   - Are the following factors important for the participation in the rehabilitation of water supply system?

     a) Frequency of people's engagement in project activities;

     b) People's input (labor, cash, machinery/equipment, in-kind, other);

     d) People's involvement in project activities (through workshops, meetings, Focus Group Discussions, capacity building trainings, seminars, discussions, rehabilitation of water supply infrastructure, maintenance of the water supply system, etc.);

   - How did social capital (demonstrated through organised activities with relatives and/or other community members, local knowledge and practice, consideration of the water supply as the ownership of community population, attachment to the community, trust towards local population, women participation) lead to improved water supply?

The following indicators for project sustainability will be applied:

- What was the quality (very good, good, sufficient or bad) of water as assessed by the people? The project is considered sustainable if the quality of water is assessed as very good/good.
- What was the frequency of water supply (once a week, once in three days, once in two days, once a day, more than once and a day)? The project is considered sustainable if the frequency of water supply is more than once a day.
- What was the level of access (very insufficient, insufficient, adequate, sufficient, very sufficient) to water, did all community members have equal access? The project is considered sustainable if the level of access is assessed sufficient/very sufficient.
- Was the quantity of water adequate (yes/no) for people's consumption needs? The project is considered sustainable if the quantity of water is assessed as adequate for people's consumption needs.
- What was the water used for (watering gardens, livestock, gardens and livestock together, small industry, other)? Diversity of use should indicate more use of water, which should indicate project success.
- Were the community representatives informed (yes/no) on who/what organization was implementing the renovation?
- Has any change occurred in the livelihood aspects (preconditioned by the water supply project) of the community after the project implementation? The change is measured through equal access to water, equal contribution of females and males to project implementation and sustainability, increase of HH income in village due to improved water supply.

The next chapter is further closely linked to the conceptual framework of the research and will discuss the methodological framework, including different methods of data collection to find appropriate answers to the identified research questions.

Chapter 4

Research Approach

4.1. Case Study Area

The research was conducted in four rural municipalities: two in Armenia and two in Georgia. The countries and locations were selected as both being in developing countries and in the developmental context (in respect to social intervention projects and initiatives) where participation is claimed to be of benefit. The selection of the two countries was justified as Armenia and Georgia are both post-Soviet countries; the mindset of rural people has not considerably changed after twenty-seven years and the rural population in both countries faces similar difficulties with respect to sustainable development of rural areas.

From the research design perspective, it was important to have the cases from different (but similar in their context) countries to confirm that participatory approaches towards project implementation may have an effect not only in a country, but also in similar post-Soviet environments. This is not to generalise the findings on the populations of the countries, but on two cases in these neighboring post-Soviet country contexts. Further, the researcher tried to find similarities in project implementation with participatory approaches in the countries to confirm findings from one country context to the other. The analysis of findings however was conducted in a way to see whether there were any differences and similarities and what this adds to the knowledge on participation (prerequisites, forms and appearances) in the post-Soviet area.

The sample was divided into groups according to the independent or outcome variable: one community participated in Infrastructure Rehabilitation Project focused on Potable and Irrigation Water Rehabilitation (experimental group); and another one was not involved and experienced a top-down approach (without a participatory approach) in a similar Water Rehabilitation Project (control group). It was important for the cases to be similar to each other in terms of geographic location, culture, economic situation/preconditions and accounting for these criteria – the four communities (Vaghashen, Astghadzor in Armenia and Lomaturskh, Turskh in Georgia) were selected.

The cases were selected based on "most-similar" and "contrast of contexts" methods of selecting cases in application of case study approach (Gerring and Cojocaru, 2015). Hence, the cases should be comparable, most-likely (in case of the two experimental and two control villages) and least-likely (in terms of experimental versus control cases). The case study was meant to utilise an explanatory approach for "process (project implementation) tracing". Consequently, the research is a within and between case evaluation at a single point in time. The case types equal to 4 (experimental case in Armenia, experimental case in Georgia, control case in Armenia, control case in Georgia), while sub-types equal to 2 (experimental and control).

The cases were selected based on several important circumstances:

a) The cases had to afford enough data to address the question of interest;
b) The cases should be similar and different from each other, but at the same time independent of each other (the cases should not anyhow affect each other);
c) The cases could not be chosen from a larger sample of potential cases (as there were no databases of water rehabilitation projects in Georgia and Armenia), hence a purposeful sampling approach was applied, available data on the projects implemented in the countries was studied and, accounting for the preset criteria on similarity of geographical, cultural, economic and linguistic contexts, as well as difference based on participatory/non-participatory approaches applied to projects, the four cases were selected;
d) More specifically on the linguistic context, the researcher had to choose villages close to Armenia where the population spoke Armenian (researcher's native language) which even more limited the scope of possible choices in Georgia;
e) The cases should be conforming and diverse: conforming – enabling conforming of the expectation according to the causal model that participation increased social capital which increased project sustainability; and in each country one case should be chosen that accounted for very high level of participation and another one that accounted for very low level of participation.

A combination of qualitative and quantitative research methods was applied in the study to balance the gaps of the respective qualitative and quantitative approaches. Different data collection methods, including (i) household (HH) survey; (ii) income survey; (iii) qualitative key informant individual interviews and (iv) group interviews (with municipality representatives and key stakeholders from the communities) were applied. The researcher applied source triangulation and methodological triangulation, utilised quantitative and qualitative methods for data collection to explore, fuel, confirm and verify the quantitative data with qualitative findings from the four villages.

First, the research question was defined, then the cases were purposefully identified, in case of the survey a random sample of HHs was drawn from the list of all HHs in each of the villages, relevant features of the cases were explored through qualitative methods. This chapter describes the case study area, methodology applied in the study, data processing, and analytical approaches/strategy. It also discusses the sources of data collection, fieldwork experience and known limitations to the research design. For more information on the case selection approaches see Chapter 4.4.

4.1.1. Georgia

Georgia has one-tier-system of decentralisation, where the capital city Tbilisi has a special status, while the local level comprises twelve self-governing municipalities and sixty-four communities (OECD, 2016). Each of these entities can be divided in sub-municipal administrative units, and the municipalities are groups into nine regions (Mkharebi) with decentralised governments. The revision of the Local Self-Government and Government Law in 2006 led to territorial consolidation, while the new on Local Self-Government Code adopted in 2014 reinforces local participation and elections mechanism through calling for directly elected mayors in 12 cities and bodies of self-government (gamgebelis) for fifty-nine municipalities (in contrast to the previous legislation that limited direct mayoral elections to Tbilisi).

The present research targets two villages: Turtskh and Lomaturtskh located in the Akhalkalaki district of Samtskhe-Javakheti Region.

Samtskhe-Javakheti region borders Northern Armenia to the south, the administrative centre is the town of Akhaltsikhe. The region consists of six administrative districts: Akhaltsikhe, Adigeni, Aspindza, Akhalkalaki, Borjomi and Ninotsminda.

Armenians comprise the majority of Javakheti's population. According to the 2014 Georgian census, of the 41,870 inhabitants in Akhalkalaki Municipality (93%) and Ninotsminda Municipality 23,262 (95%) were Armenians. Javalkheti Plateau is a volcanic plateau within the Caucasus Mountains that covers the Samtskhe-Javakheti region of Georgia, along the border with Turkey and Armenia with the elevation of over 2,000 m.

According to the Akhalkalaki District Participatory Assessment and Survey Results (2006), the overall population of Lomaturtskh is 522 people, 166 households, while in Turtskh the total population is 1407, and the number of households is 483.

Most of the population does not have official employment, and practice land cultivation, cattle breeding and local small-scaled trade. In the given situation water supply is of great importance.

The main crops are potato and barley production, which are being hindered by a series of difficulties faced by the rural poor, including poor water supply, lack of agricultural machinery, poor roads, problems with certified seeds, fertilisers and marketing. Livestock production is one of the main sectors in the region, and local people produce milk and cheese for own consumption and sale. The development of livestock production faces a number of challenges, such as low productivity due to hay feeding in winter months, lack of veterinary services and vaccination, absence of new technologies, including those for milk collection and processing, difficulties related to marketing.

According to Lohm (2007, pp.15-16) several international organisations have carried out projects in Javakheti, including the OSCE High Commissioner on National Minorities (which incorporates legal assistance, language training and special rebroadcasting of Georgian news from the main channels into Armenian). According to the same source (p.15), "the UNDP Samtskhe-Javakheti Integrated Development Programme (SJIDP) has been active in the region for several years, but most respondents are not well aware of what UNDP is actually doing. Under its 300 million USD program the American ‘Millennium Challenge Georgia

Fund' has – apart from the major Javakheti road rehabilitation program – projects to improve the performances of Small and Medium-sized Enterprises, as well as agribusiness development activities in Georgia which will benefit Javakheti as well as other regions of Georgia. "

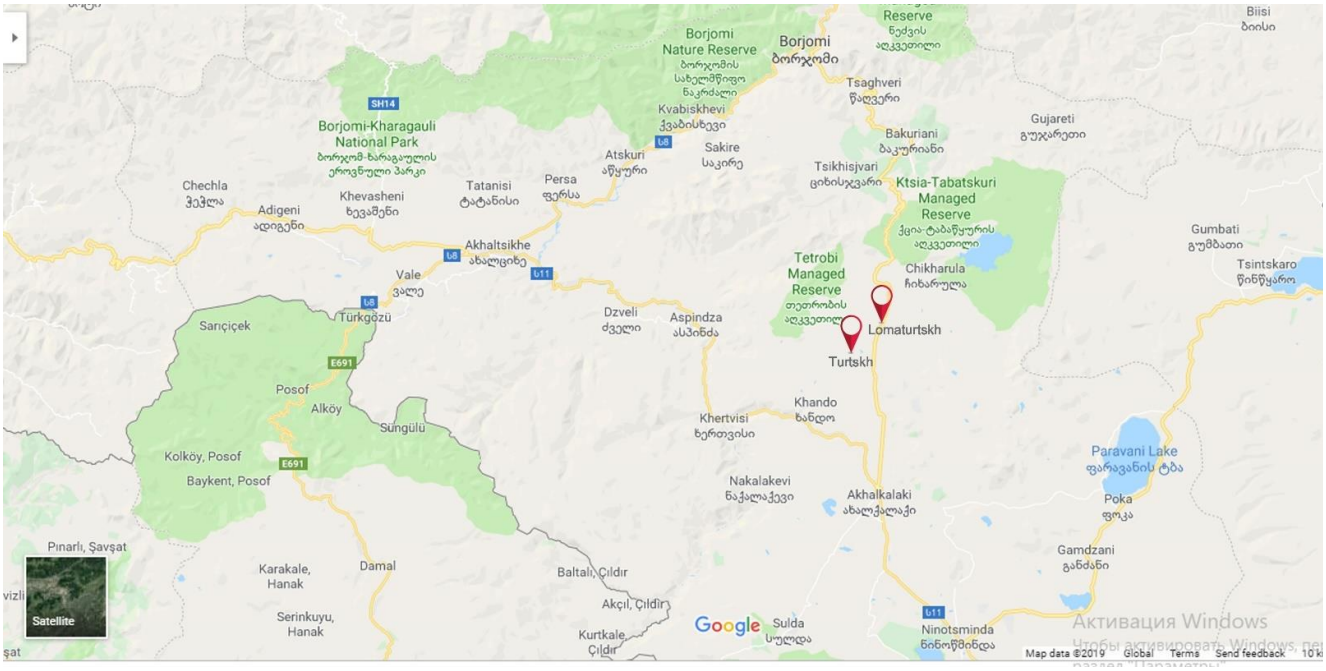
Javakheti receives support from the Armenian state, which includes renovation of schools, donations of books and equipment.

Figure 10: Map of Samtskhe–Javakheti Region, Georgia

Source: Wikipedia, 2009

Retrieved from: https://en.wikipedia.org/wiki/File:Samtskhe_Javakheti_district_map.png

Figure 11:Map of the Sample Villages in Georgia



Source: Google Data 2019 Retrieved from: https://www.google.com/maps/place/Akhalkalaki,+Georgia/@41.5610291,43.4418189,14z/data=!4m5 !3m4!1s0x4042f85def9360b9:0x156430e6c8a4de60!8m2!3d41.4025151!4d43.4871631

The water system rehabilitation projects were implemented in Turtskh and Lomaturtskh communities in 2004-2005, aiming at renovation or construction of new potable and irrigation water systems in both communities.

There are only seven Houses of Cultures, i.e. large venues for community events, and one of those is located in Lomaturskh. The rest of the communities have community clubs, where all the cultural and other related activities are performed. The irrigation network is in a very poor state, hindering the local population from agricultural activities. The inter-community roads and those to Akhalkalaki are in very poor state, thus causing high transportation costs for agricultural products and their marketing. The village still faces problems regarding sanitary conditions due to the poor state of the existing infrastructures which were not renovated after the collapse of the Soviet Union. The village has a lack of water chlorination.

In the community Turtskh, the irrigation system is in a very poor state and requires rehabilitation.

Despite the accomplishment of the water rehabilitation project in the community, which has envisaged rehabilitation of the drinking and irrigation water pipelines, the project faced problems related to the linking the water system to the main source in Bejano village, since the population of the Bejano village did not allow water supply to other villages from the water source and the network located in their village. The water network, constructed many years ago to link the spring located high in the mountains to Bejano village, was planned to supply water only to Bejano village and not the neighboring ones. Therefore, the population of Turtskh vllage still faces problems related to potable water.

4.1.2. Armenia

According to OECD (2016, p.1) "Armenia has one-tier decentralization system, as the 10 regions are deconcentrated entities under the authority of central government. The only level of devolution consists of 915 communities divided into 49 cities (urban centers) and 866 villages (rural settlements). The Capital-city has switched from region to specific community-status in 2015 and is made of 12 districts. Armenia ratified the European Charter on Local Self Government in 2001 and since 2013 the Ministry of Territorial Administration has initiated Community Enlargement process."

The present research targets two villages: Vaghashen and Astghadzor of the Martuni district of Gegharkunik Region.

Gegharkunik Region (*marz*) is the target region in Armenia; it is located in the eastern part of Armenia, around Lake Sevan, which plays an important role for the region. The region is the largest in Armenia and includes the following districts: Gavar, Chambarak, Martuni, Sevan and Vardenis. The region includes 92 communities, the major number of which is located on the altitude of 2000-3500 meters above sea level.

In Vaghashen village, the number of population is 4290, the number of households 1540, and in Astghadzor village the population is 3758, and the number of households 1800.

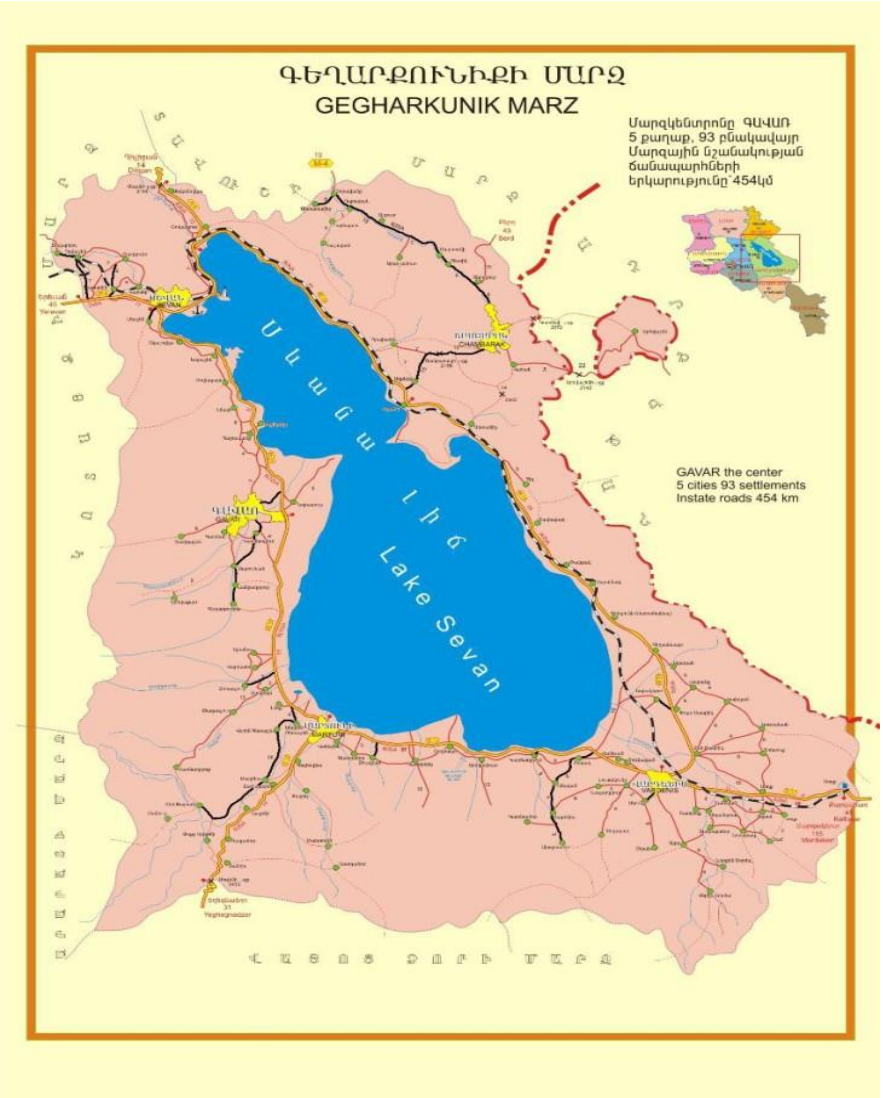
The leading branch of the region’s economy is agriculture, particularly production of grain, potato, vegetable and animal husbandry products. The region of Gegharkunik is the main

supplier of fresh fish to the population of the country. Mining industry is the main trend of the region's industry.

The quality of water supply is poor, and since proper water supply access and quality are important indicators for social-economic welfare, both state and international agencies apply efforts for their improvement.

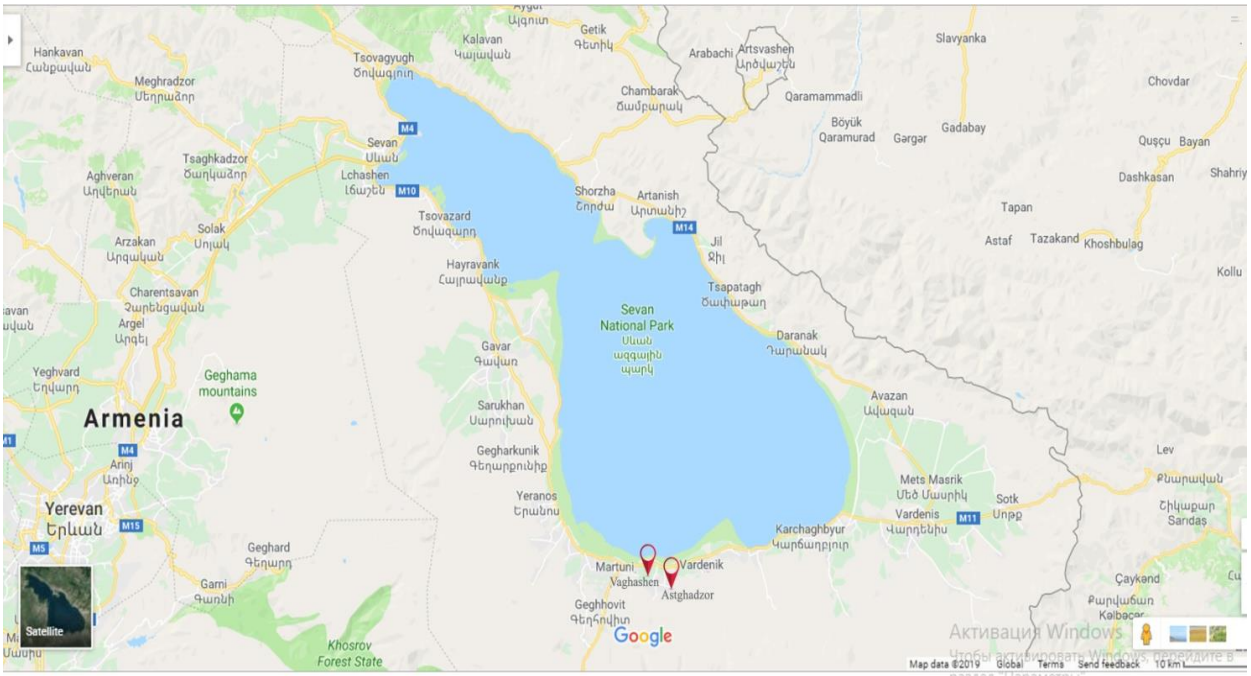
Civil society has an active role in the region; there are a number of Non-Governmental Organizations (NGOs) which try to address the major needs of the local population.

Figure 12: Map of Gegharkunik Region, Armenia



Source: Armenian Geographic Retrieved from: https://www.armgeo.am/en/gegharkunik/

Figure 13. Map of the Sample Villages in Armenia



Source: Google Data 2019

Retrieved from: https://www.google.am/search?q=vaghashen+map&oq=vaghashen+map&aqs=chrome..69i57j69i60l3.5538j0j4&sourceid=chrome&ie=UTF-8

Vaghashen village is located 2 km away from Martuni town and 2 km from Lake Sevan. The distance from the capital is 130 km. The number of population is 4290, and the majority is occupied in agriculture. The community used to be a cattle-breeding farm in the Soviet Times, however presently many people leave for seasonal work due to poor social-economic welfare.

The local population is actively involved in community life, and there is one Community-Based Organisation (CBO), which tried to mobilise the population in addressing the priority needs of the community (GIZ, 2012). The major part of the local population was engaged in agriculture, including cattle breeding, bee-keeping, potato and grain production.

One of the most urgent issues of Vaghashen community was the absence of access to potable water in one of the districts of the community since 1996. In 2009, the Office of Defense Cooperation at the U.S. Embassy in Armenia funded a Water Supply Project in several villages in Gegharkunik Region, including Vaghashen community. The "Water Supply in Armenia“ Project was coordinated by the U.S. Army Corps of Engineers Europe District and aimed at supplying potable water by the means of rehabilitating and constructing reservoirs

and intercommunity pipelines, and due to the community's mobilisation and contribution, the project was successfully implemented and secured pure potable water for 150 households.

Source: Village Administration – Most of the infrastructure was not renovated since the collapse of the Soviet Union. Fieldwork, Astghadzor, Armenia 2015

Astghadzor community is located on the eastern part of Lake Sevan, the community has high mountain pastures and has harsh climatic conditions, accompanied with cold, snowy and long winters. Due to the community's location in the mountain chain, summer pastures are located on 2406-2850 m, above sea level and winter pastures 1965-2075 m above sea level. The overall population is 3758. The major part of the community members is engaged in agriculture, including potato cultivation and animal-breeding.

Irrigation and potable water renovation project was implemented in the community for approximately hundred households. Despite the accomplishment of the project, the local population has access to water once in three days. The local kindergarten, like the rest of the social infrastructures in the village, is in a very poor state due to absence of financial resources, leaving children without pre-school education opportunities; only very few families afford to take their children to the District Center –Martuni, to attend a kindergarten.

4.2. Case Study Approach

The case study approach offered the opportunity to capture the specific geographical context, project conditions and factors, enabled conducting a targeted analysis of various levels and factors of participation, which might lead to an improved effectiveness of water projects.

The research was undertaken to assess the possible influence of participation on water projects. These projects are rare and, represent individual cases. Cases in Georgia and Armenia were selected so as these were identical in terms of population and geographical location representing with and without participation approaches to water rehabilitation projects. The term "without participation" or "no participation" does not mean that there was no participation of the community representatives in water rehabilitation projects or community life – it does mean that the implemented projects did not claim to utilise a participatory approach, but there is always some degree or form of participation.

According to Yin (2013) a case study research is preferable in situations when main research questions are 'how' questions (here how participation does (fostered by water rehabilitation project implementers) influence sustainability of water projects) and when the focus of the study is a contemporary phenomenon out of the control of a researcher over behavioral events. Here, the case of Georgian and Armenian water projects are studied within the contemporary reforms of rural community life and are 'living experiments' in a sense that a researcher cannot predict the outcome of interventions while the projects are implemented in selective communities.

To be noted that the research uses the comparative case study method. However, this comparison is not to generate universal laws, but probabilistic ones and the focus of the study is to explore different modes/approaches of project implementation and to assess their internal with and without participation dynamics (Lijphart, 1971). Some methodological literature has already emphasised that only comparative case studies allow for testing theories, but these, if well-chosen (see chapter 4.2. for prerequisites of the choices made for this research purposes), can also provide much insight on their plausibility in different contexts (Gomm and Hammersley, 2000).

The conducted research is neither to generalise findings on Armenian and Georgian populations, nor it intends to generalise findings on all water projects implemented in the countries. Rather, as a comparative case study research, it intended to become a useful inconclusive aid to conclusive studies by providing case-based evidence that will benefit project implementation accounting for participation of the population (see Gomm and Hammersley, 2000, p. 129).

4.3. Case Selection

All the cases selected for the purpose of the study have similar socio-economic conditions, scope, problems contested in Armenian and Georgian rural community contexts. The selection of the four cases was done to highlight the context related to water supply/rehabilitation in the rural settings of both developing countries in the post-Soviet area. However, the research findings were not to be generalised on other communities of the countries but were selected for comparison of internal with and without participatory approaches towards implementation of water rehabilitation projects.

The criteria for the selection of the cases included the following: i) the cases in each country should be from the same region/district to ensure comparable geographic, socio-cultural, and demographic contexts; ii) a donor-funded water supply/rehabilitation project had to be implemented in each of the four case study areas; iii) one of the cases in each country should have been accomplished with participatory approaches, and the other one - without participation; iv) the project had to be finished minimum 3-5 years ago to provide an opportunity for long-term outcome assessment within the community (the produced change) and not only measuring immediate project outputs and outcomes.

Source: Typical Landscape, Lomaturskh Fieldwork, Georgia 2015

All the four selected case study communities were facing problems regarding the supply of potable and irrigation water prior to the implementation of the projects on rehabilitation of water systems under the focus of the present research. In terms of social-economic conditions and demographics, the selected case studies had very much in common as the Samtskhe-Javakheti region of Georgia, where two case study areas are located, is bordering with Armenia and the selected communities were populated mainly with ethnic Armenians.

The model of participation in two communities of each country were comparable as well, the local population was informed and involved in the project upon the start of it, had participated in decision making regarding the allocation of pipelines and their distribution in various parts of the communities. With regards to the organisational structure and management of the projects, the selected cases were identical as well, i.e. all of them were managed by the local staff of donor agencies.

The two cases in Armenia share many characteristics. They were both located in the same region and had a comparable number of population and HHs. The two other cases were also similar in this respect.

Descriptions of the projects are presented in Chapter 5 (see 5) in accordance with the project data (summaries about the projects) provided by donors and implementing agencies.

4.4. Scope and sampling frame of the study

The survey was conducted in two rural communities in Armenia: Vaghashen and Astghadzor, both of which are located in Gegharkunik Region. The two municipalities of Georgia - Turtskh and Lomaturtskh – are located in Samtskhe-Javakheti region. A household (HH) questionnaire (See Annex 3) was developed for the survey, supplemented by HH Socio-Economic Questionnaire (See Annex 2). The respondents of the survey were randomly sampled from the targeted population by utilising the following steps:

Step 1: The list of all HHs was obtained from the local municipalities for all four communities.

Step 2: The minimum required sampled size was calculated using a-priori sample calculation principles, Hunt (2015) for medium samples (> 100 and < 2000). For this, the a-priori effect size was considered to be medium according to Cohen's (1988) criteria. With an alpha = .05 (Z α /2 is 1.96 for two-tailed hypothesis) and power = 0.80 (Zβ is 0.842), the sample size needed per community for simplest between/within group comparison was estimated to be around 52 HHs. The absence of a similar baseline research in the given regions of the country was a challenge. This meant that theoretical and universally accepted laws for small samples were to be accounted for and accepted.

Step 3: A random number generator was used to define the first HH from the list (obtained in step 1). The HH # 374 was the starting point at Turtskh, the HH # 145 was the starting point for Lomaturtskh, the HHs # 1443 and # 425 were starting points for Vaghashen and Astgadzor respectively.

Step 4: Accounting for the number of population and the sample size (52 on average), the step size for reaching the next HH after the starting point was calculated. For each community the N of HHs was divided into 52. It was calculated that every 9th and 3rd HH in the Georgian communities would be approached. In Armenia, every 30th and 35th HH would be approached.

Step 5: After approaching the HH, the researcher was asking for an interview with the most knowledgeable person on the community life. In the majority of cases this was the male head

of the HH. This was not surprising given the masculine or male-dominated social reality of rural Armenia and Georgia.

See Table 8 for selected communities, their population, number of HHs, the starting point (# of the HH), the sample step in Armenia and Georgia.

Table 8. Selected communities, their population and number of HHs in Armenia and Georgia

Georgia									
Lomaturtskh (experimental)					Turtskh (control)				
Population	N of HHs	Sampling size	Starting point	Step size	Population	N of HHs	Sampling size	Starting point	Step size
522	166	53	145	3	1407	483	50	374	9
Armenia									
Vaghashen (experimental)					Astghadzor (control)				
Population	N of HHs	Sampling size	Starting point	Step size	Population	N of HHs	Sampling size	Starting point	Step size
4290	1540	51	1443	30	3758	1800	52	425	35

Source: Author's construct

It can be seen that the population in Armenia and Georgia in the selected communities is different with Armenian communities representing higher numbers of population. However, sampling of the HHs was done in a way that assured equal distribution of HHs (and respondents) across communities and to assure equal probability of the HH representatives to get involved in the research.

In total 206 respondents from two communities in Armenia and two communities in Georgia participated in the survey interviews. On average, 52 respondents were interviewed in each community.

4.5. Research Design

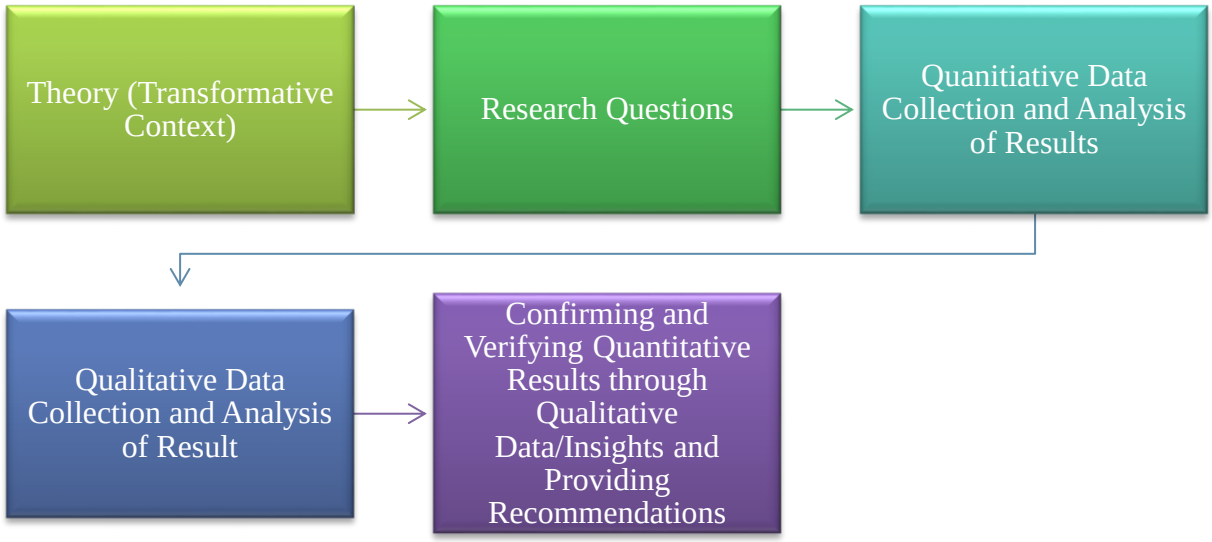
The research utilised a social justice design (using an explanatory sequential design example). The literature review (see *Chapter 3: Introduction to Key Concepts and Conceptual Framework*) suggested that, in theory, social participation is influential in terms of sustainability of social intervention programs. In the mixed methods research design, a similar understanding of the researched phenomena is framed under the umbrella term of 'social justice design' (Creswell, 2013).

According to Creswell (2013) social justice research designs reflect on marginalised individuals, traditional samples and populations and apply a transformative lens to the research. The difference between social justice/transformative worldview from positivist, constructivist or pragmatist worldviews is that it accentuates power, justice and change orientation. The social justice/transformative research position arose during the 1980s and 1990s from researchers who felt that other approached did not address the issues of power and social justice, discrimination and oppression in the social reality. There is no uniform body of literature characterising this worldview but it includes groups of researchers that are participatory action researchers, neo-Marxists or feminists. This research particularly draws on the assumption that access to water is a fundamental human right and equal access to water rehabilitation projects for different groups of villagers (stakeholders) with different income levels, age, education and gender must be properly assured given the principle of participatory approach towards project implementation. The literature review conducted for this research has already drawn on literature relevant to developmental contexts, human rights and social change and has created a ground for development of the social justice/transformative research design. The interviews conducted during the research aimed at gathering evidence on equal/unequal participation, effects of participation on HH socio-economic position. During the in-depth interviews the researcher applied open conversational approach to enable the respondents reflect freely and openly on the water rehabilitation projects and associated issues in their villages.

In turn, the explanatory sequential design was used addressing the following general question: In what ways do the qualitative data (from the theory and the key informants of the study) help to confirm/validate and verify the quantitative results? This is different from more conventional empirical studies, whereby the qualitative stage is used as an explorative stage in preparation

for the quantitative research. First what-question (quantitative) was accentuated and then the research moved in the direction of how-questions (qualitative), see figure 14 below.

Figure 14: Social Justice Design (using an Explanatory Sequential Design example)



Source: Adapted from Creswell (2013).

4.6. Research Strategy

Following the logic of its design, the research was to contribute to understanding of ways of community participation in water rehabilitation projects revealing the factors influencing participation, which might lead to recommendations on improved effectiveness and project sustainability. Firstly, the research was to start with the review of literature on participatory approaches towards program implementation. Several materials on water projects (presented in the literature review, see 3.2.) were studied with the intention to identify identical cases of suchlike projects implemented with and without participatory approach.

The main reason behind this was to realise a quasi-experimental quantitative survey through cross-comparison of projects assuming and not assuming participatory approaches towards their implementation.

Qualitative data from key stakeholders and municipality representatives was to shed light on the context of the developments, supplement, and support in explaining the quantitative data.

Ethical Standards

Research activity was underpinned by ethical research standards Guidelines of Social Research Association (2003) and Code of Ethics of American Sociological Association (1999). All the research participants were provided with information sheets and signed an informed consent form.

Considering that both countries are small and there are a few donor agencies involved in funding of rehabilitation of water systems in the targeted rural communities, the names of the donor agencies and the respondents are not mentioned in the present research report to keep the privacy, anonymity, and confidentiality of the people and municipalities involved in the survey who have openly expressed their opinions and were assured that the information provided by them would be kept anonymous.

Participation-Centered Approach

All research activity was conducted with the major goal of identifying the factors that were important in regard to project sustainability and the participation/non-participation of the community members in water projects in rural areas with the intention to come up with possible recommendations on informed and better planning of the similar projects.

Wider social, economic and cultural context

All research activity signified social perspectives, recognising that community life and participation are shaped by the wider social, economic and cultural context.

4.7. Quasi-Experimental Research

The with and without comparison of the communities enabled to call the quantitative part of the mixed methods research quasi-experimental. This was mainly to study the possible causality between participation and project sustainability. As mentioned by (Sadosh, Cook and Campbell, 2002, p. 14) ‘Quasi-experiments share with all other experiments a similar purpose-to test descriptive causal hypotheses about manipulable causes…’. The main difference with pure experiments is that the manipulation happens out of the scope of the researchers’ control and anticipated quantitative analysis might not be as robust as if the

researcher had control. The authors state that quasi-experimental control groups might be different from the point of new of treatment conditions. According to Bhattacherjee (2012, p. 38), 'Experimental studies are those that are intended to test cause-effect relationships (hypotheses) in a tightly controlled setting by separating the cause from the effect in time, administering the cause to one group of subjects (the "treatment group") but not to another group ("control group"), and observing how the mean effects vary between subjects in these two groups'. In the reminder of quasi-experiments, the same principles apply, but the research setting is not that 'tightly' controlled. Quasi-experimental design involves selecting groups, upon which a variable is tested, without any random pre-selection processes.

For example, to perform an educational experiment, a class might be arbitrarily divided by alphabetical selection or by seating arrangement. The division is often convenient and, especially in an educational situation, causes as little disruption as possible. Quasi-experimental designs involve selecting groups, upon which a variable is tested, without any random pre-selection processes. As described in the section 4.5., the sample in the research was identified based on theoretical assumptions for small sample calculation with moderate effect size. After this selection, the experiment proceeded in a very similar way to any other experiment, with a variable – participation - being compared between different communities.

This kind of quasi experimental design (also called pre-experimental meaning that is close to being experimental) is called static-group comparison where a group which has experienced participation is compared with the one which has not with the purpose of establishing the effect of participation on project sustainability (see Campbell and Stanley, 2015).

The approach was selected as it provides an opportunity to observe the difference in treatment and control groups, and to identify whether specific treatment, which in the case of the present research were participatory approaches in rural development projects, has an influence on the outcome, which is project sustainability in the context of the present study. The approach was useful in identification of the situation in the context of applied participation and the one without it.

4.8. The Quasi-Experimental Nature of the Survey

The conducted survey was quasi-experimental, because the research was designed to have: (i) two similar rural communities from the same province in Armenia and in Georgia

(ii) all four selected rural communities had undergone similar water infrastructure rehabilitation projects *'with'* and '*without'* participatory approach.

The survey research aimed at addressing the research question through comparing the communities with participatory approach to the water projects with those that did not have such an approach. Hence, the method of "with and without analysis" was employed.

Specific indicators were defined and measured to explore the influence of participation on project sustainability and identify other possible factors leading to project sustainability.

The research employed quantitative inquiry and the research questions generated quantitative data, such as extent and forms of participation in the projects' events and activities, conducting maintenance of the water supply system and other aspects of participation/non-participation.

In sum, three methods - HH survey (supplemented by income survey), qualitative key informant individual and group interviews (with municipality representatives and key stakeholders from the communities) – were applied.

A pilot survey was initially conducted to test the questionnaires, which have been revised prior to the interviews. Final questionnaires were developed and used to collect the necessary data and information (see Annexes 2, 3). The researcher explained the survey goal and procedure to the respondents, paid special attention to addressing and verifying sensitive questions and responses.

4.9. Unit of Analysis

It is widely accepted that a unit of analysis is the most basic element of a scientific research project. It is the subject of study about which an analyst may draw conclusions. In case of the research reported here, the subject of analysis is participation, while the unit of analysis is represented by the beneficiaries (being the villagers) of water rehabilitation projects. This is first contested in the main research questions being does participation have any influence on sustainability of water projects. All data gathered during the research was to directly or indirectly explicate quantitatively or qualitatively driven answers to the main question.

4.10. Quantitative Assessment: HH survey supplemented by income survey

Overall, 206 respondents over the age of 18 participated at the HH survey. The respondents of the survey were the heads of households identified by the household representatives before the start of the interviewing process.

The sample was divided into groups according to the independent variable: one community participated in Infrastructure Rehabilitation Project focused on Potable and Irrigation Water Rehabilitation (experimental group); and another one was not involved and experienced a top-down approach (without a participatory approach) in a similar Water Rehabilitation Project (control group). The experimental and control groups analysis compares the advantages and disadvantages of participatory approaches applied in one of the projects in each country and their influence on project sustainability.

The analysis of the experimental and control groups compares the advantages and disadvantages of participatory versus non-participatory approaches applied in the two projects out of the four and their influence on project sustainability.

4.11. Qualitative Assessment: key informant interviews, group interviews with key stakeholders from the communities and from municipalities

Based on the design of the research project, the qualitative research was intended to reveal "thick" data ("dense" data that allows revealing contexts and emotions/feelings of the studied subjects, (see e.g. Morse, 1994, p. 104) that would support the researcher with respect to understanding the quantitative data. In regards to the interviews with the community representatives/key stakeholders the individual and group interviews were concerned with the history of the project, relevant experiences of the individual in the context of the project, qualitative aspects of participation, perceptions of project organisation, final access to water, perceptions of the population that benefitted from the project, participation of different social groups (youth, women, adults etc.), knowledge of the project implementation, contribution/participation of the individuals in problem identification, prioritisation and project design. The same bunch of questions were asked to the key stakeholders from the experimental and control communities for comparative case study proposes of the research (see Annex 4 for the key stakeholder (participant and non-participant) interview guides).

Municipality representatives' interviews addressed the perception of the representatives regarding participation of community members, raised questions on collaboration with the donor agencies regarding the project organisation and implementation. They also addressed how water supply was identified as the priority issue for the community and the efforts of municipalities in involving population in decision making processes, level of satisfaction with the project results, persistent problems in regard to the projects and their perception of the overall impact of the project.

By the end of the interviews the municipality representatives were asked to come up with any recommendations on the sustainability of the project (see Annex 5 for the municipality representative interview guide).

4.12. Data Analysis

The study aimed to test empirically whether community participation in the Water Infrastructure Rehabilitation programs improved project sustainability. To accomplish the research, the four communities from both countries had to be compared in terms of indicators and factors related to project participation and sustainability.

Source: Fieldwork, Vaghashen, Armenia, 2015

Primary data was collected by the means of individual HH survey interviews applying structured questions, including both open and close ended questions. The primary data was also acquired from the secondary sources, such as official data of the Governments of Armenia and Georgia, local municipalities.

Statistical tests (descriptive, bivariate and ANOVAs) were implemented to present data regarding demographics of the sample, including age, sex, educational level, occupation and possible interlinkages between different modes of participation with project sustainability.

Following the mixed design, the collected data was analysed quantitatively and qualitatively. The quantitative analysis was done using Statistical Package for the Social Sciences (SPSS). The analysis was applied to analyse the results of the survey, enabling to compare the projects sustainability in the communities where participatory approaches were applied with the ones where local stakeholders were not involved in the project. All the interviews were recorded except for those with local authorities and donor/implementing agencies, who were against recording their responses, and the qualitative analysis was done through thematic analysis to supplement the quantitative data.

4.13. Use of Triangulation

Combining *source triangulation* and *methodological triangulation* (Denzin, 2012, pp. 80-88), the research utilised quantitative and qualitative methods for data collection to confirm and verify the quantitative data with qualitative findings. Source triangulation is applied when the same questions of interest are investigated through different sources of information (e.g. villagers, municipality, or donor representatives in this case). Different data sources, initially starting from theory and then having with and without participation communities as well as key informants, the research combined different perspectives on the same issue of participation and associated factors. Methodological triangulation refers to the combination of quantitative and qualitative data gathering techniques through the combination of surveying and in-depth interviewing methods (McMurry, 2004). More specifically, in case of the research, it was expected that in-depth interviews would provide additional information from the context of the overall issues addressed by the thesis. The data from qualitative interviews was to provide more space for elaboration on the quantitative data. This said, qualitative methods were used to gain

insight into the contextual factors of participation (prerequisites, reasons for different modes and forms of participation/non-participation to answer why-and how-questions).

The study applied two types of triangulation: (i) methodological and (ii) data source triangulation. Methodological triangulation was used to off-set the weaknesses of quantitative method with the strengths of qualitative method as a means of improving the reliability and validity of the research. The combination of methods was expected to give a more rounded picture of community life and behavior. Alternatively, findings from quantitative and qualitative interviews were to be compared and if the conclusions drawn were broadly the same, this helped to confirm the reliability and validity of the achieved data.

Data triangulation involved gathering information through differing sampling strategies: here, from different people. It was accepted that in case of project implementation, different informant groups are at place and it is important to talk to different parties about the same issues in the communities. Hence, the project management and municipality representatives within the communities were approached in line with the community representatives (mostly participating in the research through quantitative interviews). In turn, group discussions/interviews with municipality representatives and key stakeholders from the communities were initiated to shed more light on the context of participation and not participating in project implementation hence adding to the data received from other methods (qualitative and quantitative interviews).

4.14. Limitations of the Study

Quasi-experimental designs are not considered to be as robust as experimental ones. However, for the propose of the study it was important not to simulate effects of participation, but to explicate them from within natural settings as one aim of the study was to come up with recommendations with reference to already implemented life projects. However, to note that the research did not assume randomisation and should not intend to generalise its findings beyond its scope (see Chapter 1).

A predominantly male population participated in the HH survey as those “defined” as heads of the HH (by HH members themselves) and the most knowledgeable on community life were male. The literature review addressed the importance of gender issues in participation to

community life and project implementation. Gender equality is then an important dimension of participation, and in terms of water supply, it was hypothesised that women were relatively more affected by the benefits of better and sustainable supply. The empirical research was expected to reproduce disparities between men and women, hence the analytical strategy was to re-evaluate, account for and disaggregate data received from both: men (136 in total accounting of 66% of the sample) and women (70 in total accounting for 34% of the sample). Although under-represented, the sample of women still allowed for statistical analysis justifying the difference between the groups. Further, some more focus was put on in-depth interviews with women in the stage of data analysis.

Some of the qualitative data could contradict the quantitative data (given that representatives of municipalities were to be interviewed) and not explain it. The researcher should control this in the analytical phase of the research.

The income survey supplementary to HH survey was hard to achieve as many people (123 out of 206) refused to answer income-related specific questions. Luckily, the HH survey questionnaires contained basic questions on income and the overall amount of data allowed for drawing important conclusions on interlinks between participation and income.

CHAPTER 5

Empirical results

5. Description of Projects

5.1. Experimental Village in Armenia - Vaghashen

In the experimental village in Armenia the project aimed at the construction of a system for both potable and irrigation water supply.

The irrigation improvement referred to the 150 hectares of privatised land, to be used by 400 households, with the total number of project stakeholders of about 700 residents, since the rest of the community's residents had access to regular irrigation water. The project aimed to develop the community's agriculture, improve the quality of social life, and contribute to the reduction of seasonal migration. In case of the construction of a 600 m channel and 390 m of water lines with different materials, the irrigation was envisaged to be accessible to all the targeted residents.

The potable water rehabilitation was to provide daily water access to the overall population of the community; the construction and rehabilitation activities were mostly related to replacing the damaged sections of the overall system of the water supply network with the new ones.

The project was planned to be implemented using a participatory approach, with the involvement of the targeted population in the project implementation and provision of certain contributions, including labor force and in-kind contributions for project implementation and maintenance of water supply.

The project on potable and irrigation water supply system construction adopted a participatory approach from the very beginning, starting from the needs assessment stage prior to the start of the project. The funding agency organised a community meeting in close cooperation with local authorities and announced the willingness to start a project in the community in 2013. Local authorities supported the donor agency with respect to informing the community members about the meeting and initiatives. Several priority needs were identified based on the community meeting. After prioritisation of the main needs, the community selected the potable water supply project. The donor agency involved the community members in nearly all the

stages of the project, organised several capacity building events regarding community mobilisation, community development, and other topics of interest. The community members joined their efforts to support the project implementation and contributed by labor force, while the donor agency provided the pipes and the respective construction materials. The project budget was mentioned in the announcement of the project and was made public at the local municipality.

The donor agency made the project a learning experience for the community, and managed to involve men, women and children in almost all the project implementation activities. This was important since all social groups of the community jointly applied their efforts for the same goal. A technician ensured proper implementation of the construction activities and guided the local population during the overall process. The joint implementation of the project by the donor agency, municipality and the community provided an opportunity to buy high quality pipes and construction materials. The community had a good quality running water during the field visit in 2015. All the beneficiaries of the project had regular access to irrigation water.

The maintenance of the project has been ensured by the community members, who by the time of the fieldwork had a fruitful cooperation with the funding agency with respect to other priority needs. The community had also established a Community-Based Organisation (CBO), as the community members realised their own potential to contribute to the community's development due to the capacity building events organised throughout the project.

5.2. Control Village in Armenia- Astghadzor

Both potable and irrigation water pipelines were planned to be renovated in the framework of the water rehabilitation project implemented in the Armenian control village. The community's irrigation network was in a poor state, and often farmers used potable water for irrigation purposes. As for the potable water, despite the existence of three deep wells, the majority of the population did not have regular access to water because of the poor condition of the water supply network, which was constructed in the 1970s and 1980s. The deep well pumps were very old, costly in terms of energy consumption, the water was not properly disinfected; the source did not have any fence, and anyone could damage it, including cattle.

To ensure proper functioning of the water supply system and provision of high quality water to the population with 24-hour schedule, the project envisaged the following: (i) to completely replace the water supply network; (ii) build new manholes with their water line valves; (iii) to

replace the metal pipe with a polyethylene one, which would allow avoiding leakage; (iv) to separate the deep wells from the network; (v) and to install a new energy-saving pump.

The project was planned to be implemented by a professional construction company.

The village was informed about the potable and irrigation water supply project in 2013 after the project had started its activities. The community members only learnt about the imminent project implementation, when the construction company launched its work in the community. To note, the local population was not involved in the project and was never invited to any meetings in the framework of the project regarding rehabilitation of the water supply internal system of the village. The only communication was between the construction company hired by the funding agency and the head of the local administration. The local population did not know the name of the funding agency and could not express their dissatisfaction with respect to the poor quality of the pipes provided and installed by the construction company.

Following the end of the overall project, the pipeline was broken several times, and was not maintained by the local population. The community was dissatisfied that their opinion was not considered by the donor agency, and that the project had used poor quality pipes, which were broken already after the end of the overall project. The community did not have regular running water during the visit of the researcher in 2015. Instead, the villagers mainly relied on rainwater collection, had to buy water and could not properly irrigate the cultivated land plots. One part of the community had access to water only some days per month via a different water network.

5.3. Experimental Village in Georgia- Lomaturskh

In this community, the project addressing rehabilitation of both potable and irrigation water systems was implemented with the application of a participatory approach. The drinking water network of the community was around 12 km, most of which had been out of order since the network was built in 1970 and had not been renovated since then. As a result, the majority of the local population did not have regular access to potable and irrigation water due to frequent accidents. The water was of very poor quality resulting in numerous infections among the population, particularly children. The community did not have an irrigation network.

The project supported establishment of a committee with the involvement of the local municipality, the council of elders and the beneficiaries to do regular monitoring of the project. In addition to the project's monitoring, the above-mentioned committee was to monitor the activities related to the installation of water meters, collection charges, assess the amount of losses, water savings and submit monthly reports to the community.

In this community, the project on potable and irrigation water supply started in 2012 and the funding agency announced that the project will build a water supply system and connect the supply system to the houses. The community members contributed labor force, were invited to several meetings to discuss the progress of the project, attended mostly by men, considering the local traditions and the cultural context.

The project budget was not made public by the donor agency, and during the project implementation, the local population learned that some of the pipes were made from azbest, and despite the villagers informed the donor agency, the pipes were not replaced. Thus, the relations of the community and the donor agency became complicated. Following the construction of the system, the community was informed that the promised links to their houses would not be made due to insufficient funds of the project. The head of the local administration mentioned he never knew about the project budget although he had requested that information from the donor agency for his records and reporting. The local administration replaced the azbest pipes in 2013, and, as mentioned by the villagers during in-depth interviews, most of the households (around 80%) managed to link their houses to the water system.

The water supply has been maintained by the community members following the end of the project, and most households had running water in their houses, while the others collected water from the spring in the center of the village, as observed by the researcher during the field visit in 2015. The majority of project beneficiaries had regular access to irrigation water.

5.4. Control Village in Georgia- Turskh

The project aimed to renovate the potable and irrigation systems of the community, both being in a very poor state. The project also envisaged to establish a pipeline from the main source located in the mountains, to enable a 24-hour fresh water supply.

According to the project summary provided by the donor agency, the project was to play an important role in improving the quality of life of the community, by improving the socio-economic and living conditions of the population. The project aimed to contribute to the community's new modern drinking water system with its new water meter, by enabling the community to save a large amount of drinking water and electricity. Water purification and disinfection equipment was planned to be established to provide the population of the community with 24-hour high quality drinking water.

Project management was planned to be carried out by highly qualified specialists who were experienced in serving and operating similar systems.

The project on potable and irrigation water supply was implemented by a construction company without involvement of the local population. The donor agency had announced that at least 50% of the local population would have access to regular running water as a result of project implementation. The community members were neither invited to any meetings nor were they inquired about their needs (no needs assessment was conducted). The water pipeline was constructed in the territory of the Bejano community, where the source was located. However, since the donor agency and the construction company had not agreed with the local population and local administration of Bejano community regarding the construction of the pipeline to provide water to neighboring communities, Bejano community did not allow water supply from the source, claiming that the water was not enough for both their community and the neighboring ones.

To note that according to the initial plan of the project, the system should have started from another source, located higher in the mountains; however due to unclear reasons, the construction company neither followed the plan nor agreed on the new plan with the target and Bejano communities. The community did not have access to water following the opening of the supply system, and later on, when the community wanted to extend the pipeline to the source

located higher in the mountains, in accordance with the initial plan, it was identified that approximately 3km pipes were missing. The village did not have regular water supply during the fieldwork in 2015, used mainly rainwater, or procured drinking water, since they could not fundraise the necessary amount to procure pipes for 3 km. The community lacked water for irrigation.

Source: Georgia Turskh, Fieldwork, 2015.

5.5. Socio-Demographic Profile of the Community Representatives

Data on research participants was explored at the descriptive level to first have a picture on the distribution of research participant villagers by age, gender, education and occupation.

Table 9 below presents demographic data on the villagers in all four communities in both countries – Armenia and Georgia.

Table 9: Distribution of Community Representatives (Survey Respondents) by Age, Gender, Educational Level and Main Occupation for ALL Communities (N of Cases and %, N=206)

Age		Gender		Educational Level		Occupation	
18-30	13 6%	Male	136 66%	Secondary School		Farming	39 19%
31-40	80 39%	Female	70 34%	College	70 34%	Trading	30 15%
41-50	51 25%			Vocational Training	53 26%	Civil Servant	67 32%
51-60	10 5%			University Degree	83 40%	Employed in private sector	37 18%
60+	52 25%					Retired	29 14%
						Unemployed	4 2%
Total	206 100%		206 100%		206 100%		206 100%

Source: Author's construct.

The number of male respondents included in the sample for the research was higher than the number of females in both experimental and control villages. The majority of the respondents were men comprising 66% of the research participants. As it was identified, in the Armenian and Georgian rural contexts men were mostly knowledgeable of their communities and tended to participate in interviews themselves rather than allowing their wives to participate. This said, in the male-dominated rural context of the study, men were more likely to participate in the interviews. While this can be regarded as a shortcoming of the research because voices of women were underrepresented, interviewing took place in a natural rural environment. Hence, due to cultural specificity, the response rate of males was higher as women avoided talking to an interviewer who they were not familiar with and the response rate would even be less if the interviewer was male.

The majority of the interviewed community members (40%) had university education; 34 % had college education and 26 % of the respondents had vocational education. In regards to the main occupation, 32 % of the community members were employed by state/municipality, 19% were engaged in agriculture as self-employed farmers, while 18% of the research participants were privately employed. Fifteen percent (15%) were involved in trading, 14% were retired and 2% were unemployed. It should be highlighted that the percentages indicate the main occupation of the respondents who were all also engaged in some agricultural activities. For instance, even those members of the communities who were municipality employees practiced farming, cropping or another type of agricultural activity.

The same questions on participation in water rehabilitation projects were asked to the respondents of both experimental and control communities. Further analysis will show that in the control communities, most of the questions regarding the involvement of the respondents in the projects and their satisfaction with water supply received the predominant "NO" response.

Table 10 presents data regarding the number of respondents from experimental and control communities specified per country.

Table 10: Number of Respondents that Participated and Did Not Participate in the Projects (N=206)

	Experimental Villages	***Control Villages***
Armenia	51	52
Georgia	50	53
Total	101	105

Source: Author's construct.

As seen in the Table 10, 51 respondents were involved in the research in the experimental community and 52 in the control one from Armenia, 50 respondents were involved in experimental and 53 in the control communities in Georgia.

5.6. Prerequisites of Participation

5.6.1. Were People's Priority Needs Identified by Project Implementers?

According to the conceptual framework of this research, the concept of participation in rural development projects (here: water rehabilitation projects, particularly related to potable and irrigation water rehabilitation) assumes the involvement of rural community representatives in needs assessments, hence collaboration with project beneficiaries. During the survey interviews the community representatives answered the question if, in the course of project implementation, anyone had asked them which were their priority needs that they would like to be addressed by the project and who asked this from them. As shown in the table 11 below, the vast majority of community representatives (96.7 % in Armenia and 100 % in Georgia), who were asked about their priorities, were from the experimental (with participatory approach) villages. Those who reported being asked on their needs also answered the question of who asked them the question, and the majority referred to donor agencies. (80 % in Armenia and 86.7 % in Georgia). Interestingly, municipality in the experimental community of Armenia was more (7 percentage points) involved in assessing the needs of community representatives than the municipality in the experimental community of Georgia. However, in both cases a low level of municipality engagement in needs assessment of the community representatives was observed while the donors mostly had nominal and instrumental interest in assurance of villagers' participation in the projects.

Table 11. Priority Needs Assessed and by Who (N=206)

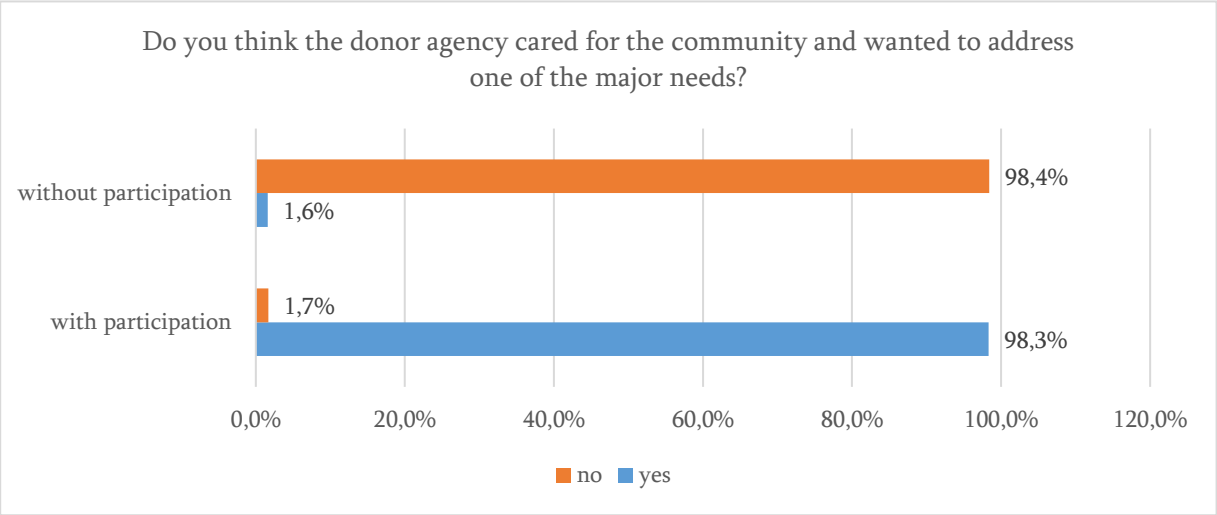
		Has anyone asked you, which of your priority needs would you like to be addressed by the project?	
		yes	no
Armenia	with participation	**96.7%**	3.3%
	without participation	3.1%	96.9%
Georgia	with participation	**100.0%**	0.0%
	without participation	0.0%	100.0%

		Who asked you, which of your priority needs would you like to be addressed by the project?	
		donor	municipality
Armenia	with participation (only)	80.0%	20.0%
Georgia	with participation (only)	86.7%	13.3%

Source: Author's construct.

A statistically significant correlation was revealed between needs assessment and perception of village representatives in regards to whether the donor agency cared for the community and wanted to address its major issues (Pearson Chi-Square= 115.125, Cramer's V=.967, p<.001).

Figure 15: Perception of the Donor Agency as Caring for the Community and Wanting to Address One of the Major Needs?



Source: Author's construct.

> *"The construction company brought the pipes; there was a committee from the capital which controlled all those actions. But nobody told us anything about the project, its aim and the budget. We had no access to information either before or during the project implementation, although it is our village, our home and we should be well aware and consulted on each activity in our village."*
>
> Source: In-depth interview with a villager, Georgia, Turskh Village-Control, July 07, 2016.

> *"We never had the feeling that we speak or work with a funding agency. All the [project] staff members were so helpful and kind to us. They asked all our needs and we were the ones to make the final selection and decision".*
>
> Source: Focus Group Discussion with villagers, Armenia, Vaghashen Village-Experimental, August 05, 2016.

The qualitative data from in-depth and group interviews with the villagers confirmed the quantitative findings. In addition, qualitative data further showed that projects implemented with participatory approach made for successful cases. Specifically, in case of control community in Georgia, a waste of considerable financial resources took place as the donor

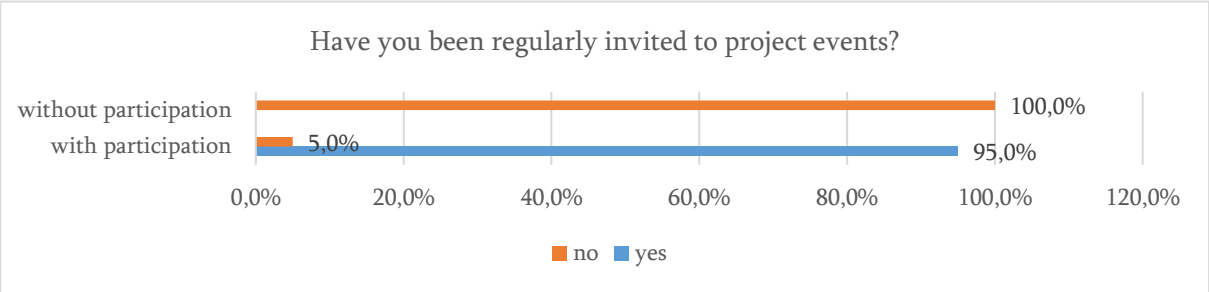
agency did not consult with the population and heavily relied on the construction company, which ruined its reputation in the eyes of the villagers. In contrast, the experimental community in Armenia achieved effective collaboration with villagers who felt the possibility and ownership in the decision-making processes.

5.6.2. Did Project Implementers Account for People's Participation and in What Ways?

This subchapter addresses the research question whether project implementers accounted for people's participation and in what ways. Application of participatory approaches towards project implementation assumes not only needs assessments, but also regular organisation of events, formation of community groups and constant creation of opportunities for effective collaboration with people/project beneficiaries. This directly contributes to the development of types of participation, which are not manipulative or passive, but are functional and interactive leading to community mobilisation.

The graph below shows that if there was no straightforward declaration of the project being participatory, community representatives were not even invited to information sessions, and were not sufficiently provided with any information. This statement is true for both the Armenian and Georgian cases (see table 16 below) as all members of the control communities mentioned that they were not invited to any project events. Only 5 % of all respondents (one person from Georgia and two persons in Armenia) from communities where projects were implemented through participatory approaches mentioned that they were not regularly invited to project events.

Figure 16: Have you been regularly invited to project events?



Source: Author's construct.

Table 12: Organisation of Events (Experimental Communities Only) (N=101)

	Have you been regularly invited to project events?	
	yes	no
Armenia	93.3%	6.7%
Georgia	96.7%	3.3%

Note: All the respondents mentioned that community groups were formed in the framework of the project.

Author's construct

> *"A lot of trainings were organised for us, I remember we learned what is a community, how we can help as an active group to develop it, we learned also how to write projects and submit those to funding agencies. By the way, we submitted one project to the province administration and our project was considered to be the best, so we received a grant to renovate a hall for the youth. After that we wrote several projects and then one of the NGOs helped us to establish a Community-Based Organisation for our community. Until today we do a lot of things for our community; we organise cleaning of the community, some events, fundraising to take care of the old people, those families who face financial difficulties, we help the local authorities to develop their plans and other things."*
>
> Source: Focus Group Discussion with villagers, Armenia, Vaghashen Village-Experimental, August 05, 2016.

The donor organisations in the control communities created no opportunities for the villagers to feel ownership for their community and for example in the case of the Georgian control community assumed the so called "cosmetic labelling" (see the first quote above) where accountability towards community representatives was violated and created distrust towards donor agencies. In contrast, the Armenian experimental community was very informed and empowered (see the second quote above).

Specifically, the qualitative interviews showed that the lack of ownership on behalf of the local

> *"There was an opening, the funding agency and the construction one made a lot of photos and never came back afterwards… funding agencies know for sure what they are going to do, before even they come to us. This is why we do not believe in these agencies any more. We were not informed until the end who was the funding agency. The implementation office is a local NGO, which made a contract with the construction company."*
>
> Source: Key stakeholder interview with a villager, Georgia, Turskh Village-Control, July 20, 2016.

population led to a negative impact with respect to both effectiveness and efficiency of the projects in the control communities. For example, in the case of the Georgian control village, the pipes were stolen and no one knew whether they had been stolen by the community

members themselves or the representatives of the Bejano village where the water source was located.

During the study, it became clear that because of project implementation the good relationships between the Georgian control community -Turskh and that of Bejano worsened to a large extent resulting in unfriendly relations which, as mentioned by the respondents during the in-depth interviews, was not the case in the times prior to the project implementation.

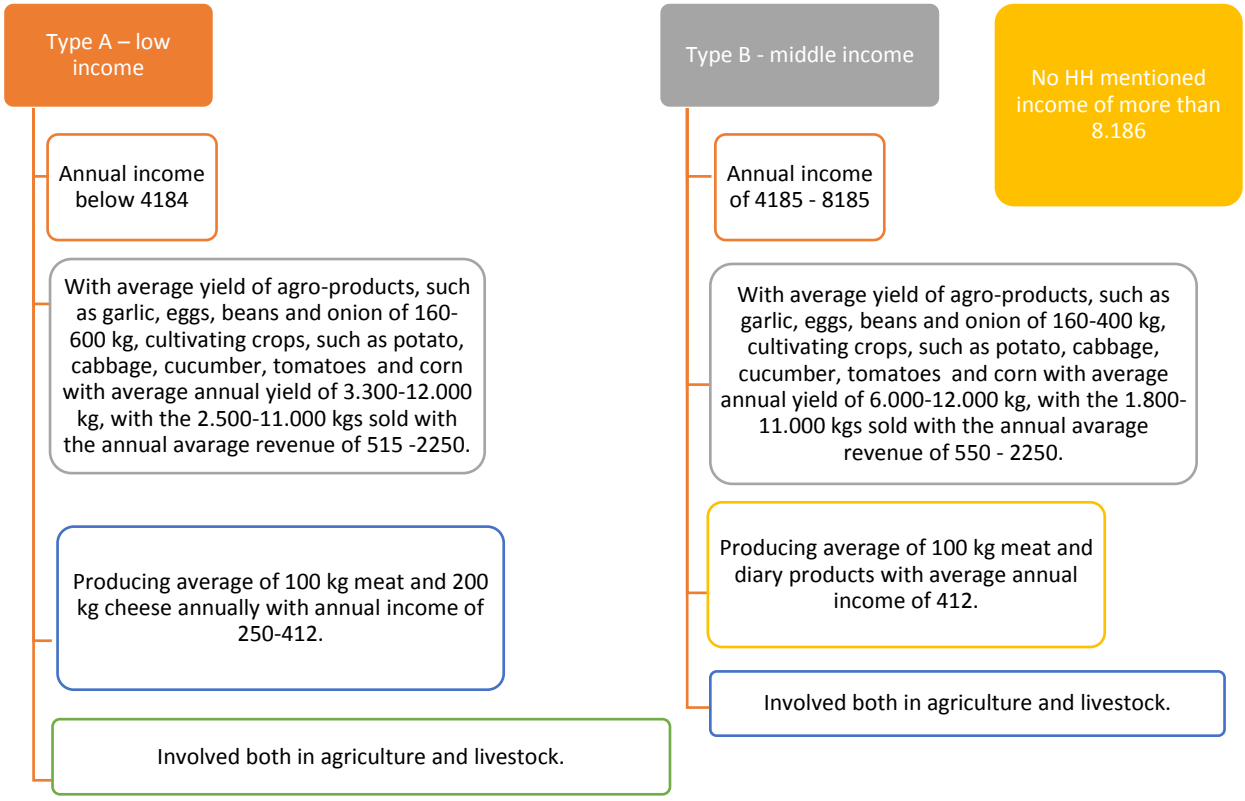
5.7. Was Household Socio-Economic Status Related to Participation?

5.7.1. Income Profiles

During the survey research, which had an income sub-survey, the respondents assessed their income in local currency, which was converted into USD and is presented in USD in this chapter for the ease of readers. To note that the research of household (HH) socio-economic status had a limitation, since no baseline data was available regarding the income of communities before the inception of the water rehabilitation projects, hence the analysis is based on the survey data, specifically self-reported gross income of the HH members. Two types of income groups were identified: (i) Type A - low income – roughly equivalent to 0 – 4184 USD annually; (ii) Type B - middle income - roughly equivalent to 4185 – 8185 USD annually. The threshold of 4184 USD corresponds to the average nominal wage in the Republic of Armenia (see NSS, 2018).

Figure 17 below is meant to describe the agricultural income sources of the studied HHs in the two income groups (low and middle, no high-income group was identified among the respondents.).

Figure 17: Agricultural Income Sources of all the Studied HHs (amounts in USD, averaged)



Source: Author's construct.

Figure 17 shows that the HHs in the income groups had rather identical income sources, however the middle-income group produced less agro-products, but received more annual yield. This disparity is explained due to the improved water supply, as improved water conditions contributed to the improvement of cropping conditions, and partly also to better cattle breeding. Better quality of water as well as improved irrigation possibilities created favourable conditions for agricultural activities which explains why producing less but higher quality products enabled more income generation in the experimental communities. Further analysis produced in this chapter will shed light on how the experimental communities had higher income due to several refined agricultural activities (especially cropping). The analysis showed a direct link between water supply and agricultural income. Moreover, there was also an indirect link between the two variables/phenomena (income and participation) within the experimental communities showing that the participatory approach contributed to a development (positive changes in various subfields of the community life), which in was a reason for more income generation.

Fifty percent (50%) of the community population that **participated** in the project in case of Armenia had low income and 50% had middle income. The income of these HHs increased (as reported by the survey respondents, since there was no official baseline) after the implementation of the project in 90% of all cases. This should be attributed to the importance of water usage for income generation in the village where 70.7% practiced only cropping, and 29.3% both cropping and livestock (in total, 11 HHs had cattle and 79 HH had poultry). The HHs in this community sold 200 kg cheese and 100 kg meat. All households practiced cropping, cultivating mainly potato, cabbage, barley, corn, cucumber, tomatoes and potato, they sold 7.500 - 11.500 kg annually, at the profit of 1.546 USD to 2.250 USD. The other agro-products cultivated by the HHs included beans, garlic, onion and eggs, which were mainly for self-consumption and only two households sold these at 62 and 41 USD annually.

Sixty-seven percent (67%) of the community population that **did not participate** in the project in the case of Armenia had low-income level, with the rest having middle income. Forty-three (43%) mentioned to have experienced increase of income after the implementation of the project.

In the case of the control community, Armenia, forty-eight percent (48%) practiced only cropping, 33% both cropping and livestock, while 19% were not involved in any of these activities. Nine percent (9%) of households had pigs and 24% had cattle. Twenty-eight (28%) produced 200 kg cheese, 100 kg meat and dairy products with annual income of 250 – 433 USD.

Further, in this community, forty-eight percent (48%) practiced cropping (potato, cabbage, cucumber, tomatoes, corn and onions) with annual revenue of 321 - 2062 USD. The other agro-products included beans, onion, garlic, which were mainly for self-consumption.

Seventy-one percent (71%) of those communities that **participated** in the project in case of Georgia had low income and the rest had middle income. However, eighty-six percent (86%) of the respondents had mentioned increase of income after the project implementation. With respect to agriculture, 67% practiced only cropping and the rest practiced both cropping and livestock, the latter being cattle and pigs. Around 40 percent (40.2%) of the households sold 100- 200 kg cheese, 100 kg meat annually at income from 2.500 to 4.329 USD. All households

practiced cropping, including potato, cabbage, cucumber, tomatoes, barley and corn for self-consumption and sales with annual income ranging from 1030 to 2300 USD.

Seventy-six (76%) of the communities that **did not participate** in the project in Georgia had low-income level and the rest had middle income. The income had increased (as mentioned by the respondents) in 67% of cases after the project implementation. In regard to agriculture, 24% practiced only cropping, 43% practiced both cropping and livestock and 33% almost did not practice any farm activities for income generating purposes. Forty-three percent (43%) had livestock, 28% had cattle and 15% had pigs. Twenty-four (24%) households produced 100 kg meat and 200 kg cheese annually, at the average revenue of 247 – 412 USD. Twenty-four (24%) cultivated potato, cabbage, cucumber, tomatoes, barley and onions, at the annual revenue of 515 – 1030 USD. The other agricultural products including beans, onion, garlic and eggs were cultivated for self-consumption and only 1 out of 21 HHs sold them with the annual revenue of 62 USD.

Table 13: Summary of HH Income Levels in Experimental and Control communities after the Introduction of the Projects (N=206)

Armenia		**Georgia**	
With Participation	Without Participation	With Participation	Without Participation
HH income levels			
Increase in 90 % of cases	Increase in 43 % of cases	Increase in 86 % of cases	Increase in 67 % of cases

Source: Author's construct.

The levels of income of the respondents in low- and middle-income groups were interrelated with their occupation see Table 14. More specifically those who, in line with practicing farming, were traders, civil servants or employed in private sector were in the middle-income group.

Table 14. Income Groups and Occupation (N=206)

Low Income Group	Middle Income Group
41% of farmers	18% traders
59% of retired	53% civil servants
	24% of employed in private sector
	5% of retired

Note: In the context of the targeted countries, most of the traders, civil servants, those employed in private sector and the retired also practiced farming, since their non-agricultural income in the rural areas was not sufficient.

Source: Author's construct.

Forty-one percent (41%) of only farmers (with no second occupation) and 59% of the retired respondents were included in low-income group, while 18% of traders, 53% of civil servants, 24% of privately employed and 5% of retired respondents were involved in the middle-income group. The relationship between occupation and the income level was statistically significant (X^2=207.565, Cramer's V=0.7, p<.001) suggesting that occupation had an influence on annual income level by putting certain groups of community representatives (only farmers with no any other occupation and the retired persons) into a vulnerable situation.

The levels of the income of the female respondents in low- and middle-income groups were interrelated with their educational level see Table 15.

Table 15. Income Groups and Educational level of Female Respondents (N=70)

	Low Income Group	Middle Income Group
Female	41.2% - college degree	61% - graduate degree
	58.8% - vocational education	20.5% college degree
		18.5% - vocational education

Source: Author's construct.

Those females with college (41.2%) and vocational education (58.8%) were in the low-income group, while those with a graduate degree (61%) were in the middle-income group. Hence, the relationship between educational level and annual income level was statistically significant for female respondents (X^2=41.632, Cramer's V=0.7, p<.001). In the meantime, the levels of the income of the male respondents in low and middle-income groups were not interrelated with their educational level. The statistical analysis regarding the male respondents suggested that education did not have a significant influence on their annual income level.

Non-agriculture related expenses had the following distribution: household-related expenses of the experimental group were 10.890 USD, and that of the control group were 10.240 USD. Those for health were 8.650 USD and 8.245 USD for the experimental and control groups respectively. The expenditures related to education were 6.890 USD for the experimental group and 6.350 USD for control group. The social expenditures were 3.215 USD and 1.995 USD for the experimental and control groups respectively, while those for transport were 1.360 USD for experimental group and 1.150 USD for the control group (see table 16 below).

Table 16. Aggregate Non-Agricultural Expenses of the Respondents in USD (N=206)

	Experimental Group	**Control Group**
Household-related expenses (including those for water supply)	10.890	10.240
Health	8.650	8.245
Education	6.890	6.350
Social expenditures	3.215	1.995
Transport	1.360	1.150
Total Expenses	31005	27980

Source: Author's construct

5.7.2. From Participation in Water Rehabilitation Projects to Improved Income

The analysis below demonstrates that participation/not participation of villagers in water rehabilitation projects had not only consequences for social empowerment/discouragement, development/reduction of sense of ownership towards the development projects, trust/distrust towards donor organisations, but for HH income, especially in the case of HHs that practiced cropping (to highlight, the right to water clearly falls within the category of guarantees essential for securing an adequate standard of living, particularly since it is one of the most fundamental conditions for survival (WaterAid, 2011, p. 7, UN, 2010 Article 11, paragraph 1).

The quantitative analysis showed that HH socio-economic status was statistically significantly correlated with the participation of the community/villagers in the potable and irrigation water rehabilitation projects' implementation. While in the framework of the survey interviews 69% of the control community representatives mentioned that their HHs were poor or very poor, only 56.1% of the community representatives where the projects were implemented through participatory approaches mentioned that their HH had middle income and no HH in the

experimental communities lived poor or very poor (X^2=45.958, Cramer's V=.744, p<.001). This statistically significant difference between income levels in experimental and control communities clearly showed that implementation of projects through participatory approach had a profound impact on the economic situation of the rural communities.

Better cropping practice and improved irrigation possibilities increased the income of the experimental communities, as there was a direct link between water supply and the reported agricultural income of the HHs.

> *"We collect rainwater and buy water once per 2 days. There are some of the poor villagers who do not have money to buy water and make use mainly of the rainwater. It means if we did not have rainwater yesterday most of the people would not have access to water today. We collect mainly rainwater, which we use both for irrigation and for our use at home. Sometimes we get access to water once per two days via another network, but it does not properly function in winter and summer time."*
>
> Source: Key stakeholder interview with a villager, Turskh village-Control, Georgia, July 20, 2016.

Qualitative data supported the finding that the local population of control communities had to spend money for buying water (potable and for their daily usage), and had difficulties with absence of irrigation water for cultivation of crops, while the income of respondents in both the control and the experimental groups was mostly related to agriculture and cattle breeding.

The aggregate gross household income of the respondents (see Table 17) from cropping in the experimental group was 81.460 USD annually, which was more than twice that of the control group of only 30.445 USD, and can be considered an indication of the link between participation and income increase specifically in respect to cropping. The income from agro products was 215 USD in the experimental group and 165 USD in the control one. The income from the sale of farm products, such as meat and wool was not considerably different in the two groups: 1.590 USD and 1.815 USD in the experimental and the control groups respectively. Income from sales of self-produced products was 2.680 USD in the experimental group and 3.400 USD in the control group. Thus, the overall income from agriculture and cattle-breeding related activities was 85.945 USD for the respondents from the experimental group and 35.825 USD for those from the control group. The other sources of income, such as salaries, pensions were 149.195 USD for the experimental group and 136.330 USD for the control group, while the overall income was identified as 235.140 USD and 172.155 USD for the experimental and control groups respectively.

Table 17: Aggregate Net Income of the Respondents in USD (N=206)

	Experimental Group	Control Group
Cropping	81.460	30.445
Other agricultural products	215	165
Sale of farm products	1.590	1.815
Sale of self-produced products	2.680	3.400
Overall income from agriculture and cattle-breeding	85.945	35.825
Salaries, pensions	149.195	136.330
Total Gross Income	235.140	172.155

Note: Due to sensitivity of the question on income, the numbers have to be accepted with reservation as some gross income data might be under-reported but is still worth to be considered.

Source: Author's construct

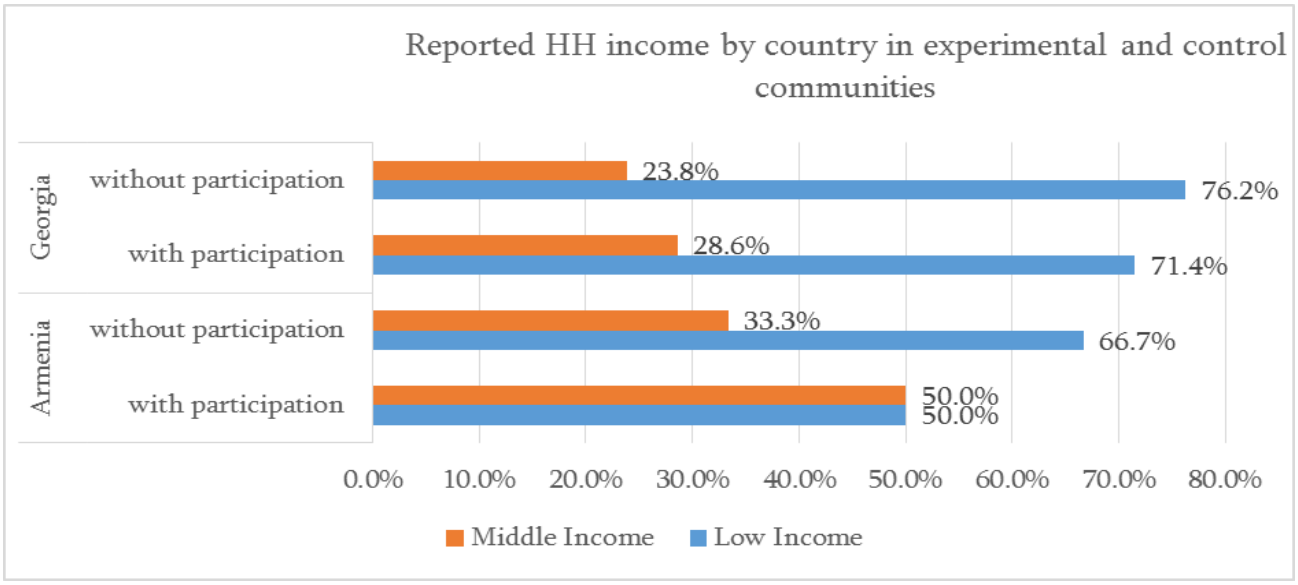
Below table 18 shows that those community representatives who were mostly involved in only cropping participated in the projects (X^2=13.327, Cramer's V=.403, p=.001).

Table 18: Practicing Agriculture and Livestock and Involvement in the Project

		Do you practice any agriculture and/or livestock for income generation purposes? (N=206)		
		Cropping only	Cropping and Livestock	None
Have you been involved in the project?	yes	70.7%	29.3%	
	no	39.0%	39.0%	22.0%

Disaggregation of HH gross income levels by country showed that communities in Georgia had lower income, than those in Armenia and the experimental community in Armenia was in the most favorable situation with equal distribution of HH income groups, see figure 18.

Figure 18: Reported HH Income (Gross) by Country and Type of Community (N=206)



Source: Author's construct

Interestingly, taking into account the data received from HH and income surveys, the respondents in the communities mentioned an increase in income in the time given, which was approximately two years after the project implementation. This may of course be attributed to various factors, however indicates the relationship between the project implementation and improvement in community life as projects (here linked to water supply) that were essential for community life engaged in agricultural activities did form new socio-economic environments creating ground for more income generation. It has to be noted that given the increase in self-reported HH income levels, the communities have still to be treated as generating more low than medium income. Especially, the interviews with control communities showed that villagers were aware of the importance of water for their HH income and the large amount of money they spent for buying water.

> *"The community did receive neither irrigation nor potable water, although the project resources were expended. As a result, the majority of the villagers remained without access to potable water, while over half did not have access to irrigation water at all. That said, people spent money to buy potable water and water for their daily usage, spending on average 20-30% of their monthly budget, and were not enabled to cultivate any crops."*
>
> Source: Interview with a villager, Turskh Village-Control, Georgia, July 21, 2016.

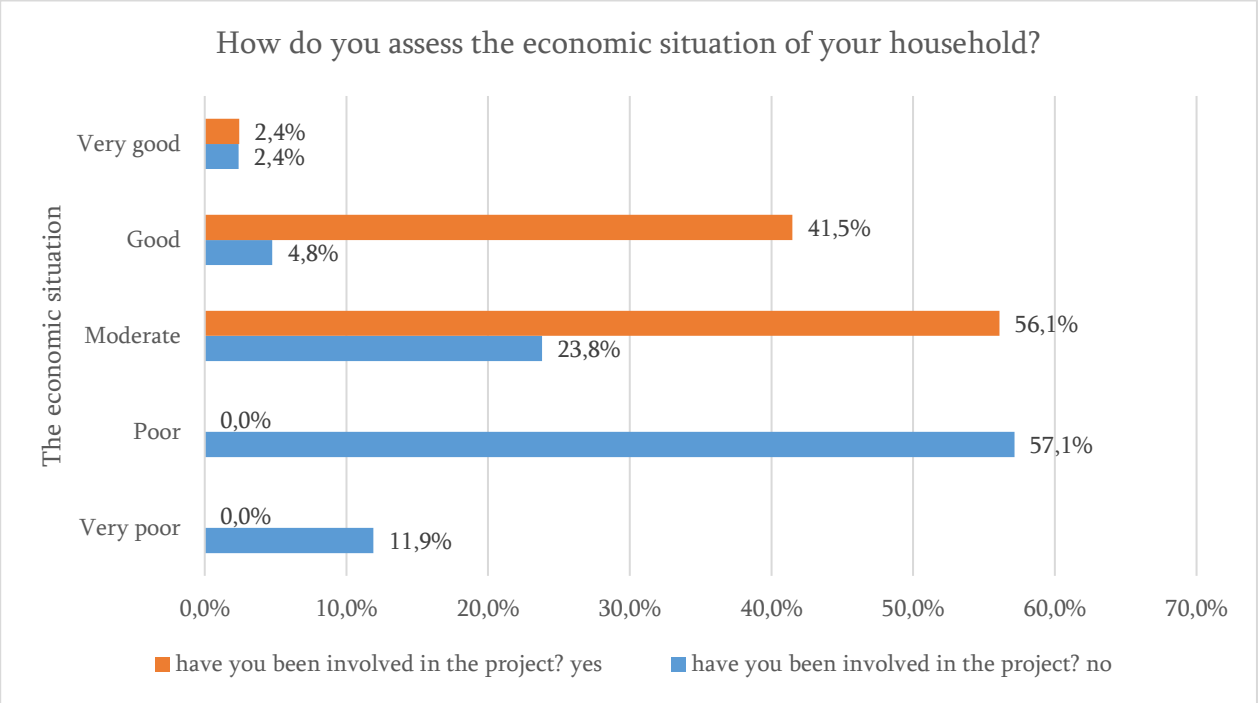
5.7.3. Poverty as an Excluding Factor to Participation

Before analysing the influence of participation on project sustainability, the foundations/possibilities for participation of various groups of stakeholders in the projects should be well examined and taken into account. For instance, the research revealed that education of female respondents had an influence on their income level, which in the specific regional context with male-dominated cultural structures, is an important finding to take into account in any project implementation activities in Armenia and Georgia.

The statistical investigation here evidences that not only the direct interrelation between participation in projects and sustainability of the projects is important, but the overall context of the project implementation that provides or does not provide access for participation for various groups of stakeholders (including women) hence gaining or missing opportunities for equal community engagement.

Below figure 19 shows that (the self-reported) poor and very poor HHs were excluded from participation in the project implementation. First, because experimental communities where the projects were implemented through participatory approaches had better socio-economic situation. Second, the approaches applied by donor organisations towards participation were nominal or instrumental without specifically targeting the economically disadvantaged which would benefit from the project.

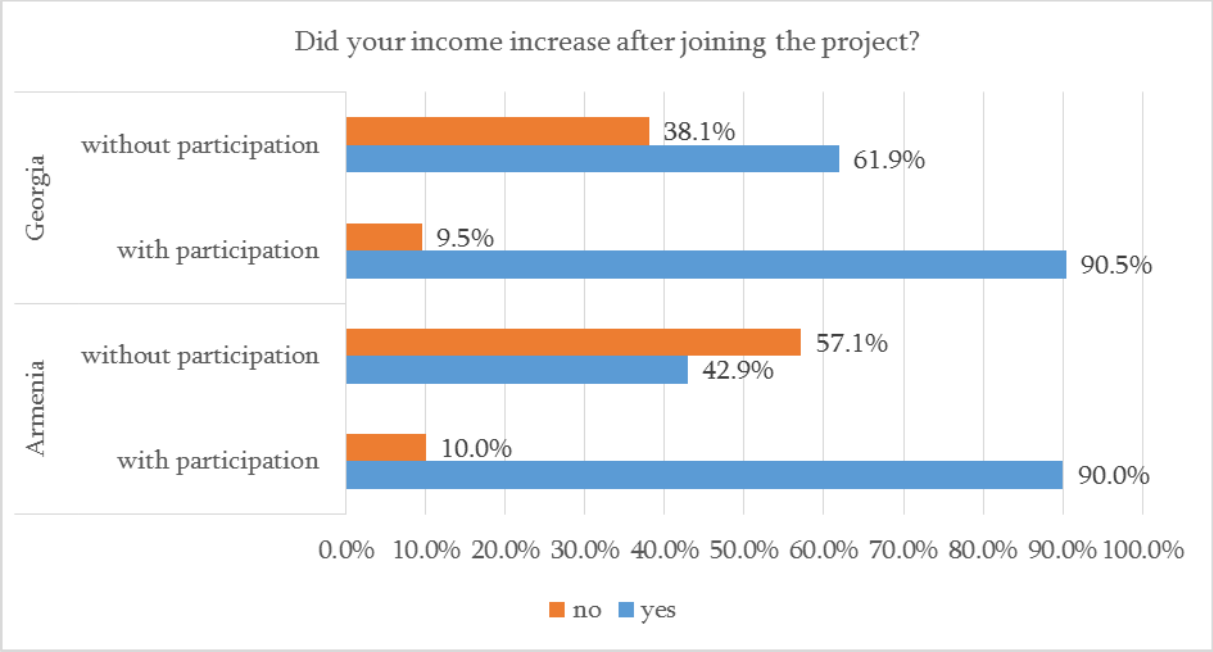
Figure 19: The Economic Situation of the Households and Involvement in the Project (N=206)



Source: Author's construct.

Only those HH representatives who had reported income levels ranging from moderate to very good were engaged in the project implementation. HHs in the experimental communities reported better economic conditions compared to those in the control communities who mostly (57.1%) reported poor economic situation and not being involved in the project. In addition, 90.5% percent of experimental community representatives indicated that their HH income levels increased after the project implementation, while 42.9% of the control community representatives reported no change in their HH income levels (X^2=14.470, Cramer's V=0.4, p<.001), see Figure 20. Quantitative data showed an increase in self-reported HH income levels among all communities after the project implementation except the control community in Armenia. As shown in the figure 20 below, 61.9% of control community representatives in Georgia reported an increase in income, while 57.1% of the control community representatives in Armenia reported no change in their HH income.

Figure 20: Increase of Income after Joining the Project (N=206)



Source: Author's construct.

Data from qualitative interviews also confirmed that economic well-being of the communities was highly affected by water supply and hence (quality and accessibility of water and sense of ownership towards) implementation of water rehabilitation projects.

> *"The project was something fresh for all of us and the trainings helped us a lot. But I value mostly how the funding organisation could unite all of us to work day and night for one goal-water for all. After the project, we did regular minor renovations as there were not any big problems, as the pipes were of high quality which the funding organisation could procure only while we contributed the rest of the materials and the labor force."*
>
> Source: Focus Group Discussion with villagers, Armenia, Vaghashen Village-Experimental, August 05, 2016.

As shown in the quote above, the experimental project in Armenia was cost-effective as participation implied the input of work force and other contribution from the side of the villagers, the participation of the villagers later resulted in joint endeavors (also through agreed monetary contributions) of maintenance of the renovated water infrastructure.

"Nowadays the water supply companies and authorities cannot cheat us as they did before, as we even make claims to the court when necessary, and honestly all this is thanks to the project, their attitude to us, that we can change something in our lives, and the trainings. Although at first none of us [monitoring group members] had any trust and interest to participate in those trainings, but we saw how useful they were already during the first days. The training of the project helped us a lot, as previously we did not know where and how to apply when there were problems regarding water supply. Now we know everything and are better informed. We inform our population and each resident is very active and requires accountability. They go to the regional authorities and advocate for their rights. We have already given several news articles to the local new agency, about all the problems related to the water supply."

Source: Key Stakeholder Interview with a member of the local council,

Georgia, Lomaturskh Village-Experimental, July 14, 2016.

As shown in the quote above, in case of the experimental community in Georgia, the implementation of the project led to "lessons learnt" for those respondents who were engaged in the project implementation – for the monitoring group involved in information and training sessions. The formation of this group still produced some kind of local knowledge that empowered the municipality representatives.

"We were used by the project staff, they cared only about writing that they did a great job, while I reserved money from the municipality budget and did not touch it for three years, despite all the needs of the villagers, I thought water was the main priority and we should not touch that money, as nobody was sure if we could collect that amount next year, as most people did not pay land tax, as they did not intensively use their lands because there was no irrigation water."

Source: Interview with a municipality representative, Astghadzor village-Control, Armenia, August 10, 2016.

As shown in the quote above, lost trust towards a donor organisation created unclear future for follow-up of project activities, which were in the end not perceived as very useful by the municipality representative. On the other hand, the tendency of income increase even in the control (without participation) communities under research suggested that vital resources, here water, brought in by any projects to the community life may produce positive change and have the potential of fostering beneficial developmental environment in the rural communities of

Armenia and Georgia. On the other hand, this also shows that exclusion of groups of stakeholders from the project implementation shall lead to missed opportunities.

5.8. What was the Water Used For?

Uses of water both in Armenia and Georgia were similar (no statistically significant differences between the countries were revealed in this respect). As shown in the table 19 below 30.9% used water for gardens, 17.9% for livestock, the majority of the population 49.6% used water for both gardens and livestock which confirmed the importance of water use in agricultural activity and as only 1.6% of the respondents reported industrial use.

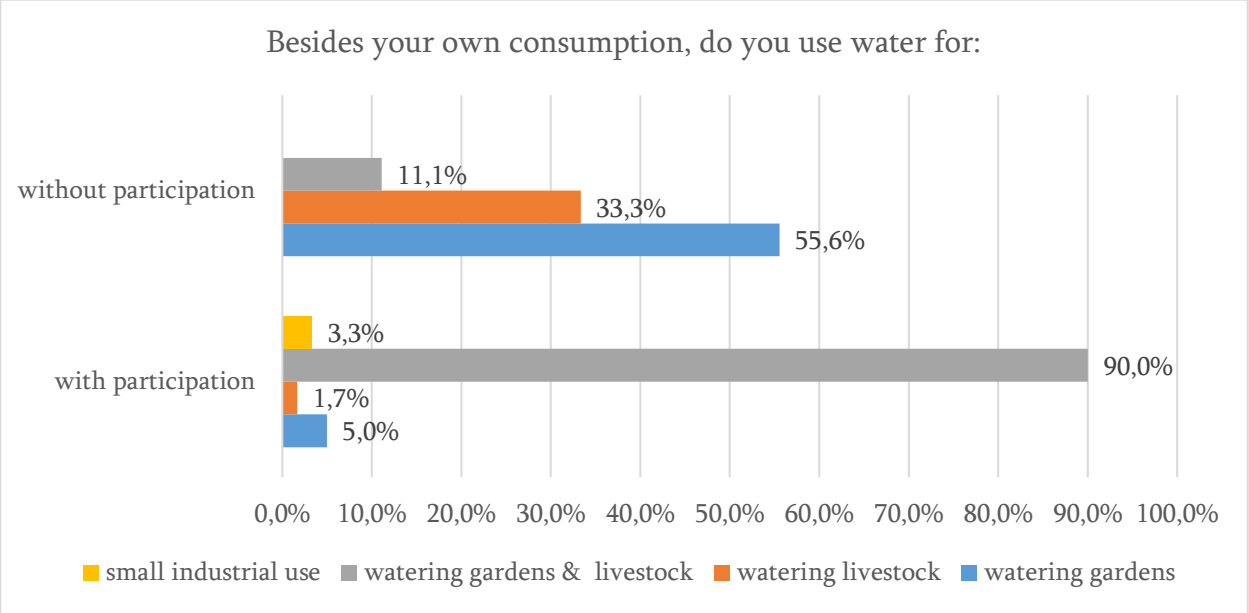
Table 19: Uses of Water (N=206)

Besides your own consumption, do you use water for:	
	Percent
Watering gardens	30.9
Watering livestock	17.9
Watering gardens & livestock	49.6
Small industrial use	1.6

Source: Author's construct.

Interestingly, if in case of experimental communities in 90 percent of cases water was used for gardens and livestock, only 11 percent of those in control communities used the water for the same reason (Pearson Chi-Square= 83.319, Cramer's V=.823, p<.001). This is a very significant statistics to show the sharp difference of water uses (especially the one that might lead to income generation through agricultural activity) between experimental and control communities.

Figure 21: Uses of Water (N=206)



Source: Author's construct.

5.9. What is the Influence of Participation?

5.9.1. Frequency of People's Engagement in Project Activities

The following sub-chapter addresses the question of whether several factors were important for the participation in the rehabilitation of water supply systems. Specifically, it addresses the questions on frequency of people's engagement in project activities; people's input (labor, cash, machinery/equipment, in-kind, other); people's (groups of people) involvement in project activities (through workshops, meetings, Focus Group Discussions (FGDs), capacity building trainings, seminars, discussions, rehabilitation of water supply infrastructure, maintenance of the water supply system, etc.).

According to the survey participants, 66.6 percent engaged with a project activity once, 21.7 percent twice and 11.7 percent three times. Disaggregation of results by gender proved interesting results. Specifically, more females participated in a project activity once; while more (by around 6 per cent points) males participated at a project activity three times.

Table 20. Frequency of Involvement in Project Activities by Gender (N=101)

	How often have you been involved in the project?		
	once	twice	three times
Male	65.1%	20.9%	14.0%
Female	70.6%	23.5%	5.9%

Source: Author's construct.

The general tendency was that the percentages for participation for all the survey participant villagers gradually declined. This showed that the concept of participation applied to the project implementation was limited to capacity building and mobilisation in the case of the villages under the research focus. Peoples' engagement with project design and implementation (also in respect to budget), monitoring and evaluation and community planning was very limited, but could be very useful. This said, participation could have had a better effect if planned in a more comprehensive manner.

> *"The constructing specialist from their company came to the village and said the water line should be built with basalt, which in my view and that of our hydrologist was not necessary and relevant. Moreover, it was very expensive to build a canal with basalt, we said it was not the right way, but nobody listened to us. Nobody told us what the budget of the project and we did not see any technical plans for the rehabilitation works. So, the whole population of the village did not know how much the budget of the project was, and none of us was aware on how and what was going to be done.*
>
> Source: Interview with a municipality representative, Astghadzor village-Control, Armenia, August 10, 2016.

The example of the Armenian control community was very illustrative in this respect showing ignorance towards local knowledge, which is presented in the differentiation between the "we" of the villagers and "them" in the face of donor organisations. The local population and municipality considered the donor agency to be responsible for the proper implementation and maintenance of the project and did not in any way discuss their own responsibility, since they were not consulted. The villagers claimed during most of the interviews and FGDs that they would not allow the company to procure low quality materials if they were consulted and there was transparency with respect to the financial resources allocated to the project.

5.9.2. What was People's Input?

In 95 percent of the cases, the participants had an input in project implementation. Eighty-six (86.2%) percent of the villagers had provided input in the form of labor, while inputs in the form of machinery/equipment were made mostly by those with higher education. Clearly, the reflections of those with higher education differed in content putting more emphasis on education and long-term community mobilisation activities.

Table 21: The Kind of Input People Had (N=96)

If have input, what kind of input did you have?	
	Percent
labor	86.2
cash	6.9
machinery/equipment	6.9

Source: Author's construct.

Based on the analysis produced in the above sub-chapters it can be stated that the people's engagement in project activities, ways of the engagement, people's input (labor, cash, machinery/equipment, in-kind, other), people's involvement in project activities (through workshops, meetings, FGDs, capacity building trainings, seminars, discussions, rehabilitation of water supply infrastructure, maintenance of the water supply system, etc.) were important factors (as assessed by the community representatives) influencing and altering the ways of rehabilitation of water supply system.

5.9.3. People's Involvement in Project Activities

As shown in the table 22 below, both in Armenian and Georgian control communities, villagers were not involved in any project activity, which is unacceptable even if the project is not claimed to be implemented through participatory approaches. Table 23 shows that most attention in experimental communities was paid to project planning activities via workshops, meetings etc., which as shown in qualitative data: meant information sessions and capacity building events.

Table 22. Involvement in Activities by Country (N=206)

		In which project activities were you involved?			
		Project planning activities via workshops, meetings, FGDs	Rehabilitation of water supply infrastructure	Capacity building (trainings, seminars, discussions)	Maintenance of the water supply system
Armenia	with participation	40.0%	43.3%	10.0%	6.7%
	without participation	0.0%	0.0%	0.0%	0.0%
Georgia	with participation	46.7%	30.0%	20.0%	3.3%
	without participation	0.0%	0.0%	0.0%	0.0%

Source: Author's construct.

Table 23. Involvement in Activities by Gender (N=101)

	In which project activities were you involved?		
	Project planning activities via workshops, meetings, FGDs, trainings, seminars, discussions	Rehabilitation of water supply infrastructure	Maintenance of the water supply system
Male	65.2%	30.2%	4.7%
Female	41.1%	52.9%	5.9%

Source: Author's construct.

As shown in the table 23 above, participation differed by gender and age: women were more engaged in rehabilitation of water supply infrastructure, while men were more (in terms of quantity of persons, as well as the number of attended events) engaged in project planning activities via workshops, meetings, FGDs. This can be explained by the fact that in rural environment women were more "home-bound" and contributed to project implementation as the rehabilitation water supply construction was in progress within the village. Women cooked food and supplied food and drinks to the construction workers (among who schoolboys and husbands of some of them were also working as evidenced through the in-depth interviews of female respondents), while males freely attended meetings conducted in municipality buildings (51.2 % of males versus 23.5 % of females). Notably, during the in-depth interviews women spoke mostly on behalf of their families, including hubands and sons. The two quotes below illustrate "different modes of participation" among women and men in the experimental community in Armenia. While the male farmer reflected more on the "conversation" with the donor organisation, the female farmer potrayed and "on-site" picture of participation.

"For me water supply is very important in our village and I am very happy that we and the funding organisation worked so well together and since the end of the project we regularly had both potable and irrigation water. I remember how we, women, were bringing food for our men, who including our sons worked day and night on the renovation. They did all the work related to digging the soil and placing each pipe after another, connecting them and closing again with soil. We were scared that during the process of the renovation activities, pipes or some other construction materials could be stolen at night by someone from the neighboring communities, and then old men who were not busy in the construction works, said they will stay in that venue overnight and take care of security. Several of them did that, and I am really proud that all of us did something we could to make it happen."

Source: Interview with a Female Farmer, Vaghashen village-Experimental, Armenia, August 09, 2016.

"During one of our meetings we were asked what the contribution of our people can be, so that the donor organisation could decide what they should spend money for. And many people of our group asked about the amount that could be invested in our community. We were told that the amount was not enough for the overall water supply system rehabilitation, and then we suggested that they spend their money only on the pipes and other construction material, while the local people would work on the rehabilitation and bring the necessary machinery. This worked very well, as they [the donor organisation] sent a very good specialist to our village who guided and supported us as necessary."

Source: FGD with a Male Farmer, Vaghashen village-Experimental, Armenia August 05, 2016.

As shown in the quote from a member of the local council in Armenia below, the community members acquired motivation and ownership of the project.

"The project solved not only our water problem but also our internal communication problem. We never did anything together as a community, where children and elders, poor and rich would be together. This happened only thanks to the project".

Source: Interview with the member of the Local Council, Vaghashen village-Experimental, Armenia August 10, 2016

As a result of the project, the experimental community in Armenia had an unintended positive outcome being the establishment of a Community-Based Organisation (CBO). The organisation regularly involved the local population to conduct the proper maintenance of water network, as well as initiated and implemented several community development initiatives supported by donor resources, local municipality and contributions of the local population and former villagers presently residing in Russia. This was a clear impactful example of how participation resulted in self-mobilisation of the community and produced long term rural development results.

To continue the discussion on the importance of involvement of different groups of stakeholders in project activities, it shall be noted that interestingly, 36-55-year-old males (66.6%) were involved in project planning activities via workshops, meetings, FGDs, while females of the same age (81.8%) were engaged in rehabilitation of water supply infrastructure (this directly confirms the qualitative data presented earlier above). It has to also be noted, that "engagement in water rehabilitation" by female respondents also involved engagement of their family members (husbands and sons) since when telling the story behind community participation, women intensively referred to their households'/families' engagement in project activities.

Table 24. Involvement in Project Activities by Gender and Age (N=101)

		In which project activities were you involved?		
		Project planning activities via workshops, meetings, FGs, trainings, seminars, discussions	Rehabilitation of water supply infrastructure	Maintenance of the water supply system
male	18-35 years old	71.4%	28.6%	0.0%
	36-55 years old	83.3%	16.7%	0.0%
	55 years old and more	47%	41.2%	11.8%
female	18-35 years old	80.0%	0.0%	20.0%
	36-55 years old	18.2%	81.8%	0.0%
	55 years old and more	100.0%	0.0%	0.0%

Source: Author's construct.

5.10. Did Increase in Social Capital Lead to Improved Water Supply?

Social capital is important with respect to promoting social cohesion of the local population during their involvement in the project stages; ensuring social justice by enabling the people claim for their needs and rights; building the ownership of those involved in the project implementation; promoting equity among the different layers of the society by the means of cooperation of the overall population for the achievement of one goal; empowering the local people who realise, through their participation in the project implementation and the capacity building and learning, that they can not only successfully contribute to the implementation of the project but also to the development of the overall community/village. The analysis below shows that in the cases of needs assessments, female engagement in project implementation,

and equal access to water prerequisites were developed for the increase in social capital in the experimental villages (in the reminder of the General Comment No. 15 of the UN Committee on Economic, Social and Cultural Rights, it has to be noted that drinking water must be safe and acceptable, it must be affordable, it must be accessible and it must be sufficient, while the price of drinking water, should not be more than 3% of the income, see UNDP, 2006, p.11)

In the case of the research the "improved water supply" was defined through three key terms: (i) quality, (ii) frequency and (iii) level of access. All of the terms were assessed (as perceived) by the community representatives. The scale for assessment of quality ranged from bad to very good (bad, sufficient, good, very good). The scale for the frequency of water supply ranged from once a week to more than once a day (once a week, once in three days, once in two days, once a day, more than once and a day). The scale for the level of access to water ranged from very insufficient to very sufficient (very insufficient, insufficient, adequate, sufficient, and very sufficient).

It was hypothesised that relevant dimensions of participation created associated social capital, which in turn created foundations for understanding possible sustainability of the water rehabilitation projects in respect to quality, frequency of and level of access to water supply. The chapter analyses if the water quality/frequency of supply/access to water has improved/got worse/remained the same, since completion of the water rehabilitation as assessed by the community representatives. To note that no baseline information on how the water supply was perceived before the implementation of the project was available.

Needs assessment proved to be an important factor in project implementation. As when asked about their needs, people developed positive perception of the donor agency. The findings showed that needs assessments (conducted in the experimental communities) increased the sense of attachment and ownership towards the project, and enabled the use of local knowledge and practice, hence assuring equal participation and access in the projects, which contributed to the formation of social capital as an outcome of participation to project implementation at the local level. Specifically, in case of control community in Georgia, a waste of considerable financial resources took place as the donor agency did not consult with the population and heavily relied on a construction company, which ruined its reputation in the eyes of the villagers.

In contrast, the experimental community in Armenia achieved effective collaboration with villagers who felt the responsibility and ownership in decision-making processes. Application of local knowledge in the project implementation was one important dimension of participation. Only 8% from the control group mentioned that their local knowledge was used during the project implementation. The population in the control communities did not have chances to voice their needs and utilise their knowledge. Hence, no sense of ownership was developed among the representatives of the control communities towards the projects. On the other hand, 90 percent of the respondents in the experimental groups confirmed that their local knowledge was used during the project implementation.

"People were asked if they would support the project implementation if our community was selected, and most of those present at the meeting confirmed that they would help. The funding agency asked for volunteers, and more than 15 people, both young and old, volunteered to become members of the active group. I was told that the reason behind was to have a group of active members who would be informed about everything and make decisions related to that project, and I was never against it, everything which is good for the community and our people, I support all those ideas."

Source: FGD in Vaghashen village-Experimental, Armenia, August 05, 2016.

5.10.1. What was the Quality of Potable Water?

The findings suggested positive interrelation between participation and the current quality of water. Almost eight-two percent (81.7%) of the respondents in the experimental group assessed the quality of water as very good, while only 47.6% of respondents of the control group considered the quality in their communities as sufficient.

In general, as shown in the table 25, in all communities and in both countries implementation of projects improved the quality of water. However, more villagers in Armenia than in Georgia (32.3% versus 14.8%) assessed water quality as bad, and more villagers in Georgia than in Armenia (16.1% versus 34.4%) assessed the quality of water as sufficient (X^2= 11.150, Cramer's V=.301, p=.011). However, the table 25 shows that both in Armenia and Georgia most of the experimental community representatives assessed the quality of water as good or very good and those in the control communities assessed the quality as bad or sufficient.

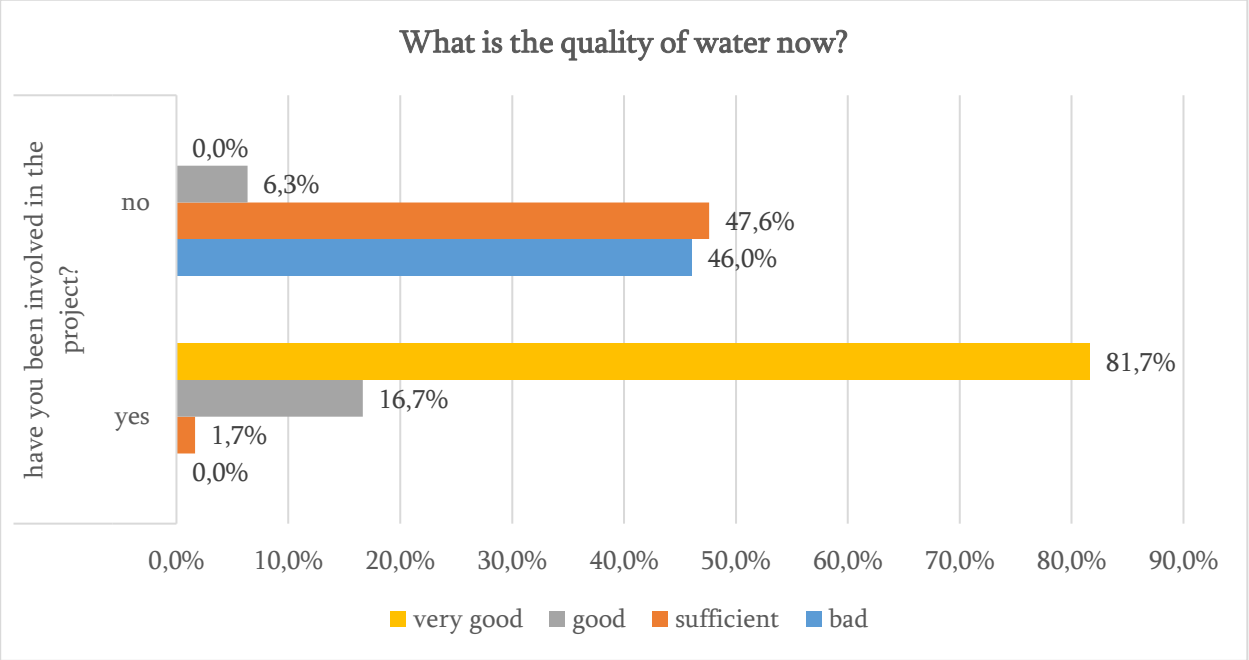
Table 25: Assessment of the Potable Quality of Water by the Time of the Interview by Country and Gender (N=206)

			bad	sufficient	good	very good
Armenia	with participation	male	0.0%	4.2%	25.0%	70.8%
		female	0.0%	0.0%	16.7%	83.3%
	without participation	male	57.9%	31.6%	10.5%	0.0%
		female	69.2%	23.1%	7.7%	0.0%
Georgia	with participation	male	0.0%	0.0%	0.0%	100.0%
		female	0.0%	0.0%	27.3%	72.7%
	without participation	male	33.3%	61.1%	5.6%	0.0%
		female	23.1%	76.9%	0.0%	0.0%

Source: Author's construct.

Aggregated numbers in the below figure 22 show that no respondent in the control communities assessed the quality of water as very good.

Figure 22: Assessment of the Quality of Water by the Time of the Interview by Involvement in the Project (N=206)



Source: Author's construct.

To look at the overall tendency, all community representatives reported improved quality of the potable water. This is explained by the fact that both type of communities were in urgent need for water rehabilitation projects and even with issues in implementation (with mostly nominal and instrumental forms of participation, sometimes with "cosmetic labelling" approach), the projects were important for improvement of the water quality. Armenian community representatives reported higher levels of improvement (X^2=7.905, Cramer's V=.254, p=.005) supposedly because the experimental case in Armenia was more successful (in terms of assuring community participation) than it was in Georgia.

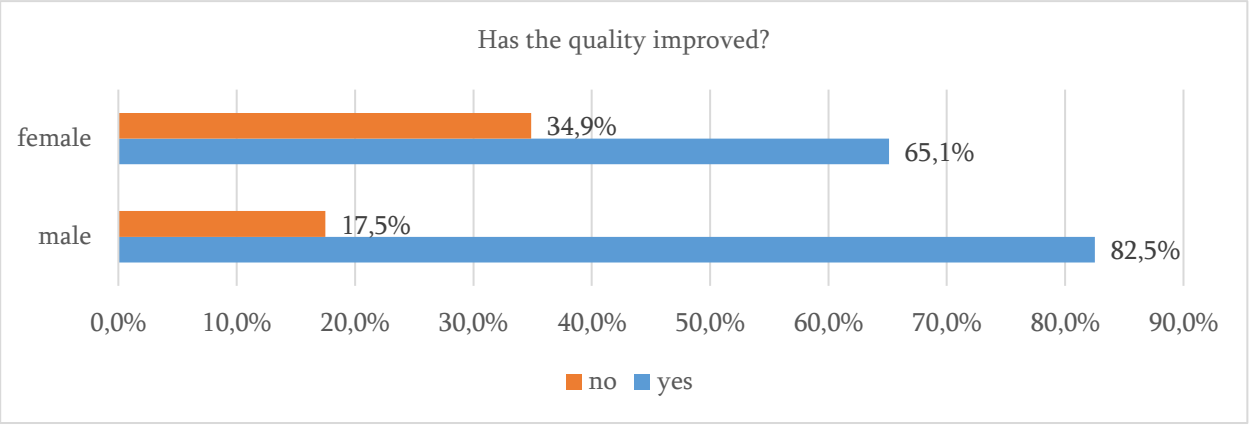
Table 26. Assessment of Improved Quality of Potable Water by Country (N=206)

	Has the quality improved?	
	Yes	No
Armenia	87.1%	12.9%
Georgia	65.6%	34.4%

Source: Author's construct.

Interestingly, there was a difference between perceptions of water quality improvement between males and females. Overall, more male respondents thought that the water quality improved (see figure 23 below, X^2= 4.691, Cramer's V=.195, p=.030) after the introduction of the project. This shows that the projects were perceived differently for men and women as "gender-blind" participatory approaches brought to unforeseen differences in the perceptions of the males and females.

Figure 23: Assessment of Improvement of Potable Water Quality by Gender (N=206)



Source: Author's construct.

Further, the community representatives were asked if the water supply system would work in five years. As shown in the table 27 below the optimism of male respondents was in a contrast to the pessimism of Armenian women in experimental community of the country and the control community in Georgia. One third of Armenian women did not think that the water supply would work in five years, while literally all males in Georgia and Armenia from experimental communities and some males from the control community in Georgia thought the opposite (see table 27 below).

Further table 28 confirms this finding by showing that twice more females than males thought that women's participation in the project and/or other community activities has not increased after the project started.

Table 27: Assessment if the Water System would Function in 5 years (N=206)

			Do you think the water supply system will function in 5 years?	
			yes	No
Armenia	with participation	male	100.0%	0.0%
		female	66.7%	33.3%
	without participation	male	47.4%	52.6%
		female	38.5%	61.5%
Georgia	with participation	male	100.0%	0.0%
		female	100.0%	0.0%
	without participation	male	22.2%	77.8%
		female	0.0%	100.0%

Source: Author's construct.

Table 28: Assessment of Participation of Women by Gender (N=206)

Are more women participating in the project and/or other community activities now than before the project started?		
	Male	**Female**
Yes	53.8%	39.5%
No	46.3%	60.5%

5.10.2. What was the Frequency of Water Supply?

A positive correlation was revealed between participation and the frequency of water supply. Ninety percent (90%) of the respondents from the experimental group had water access more than once a day and 10 percent had access once a day. Sixty (60%) from those of the control group had access to water once a day, and 40% had access to water only once in two days.

5.10.3. What was the level of Access to Water?

The table 29 below clearly shows that in case of experimental communities, the access to potable and irrigation water was assessed as being much better both in Georgia and Armenia.

Table 29: Assessed Access to Potable and Irrigation Water by Country (N=206)

		What is the level of your access to both potable and irrigation water?			
		insufficient	adequate	sufficient	very sufficient
Armenia	with participation	0.0%	0.0%	16.7%	83.3%
	without participation	0.0%	81.3%	18.8%	0.0%
Georgia	with participation	0.0%	0.0%	20.0%	80.0%
	without participation	32.3%	64.5%	3.2%	0.0%

Source: Author's construct.

5.10.4. How Did Social Capital Lead to Improved Water Supply?

In the reminder of Beresnevièiûtë (2003, p.10, see 3.8. Social Capital in Development Discourse), 'social capital is the civic society in the context of which people, as the result of mutual communication and co-operation create and get involved in a network of voluntary associations for the sake of their families, beliefs, interests, ideologies', and here also villages. Further, considering the positive effects that participation had on the quality, frequency of and access to water supply, it can be regarded as one important foundation of developing social capital in rural communities of Armenia and Georgia.

In the experimental group, 97 percent of the respondents replied that all the community members had equal access to water, while only 27 percent from the control group agreed with availability of equal access to all of the members of the community. This indicates the level of inclusion of all community members in the project which clearly differed for experimental and control communities. It has already been emphasised that poor and very poor people (mostly from control communities) did not participate in project implementation activities.

In the experimental group, 97 percent of the respondents considered that the water supply would function in 5 years, while only 29 percent from the control group were optimistic regarding the long-term water supply. This indicates the level of trust towards the project from the side of the community members. Further, if adding that more females were pessimistic in this respect, it will become clear that the projects in the control communities failed to generate trust of the village representatives (especially women).

In respect to the sense of ownership among community members, it has to be noted that this was much higher in the experimental communities (see figure 24 below). Further, as illustrated in the table 30, the projects failed to transfer the sense of ownership equally to the men and

women: while 63.8 percent of males thought that the water supply system was the ownership of the community population, almost the same percent of females (62.8%) thought that the water supply system had more to do with the local authorities or donors.

Figure 24: Who Owns the Water Supply System (by Types of Communities, N=206)

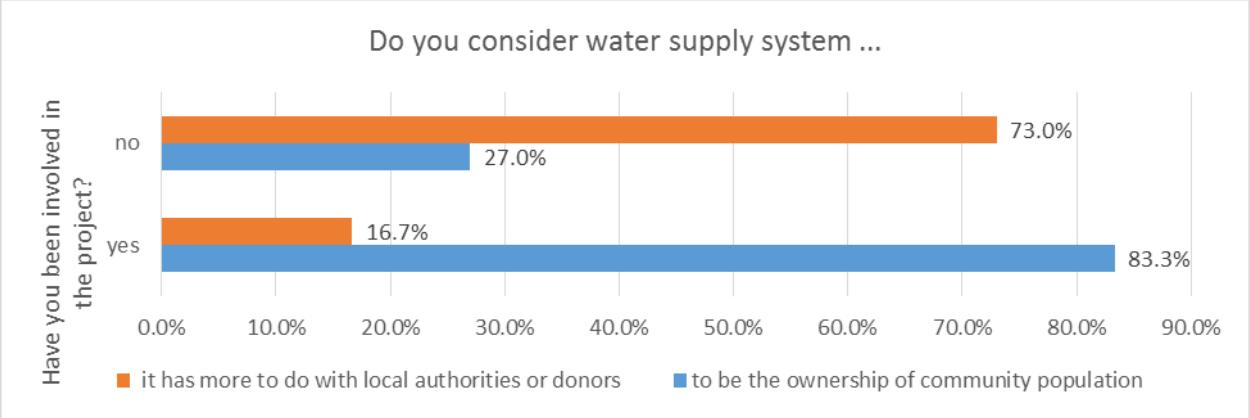


Table 30: Who Owns the Water Supply System? (N=206)

Do you consider …	Male	Female
… water supply system to be the ownership of community population?	63.8%	37.2%
… water supply system has more to do with local authorities or donors?	36.2%	62.8%

Women were mainly involved once or twice, and less women than men were involved three times in the project activities – capacity building/project planning events/meetings (see Table 20: Frequency of Involvement in Project Activities by Gender). Overall, 65.2 percent of males and 41.1 percent of females were involved in these events (table 23). More specifically, a significant numbers of middle aged males (36-55 years old) 83.3 percent compared to 18.2 percent of females were engaged in these events. Meanwhile, 81.8 percent of females compared to 16.7 percent of males were engaged in the rehabilitation of water supply infrastructure, mainly related to the provision of food and drinks to their husbands and sons working at the construction site (table 24).

Clearly, involvement of the local population in the project implementation resulted in a quite successful experience in the case of the Armenian experimental community. The donor organisation conducted several introductory meetings with the community members in the initial stage of the project, aimed to identify the main needs of the local population and considered options of where the project funds could be allocated. The community proposed to

the donor agency to spend the planned financial resources for procurement of construction materials and supplies and committed themselves to contribute the workforce for the establishment of the pipeline. This is an important case of formation of social capital that led to development of self-mobilising community.

The project created a close working environment within the community during the different stages of the project implementation, and provided several capacity development events, e.g. related to community mobilisation and community development projects and/or initiatives. The project allocated one technical specialist who provided technical assistance to the people involved in establishment of the pipelines during the overall project to ensure high technical standards. More than 45 men were involved in establishing the water network, including schoolboys (yet not schoolgirls who were in general excluded from the project implementation), which resulted in linking people from different social groups who joined efforts for the same goal.

In summary, it may be inferred that the discussed quantitative and qualitative findings confirmed the hypothesis showing that community participation had a positive influence on project sustainability. However, the term 'sustainability' has to be carefully defined here. Specifically, it has to be defined in a given regional and socio-economic, as well as socio-cultural context. For example, the data suggested that participation at work was still a one-sided process initiated and directed by the donor organisation. On the other hand, the overall analysis provided above confirmed that within the low and middle-income contexts participation may be an irreplaceable factor/determinant for project sustainability. It must be noted that a combination of (i) income generation, (ii) self-mobilisation of local communities, (iii) gender equity, and (iv) environmental sustainability fueled by balanced collaborative/participatory structure may contribute to community development and sustainability of development interventions in the studied regions. However, the expansion and diversification for participatory approaches and possibilities for participation, as well as creation of equal opportunities for participation for different groups of the people (females, poor or very poor farmers, retired people) leaves space for improvements and needs more reflection from the side of the municipalities, communities and donor organisations, according to the empirical evidence, see chapter 7 for more concrete guidance in this respect.

Both the quantitative and qualitative data confirmed the important influence of participation on the sustainability of the projects selected by the present research. There were several key factors

identified by the research which were important in the context of the projects: (i) the local population should be involved in all the stages of the project planning and implementation, since this factor was key to ensure that the funding would be expended on the priority needs of the community, and that the best ways would be explored to implement the project in an efficient and effective way; (ii) involving women in the project activities proved to be an important factor; it had an empowering influence and a synergy effect on the effective cooperation of the community members; (iii) the community members often did not take the initiative to approach the donor agencies and express their needs, problems and the advantages the project may have in case of their involvement. Thus, the participation should be more inclusive, targeted and balanced. (iv) this is also important with respect to transferring the local knowledge and building the ownership of the local people toward the projects; (v) conducting feasibility studies with the involvement of the local population is another important factor. (vi) capacity building events were identified as key not only for the sustainability of the project but also for the further development of the community, as it was the case with the experimental community in Armenia.

It may be inferred that the involvement of the local population built up their ownership towards the project and resulted in better maintenance/sustainability than in the cases of control communities. However, the contextual aspects of the project, the effects that could not be measured directly might have an effect and have to be accounted for. For example, the engagement of diverse social groups (e.g. women and schoolchildren) in the communities with participatory approaches had an important influence (as could be inferred from in-depth interviews with the villagers of the experimental community in Armenia) on the project implementation environment. However, this may be measured through further explanatory fieldwork with a more targeted and varied sampling frame: what were the motivations of women to participate in the project, how did they contribute, why only the schoolboys (and not girls) were engaged in infrastructure rehabilitation, why are the project implementation activities mostly donor-driven?

The quantitative descriptive data showed that the income of the communities' representatives having applied participatory approach was twice as high as in the control group, while the biggest difference in income was registered in relation to cropping. This is explained by better access to irrigation water by the respondents of the experimental group, an interrelationship between participation and practicing agriculture/livestock. In the categories not much related to water accessibility, such as for instance beekeeping, the members of the control group had a

higher income than those in the experimental group. In the categories related to the farm-related and non-farm related expenses, no considerable difference was observed among the participants of both groups. This suggested that the increased access to water might have an effect on income increase in the experimental groups.

The question related to the formation of community groups received positive responses from 100 percent of the respondents from the experimental groups. As to the control groups, none of the respondents had been inquired or requested to join a community group during the projects' implementation. Similar responses were received to the question on being invited to project-related events on regular basis.

In the questions related to the influence of external factors on the categories of quality of water, frequency of water supply, where the respondents mentioned mainly the factors of drought and high rate of inflation, the tests implied that the relationships were not statistically significant. Thus, the broader external factors did not have an influence on project sustainability.

5.10.5. Did Community Participation Have Any Positive Influence on the Provision of Regular Water Supply in the Framework of Water Rehabilitation Projects?

The research confirmed that the participatory approach leads to a more efficient and effective project implementation in the context of post-Soviet Armenia and Georgia. Towards answering the main research question (Does community participation have any positive influence on the provision of regular water supply in the framework of water rehabilitation projects?), it is worth highlighting that the average relationship between participation (in the experimental communities) and the frequency of water supply was statistically significant. The average relationship between participation (in the experimental communities) and access to water was statistically significant. Ninety-seven (97%) percent of those from the experimental group replied that the water quantity was sufficient for them, while 87% of the respondents in the control group mentioned that this was insufficient for them. Those in the experimental communities defined their level of access to potable and irrigation water as very sufficient, and the majority from the control group described this as only adequate.

Income analysis revealed a direct link between being in the experimental community and increase in HH income. Capacity development and involvement of the local population led to

effective project implementation. Project implementation through participatory approaches (conduct of needs assessments, involvement of various groups, e.g. engagement of females, the poor and very poor, involving the community members in decision making regarding the planning of the project, assurance of equal access to water supply) activated social capital, which in turn contributed to the formation of ownership towards the project and trust towards funding organisations (more specifically in the most successful case of the Armenian experimental community). Hence, participatory approach towards project implementation as it was a case with Armenian and Georgian experimental communities is highly recommended in the areas (villages) with low levels of agricultural income and social capital (and associated phenomena such as social cohesion and trust). On the other hand, the participatory approach in its type and form has to be well -thought before it is utilised in the contexts of post-Soviet Armenia and Georgia.

5.11. Cross-Country Analysis

In this subchapter the key findings of this research are highlighted, i.e. a synthesis of the above information on the studied water rehabilitation projects (assuming participatory and non-participatory approaches towards their implementation) in the Armenian and Georgian villages is given. The difference or similarities between the countries is accentuated.

In the most successful community in Armenia (experimental) where participation produced the good results, the municipality was more (7 percentage points) involved in assessing the needs of community representatives than in Georgia. However, in both cases the general low level of municipality engagement in needs assessment of the community representatives was observed as referring to nominal and instrumental interest in participation from the side of donors. This said, donor organisations need to be encouraged to work more with municipalities to achieve better results in project implementation.

To note, there was no straightforward declaration of the project being participatory by the donor agencies, the community representatives were not even invited to information sessions, and were not sufficiently provided with any information. This statement is true for both Armenian and Georgian control community cases. This clearly created no possibilities for the villagers to feel ownership for their community and for example in case of the Georgian control community assumed the so called “cosmetic labelling” where accountability towards community representatives was violated and created distrust towards donor agencies. This clearly indicates

that information sessions, feasibility analysis and needs assessment have significant importance in post-Soviet Armenia and Georgia even in cases when the project is not methodologically (in terms of peculiarities of implementation) declared/assumed to implement a participatory approach.

The research findings clearly showed that a huge percentage of experimental community representatives (90.5%) indicated that their HH income levels increased after the project implementation, while 42.9% of the control community representatives reported no change in their HH income levels. This said, water rehabilitation projects have to be treated with extreme care as they immediately affect the income levels of target rural communities.

It has to be noted however, that quantitative data showed an increase in self-reported HH income levels among all communities after the project implementation except the control community in Armenia. Sixty-nine percent (61.9%) of control community representatives in Georgia reported increase in income, while 57.1% of control community representatives in Armenia reported no change in their HH income. On the other hand, the research revealed an overall increase in income levels both in the experimental and control communities after the projects implementation meaning that water rehabilitation projects are (where relevant) very important for rural communities' economic well-being in Armenian and Georgia and have to be prioritised for rural development in the countries. It has to be considered, that the uses of water in Armenia and Georgia were similar: the rural population used water for land/gardens and for livestock, which confirms the importance of water use in agricultural activities of the communities. Interestingly, if in case of experimental communities in 90 percent of cases water was used for gardens and livestock, only 11 percent of those in control communities used the water for the same reason meaning that participatory approach increased the effectiveness of projects. To reflect more on the socio-economic status of the researched communities, communities in Georgia had lower income levels compared to those in Armenia and the experimental community in Armenia was in a better condition than the control community in Armenia. Hence, the initial analysis of socio-economic status of communities before realisation of water rehabilitation projects is important.

The income analysis showed possible relationship between the project implementation and improvement in community life (not only in terms of monetary income) as projects (here linked to water supply and sanitation) were vivid for community life mostly engaged with agricultural activities. In all communities both in Georgia and Armenia, the levels of the income of the female respondents grouped in low and middle income groups were interrelated with their

educational level. Hence, the relationship between educational level and annual income level was statistically significant for female respondents, which has the potential of altering the effects of education on participation in projects implementation by gender.

The findings in general implied that participation of male and female respondents in the community life was different. Further analysis on education/profession in experimental community and types of participation, showed that different groups of community representatives (accounting for gender, educational level, profession etc.) exhibited different outcomes of their participation (knowledge production, contribution through labor force etc.) and this has to be taken into account when planning water rehabilitation projects and associated interventions in Armenia and Georgia. For example, it was interesting to learn that women were more engaged in rehabilitation of water supply infrastructure, while men were more engaged in project planning activities via workshops, meetings, FGDs.

Further, females were more pessimistic in terms of the future of water supply: one third of Armenian women did not think that the water supply would work in five years, while literally all males in Georgia and Armenia from experimental communities and some males from the control community in Georgia did so. This is a clear message that the perception of project implementation varied by gender and this has to be taken into account in diversifying the ways of equal engagement of males and females in project-related activities.

Despite the evidenced importance of water rehabilitation projects and common water resource management issues both in Armenia and Georgia, very limited scholarly work has addressed the question of whether community participation has any positive influence on the provision of regular water supply in the framework of water rehabilitation projects in the countries. This was the main research question that this analysis addressed. And although evaluation specialists have long reflected upon contexts of project implementation (e.g., age of program, accessibility, size of program, timeline, political nature) and the project evaluation context (e.g., stakeholder involvement, method proclivity, measurement tools, purpose, use of results), there was still little discussion on how the participants of a project themselves perceive and affect the practice of project implementation. This analysis was meant to fill this gap.

CHAPTER 6

6.1. KEY FINDINGS

- The general tendency was that the frequency of engagement in project activities gradually declined. This showed that the concept of participation applied to the project implementation was limited to capacity building, while peoples' engagement with project design and implementation (also in respect to budget), monitoring, evaluation and community planning was very limited, but could be very useful. This said participation could have had a better effect if planned in a more comprehensive manner.

- A participatory approach was important for project sustainability; however, the form of participation should be considered. The research revealed that the participatory approach within the experimental groups of the two countries was different. In the case of the experimental Armenian community (experimental) men were involved in establishing the water network of the community, including schoolboys (not schoolgirls), which resulted in linking people from different social groups and age groups who joined efforts for the same goal. The case of the community which was involved in the project from the initial stage showed that the design of participatory approaches was very important for the effectiveness of implemented projects.

- Even though the project implementers practiced participatory approaches in the experimental communities, the interest in participation from the side of donors was nominal (through a donor-led) and instrumental (through engagement of participants for cost-effectiveness). This kind of interest in participation did not lead to co-opting and empowering participation. Only the experimental case in Armenia had aspects of empowerment of the villagers (with the donor organisation hence having transformative interest in participation) and could be recognised as a case illustrating a self-mobilising type of participation.

- The involvement of municipalities in the projects' implementation was limited. The municipality in the experimental community of Armenia was more (7 percentage points, which was significant given the overall low level of municipality engagement across the other communities and the success of the Armenian experimental community)

involved in assessing the needs of community representatives than the experimental community in Georgia. However, in both cases a low level of municipality engagement in needs assessment of the community representatives was observed. This finding again confirms that the interest of municipality representatives in participation was nominal and instrumental, and in-case of the Georgian control community, it even led to "cosmetic labeling" – a state when the project was imitated to be addressing the needs of the village community, accountability towards community representatives was violated and created distrust towards donor agencies.

- Even though the methodologies of assuring participation through the projects could be more diversified assuring all the levels of participation (not only informing and sometimes consulting, but also involving, collaborating and empowering) for all the communities, the research clearly showed that community participation had a positive influence on the provision of regular water supply in the framework of water rehabilitation projects.

- Not only the direct interrelation between participation in the projects and the sustainability of the projects was important, but the overall context of the project implementation that provided or did not provide access for participation to various groups of stakeholders (e.g. including more women in the organised events, engaging (the self-reported) poor and very poor HHs in the project implementation). With this, the projects missed opportunities for equal community engagement.

- In the case of the experimental community in Georgia, the implementation of the project led to "lessons learnt" for those respondents who were engaged in the project implementation-monitoring group and were involved in information and training sessions. The formation of this group still produced local knowledge that empowered the group representatives.

- Participation differed by gender and age: women were more engaged in the rehabilitation of the water supply infrastructure, particularly by providing food and drinks to those involved in the construction, while men were more engaged in the project planning activities via workshops, meetings, FGDs etc.

- More females participated in the projects' activities once; while more (by around 6 per cent points) males participated in the projects' activities three times.

- People's engagement in the projects' activities, the ways of the engagement, i.e. people's input (labor, cash, machinery/equipment, in-kind, other), people's involvement in the projects' activities (through workshops, meetings, Focus Group Discussions (FGDs), capacity building trainings, seminars, discussions, rehabilitation of water supply infrastructure, maintenance of the water supply system, etc.) were important factors (as assessed by the community representatives) influencing and altering the ways of rehabilitation of the water supply system.

- The projects failed to transfer the sense of ownership towards the water supply systems equally to the men and the women: while 63.8 percent of males thought that the water supply system is the ownership of the community population, almost the same percent of females (62.8%) thought that the water supply system had more to do with the local authorities or donors.

- In the control communities, where no needs assessments were conducted, no positive perception of donor organisations was achieved. This, in turn, hindered the sense of attachment and ownership by the villagers towards the projects in these communities, the local knowledge and practice retained underused, the trust of the local population was lessened and did not assure equal participation in and access to the projects, which reduced the formation of social capital as an outcome of participation at the local level.

- Regardless of the issues with the form and the type of the participation, 97% of the respondents in the experimental group thought that the water supply would function properly in 5 years, while only 29% from the control group were optimistic regarding long-term water supply.

- A positive correlation was revealed between participation and the frequency of water supply. Ninety percent (90%) of the respondents from the experimental group had water

access more than once a day and 10 percent had access once a day. Sixty (60%) from those of the control group had access to water once a day, and 40% had access to water only once in two days. In the case of the experimental communities, the access to potable and irrigation water was assessed much better both in Georgia and Armenia.

- Better access to resources implied increase (as mentioned/perceived by the villagers) in HH income levels revealing a direct relationship between the water rehabilitation projects and rural community well-being. The difference between the control and the experimental groups in terms of being involved in agricultural activities and/or cattle breeding was statistically significant. Specifically, in the communities where the project was implemented with a participatory approach, especially cropping and some livestock practices were prevailing due to the better access to water supply.

- Females were more pessimistic in respect to functioning of the water supply in the communities. One third of Armenian women did not think that the water supply would function in five years, while literally all males in Georgia and Armenia from the experimental communities and some males from the control community in Georgia thought the opposite. Further, more females than males thought that women's participation in the project and/or other community activities did not increase after the project started.

- In the case of the experimental communities, water was mostly (90%) used for gardens and livestock, while only 11 percent of those in the control communities used water for the same reason. This showed the sharp difference of water uses (especially the one that led to income generation through agricultural activity) between experimental and control communities.

- Only farmers (with no occupation other than farming) and the pension age people were among in the lowest income group both in the experimental and the control communities.

- The levels of the income of the female respondents grouped in low- and middle-income groups were statistically significantly interrelated with their educational level. In contrast, the levels of the income of the male respondents were not statistically

significantly interrelated with their educational level. Those female participants of the study who possessed graduate and college degree were in the middle-income group.

- The clear majority of the respondents knowledgeable of community life and participating in it were male.

- Based on the logical deduction from the above two findings, it might be inferred that with active participation of male respondents in the community life, the effect of the education of female respondents (that had an influence on their income levels) was likely to be overlooked in community development endeavors within the observed regions.

- All the respondents in four communities mentioned an increase in income in the time given after the project implementation. However, the agricultural income levels of the experimental communities were higher as they produced less agricultural products but had higher revenue. Experimental communities had a higher income due to several refined activities (e.g. cropping). Better cropping practice and improved irrigation possibilities positioned better the HHs in the experimental communities.

- The average relationship between participation and the frequency of water supply was statistically significant. The average relationship between participation and the perceived present access to water was statistically significant. Ninety-seven (97%) of those from the experimental group replied that the water quantity was enough, while 87% of the respondents in the control group responded that the quantity they received was insufficient. Eighty-two (82%) of the respondents from the experimental group defined their level of access to potable and irrigation water as very sufficient, and 73% from the control group defined it as adequate (the mentioned differences were statistically significant).

- As a result of the project, the experimental community in Armenia had an unintended positive outcome being the establishment of a community-based organisation (CSO). The organisation regularly involved the local population to conduct the proper maintenance of water network, initiated and implemented several community development initiatives supported both by donor resources, local municipality, contributions from the local population and the former villagers presently residing in

Russia. This was a clear impactful example of how participation resulted in self-mobilisation of the village community and produced long term rural development results.

CHAPTER 7

7.1. Conclusions and Recommendations

Conclusion # 1: Donors' interest in project implementation was mostly nominal (through a donor-led) and instrumental (through engagement of participants for cost-effectiveness), while participation had significant positive influence on the provision of regular water supply in Armenia and Georgia.

Recommendation to municipalities/local authorities:

- Municipalities/local authorities should be involved in the projects as major implementing partners, collaborating with donor organisations to assure more advanced levels of participation of the villagers and enable self-mobilisation of the communities. This can be done by holding information sessions for villagers, conducting site visits, and assuring that villagers' priority needs are addressed by the donor organisations or implementing agencies.

Recommendations to donor organisations and implementing agencies:

- Self-mobilising state of communities is more cost-efficient and sustainable. To assure this, the donors and implementing agencies should contact the local administration/municipalities/council of elders well in advance to inform about their intention to implement a project.
- It is recommended to start the intervention by needs assessments (regardless of participatory/non-participatory methodology towards implementation), and start a discussion regarding the possible implementation of the project in the specific village/community with the municipality representatives and villagers also accounting for the cultural context.
- It is recommended to identify whether the proposed intervention is a priority for the targeted village/community through conducting village/community meetings. The

different social groups/stakeholders in the community should be identified prior to the meetings, to ensure that the meetings are representative for the whole community and are well-moderated.

- The council of elders, school administration and the nurse of the village/community can be useful references to inform the village of the to-be-implemented project.
- Even after the projects are over, it is important to maintain ties with the municipalities, so that if needed, the relevant stakeholders (including researchers) are able to reach the donors and implementing agencies out.

Recommendation to villagers:

- Access to water is a fundamental human right and should be recognised as such, defended and respected. The villagers should not be passive recipients, but active collaborators. This can be done through self-initiatives, learning on and advocating for their rights, voicing their concerns to municipality/donor/implementing agencies representatives.

Conclusion # 2: Peoples' engagement demonstrated a declining tendency showing that the concept of participation applied to the experimental projects implementation was limited to capacity building. Peoples' engagement with project design and implementation (also in respect to budget planning), monitoring, evaluation and community planning was very limited.

Recommendation to municipalities/local authorities:

- Municipalities should involve village representatives in the monitoring groups to assure that not only municipality representatives, but also the villagers (represented by males and females, poor and very poor, professionals and the elderly who generally have high social status in Armenian and Georgian villages) are as well familiar with the project plan and its budget; can regularly monitor their implementation and inform the local population.

Recommendations to donor organisations and implementing agencies:

- Feasibility studies should be implemented with the involvement of the local villagers (hydrologists, municipality staff or other professionals) and should go beyond sharing the results. It should be explored what kind of contribution can be provided by the

community/village (financial, labor, equipment, other) with respect to the requirements of the funding/implementing agencies.

- Even in the cases when villagers' contribution is not required, it is recommended to ask the communities/villages for contribution which raises the ownership and promotes the chances for further maintenance of the project. All the issues related to the contribution of the community, e.g. its types (financial, labor, equipment, etc.), quantity, aim of the contribution should be made clear to all of the beneficiaries. Each of them should understand the goal and the added value of their contribution and their role in further maintenance of the water supply system (or other project outputs).
- All the levels of villagers' participation shall be examined and applied: involving, collaborating and empowering the villagers are important beyond just informing and consulting. Process evaluation (after the needs assessment) is one important evaluation methodology to assure that the desired input in the project implementation is made.
- Further, outcome evaluations may be conducted as the project produces its outcomes. The donor organisations/implementing agencies shall carefully document whether the project has met its objectives, how and to what extent.

Recommendations to villagers:

- Implementation of important (for the village) projects is not the sole responsibility of the municipalities/donor organisations/implementing partners. Villagers' voluntary contributions are important factors assuring overall success. Environmental sustainability and maintenance of adequate and decent livelihood may be achieved if the villagers themselves contribute to and care about formation of social capital.
- People with different education background may have varied types of input in project implementation and this variety will enrich the project implementation process. For example, education of women could be one important factor for consideration. People of different professions could have more diversified in-kind contribution.

Conclusion # 3: The higher the level of participation and the better its design, the more positive the perception of and trust towards donor organisations, sense of attachment and ownership by the villagers towards the projects, utilisation of the local knowledge and practice, equal participation in and access to the projects will be achieved. Advanced participation leads to increase in social capital, which assures project sustainability.

Recommendation to municipalities/local authorities:

- Before donor organisations/implementing agencies decide to implement projects in the villages, it is important for the municipalities to exercise stakeholder mapping with respect to priority needs, conduct budgeting for village development, identify the local knowledge with respect to priority needs and develop approaches to assure equal representation of villagers in decision-making processes important for the village. If municipalities' capacities are increased in this respect, this will create a ground for development projects.

Recommendations to donor organisations and implementing agencies:

- Donor organisations and implementing agencies should account for building the capacity of municipalities towards the above-mentioned recommendation. Further, the villagers' capacity of signing petitions, mechanisms of getting involved in important decision-making processes can be further increased.
- When designing participatory approaches/methodologies for project implementation, the donor organisations/implementing agencies shall aim at "mobilising" and "community planning" concepts of participation which will in turn lead to interactive and self-mobilising types of participation.
- Assessment of participation is itself important: the donor organisations/implementing agencies are recommended to account for the specific contexts of villages, scope of project implementation (avoidance of conflicts of interests, e.g. between villages) and possible influence of various groups of project stakeholders.
- Identification of village leaders/respected people as collaborators for project implementation might be beneficial to project implementation, as this will create trust towards the donor organisation/implementing agencies.
- Inclusive and diversified approach to different groups of stakeholders which in turn makes a positive impact/change on the lives of the local people and social development is recommended. The following capacity development activities and other events can be taken into account:
  (i) supporting mobilisation of the community/village for the successful implementation and maintenance of the project and its results;
  (ii) enabling the community representatives, e.g. members of both the active and marginalised or excluded groups to learn more about opportunities related to community development;

(iii) reach out mechanisms for those active and inactive in village life and project implementation initiatives have to differ;

(iv) organising project development and fundraising seminars;

(v) organising capacity building events related to establishment and operations of Community-Based Organisations, youth and women groups;

(vi) Monitoring of access to water, its quality and management of water resources;

(vii) Organising seminars on the rights of the local people related to water use, and other important topics relevant to the specific community, since in the case of the majority of the communities of Armenia and Georgia, the local population may not be aware about their rights and responsibilities related to water use and management.

- Based on feasibility study results, an Action Plan of project implementation and a contract should be developed and signed by the village/community administration and the implementing agency, listing all the responsibilities and the rights of both parties.

Recommendations to villagers:

- Offering local knowledge to donor/implementing agencies, being open to discussions, collaboration in monitoring and evaluations activities (by providing sufficient information) and collaboration with the municipalities in assuring that local knowledge is properly accounted for, may become valuable assets for project implementation.
- Participation in donor/implementing agency-led events/trainings, including involvement of women, is important to increase villagers and communities' knowledge and capacities.

Conclusion # 4: Better access to resources implied increase (as mentioned/perceived by the villagers) in HH income levels revealing a direct relationship between water rehabilitation projects and rural community well-being.

Recommendation to municipalities/local authorities:

- High quality water supply is an important factor for HH economic situation in villages. If this is clearly communicated, people will be more willing to contribute to the rehabilitation of water supply system. Social advertisement might be effective in this respect.

Recommendations to donor organisations and implementing agencies:

- It is important to make sure that the village/community receives enough, frequent and high quality water supply. Otherwise, if not well implemented the projects might do more harm than good. This said, any mistakes or omissions in regards to water rehabilitation projects implementation may have unpredictable consequences, for example a conflict between villagers or villages may arise because of poorly communicated expectations of donors and of villagers.
- The poor and very poor HHs should not be excluded from any project implementation activities. On the contrary, these HHs should be the very first beneficiaries of the projects.
- Another important target towards project implementation are farmers (with no other occupation) who are more probable to be in an unfavorable socio-economic situation.
- Interrelation of education and impact has to be well examined to identify any positive effects that education may have on project implementation. For instance, a group of educated women may be an important target in case the projects seek to improve the socio-economic condition of a village/community. Further, capacity building of those women without education could as well benefit project implementation.
- Baseline studies in terms of the socio-economic status of a village are of great importance. This study can serve as providing baseline data for the studies of the four communities and associated phenomena.

Recommendation to villagers:

- Poor quality and lack of water result in producing low quality agro products and receiving less revenue due to decreased quality of the products and challenges arisen because of lack of water, hence contribution to the improvement of water supply is a direct positive contribution to the HH economic situation, especially for those practicing farming, especially cropping and cattle-breeding.

Conclusion # 5: Applied participatory approaches were not gender-sensitive leading to important losses/gaps in project implementation and associated benefit for the community.

Recommendation to municipalities/local authorities: When investigating the local knowledge, it is important to apply a gender-sensitive approach, and inform donor organisations/implementing agencies on cultural context of the village.

Recommendations to donor organisations and implementing agencies:

- Project implementation is post-Soviet Georgian and Armenian villages, is sensitive in terms of the cultural context and gender relations within a village/community. It is recommended to consult with local experts, as well as the municipality/local authorities when developing an Action Plan for project implementation and the concept of participation.
- Further, donor organisations/implementing agencies can work on building the capacity of municipalities in addressing gender-equality in village-related decision-making processes at different levels: the municipality/local authority itself, at the village/community and regional/administrative district levels.
- It is recommended to diversify the sites of project-related capacity building or other events. Some events have to be organised close to village houses on in a village house, as females will be more willing to attend suchlike meetings/events.
- In case women were not actively participating in community/village meetings in the preparatory stage of the project planning, it is recommended to reach women by organising another meeting only for women, to be moderated by a female facilitator.
- To ensure the participation of women in the meetings/events, it might be useful to request the local administration/authorities and the council of elders to contact the families of the targeted women and explain the goal of the meeting. Age distribution of women and their educational background may be an important factor to consider before organising the events/meetings and assurance of representation of females with different education background and age will be beneficial for the project.
- Special attention can be made to schoolboys and schoolgirls (assuring equal representation), as creating interest towards the project through these important stakeholders will assure long-term impact, social education and transferable life skills for schoolchildren. In this respect, donor organisations/implementing partners may collaborate with local schools and teachers.
- The role of elderly women can be thought through in mobilising female representatives of the communities for project implementation and maintenance purposes.
- The donors and implementing partners should consider managing the expectations of females and males from the projects. This also implies monitoring and promotion of female participation in local development in the framework of program/project implementation to account for possible differentiated effects (e.g. of education or age).

- To ensure that the local actors are equally involved in all of the stages of the development projects, a representative working group can be established, including women representatives, who should be responsible for the overall coordination of the community population with respect to their awareness raising regarding their involvement in the project, labor contribution during project implementation, overall communication with donor/implementing agency and the local authorities, and pubic monitoring of the project.

Recommendations to villagers:

- Women need to realise their important role in project implementation and community development. They can as well support donor agencies/implementing organisations in their efforts to assure equal representation of males and females in important decision-making processes.
- Villagers need to realise that participation in project activities from the side of both schoolboys and schoolgirls is equally important to educate them for responsible citizenship and orient them towards community development.
- Ongoing cooperation (before, during and after projects implementation) of females with municipalities/local authorities is highly desirable. Suchlike approach may well be well utilised in the case when the municipality representatives themselves account for gender sensitive staff, policies and procedures.

Bibliography

1. African Development Bank (2001) *Handbook on Stakeholders Consultation and Participation in AFDB Operations*. Environment and Sustainable Development Unit (OESU).

2. Akhalkalaki District Participatory Assessment and Survey Results (2006) Funded by the European Commission Compiled by: Mercy Corps Association of Business Consulting Organization (ABCO) International Association of Agricultural Development (IAAD) International Centre on Conflict and Negotiation (ICCN), p. 19. Retrieved from https://www.mercycorps.org/sites/default/files/file1186201133.pdf

3. American Sociological Association (1999) *Code of Ethics and Policies and Procedures of the ASA Committee on Professional Ethics.* Retrieved from http://www.asanet.org/sites/default/files/code_of_ethics.pdf

4. Annan, K. (2001) *Message of Secretary-General Kofi Annan on World Water Day, March 2001*. United Nations Press Release. Retrieved from: https://www.un.org/press/en/2001/sgsm7738.doc.htm.

5. AP2 International Federation (2014) *IAP2's Public Participation Spectrum* Retrieved from https://c.ymcdn.com/sites/www.iap2.org/resource/resmgr/foundations_course/IAP2_P2_Spectrum_FINAL.pdf .

6. Armenia Political Map (2014) *Political Map Armenia.* www. Mapsoftheworld.com. Retrieved from https://www.mapsofworld.com/armenia/armenia-political-map.html

7. Arnstein, Sh. (1969) *A Ladder of citizen participation.* Journal of the American Planning Association, Vol. 35, No. 4, July, pp. 216-224.

8. Asian Development Bank (2011) *Armenia Water Supply and Sanitation Challenges, Achievements, and Future Directions.* In-Ho Keum, pp. 1-2. Retrieved from https://www.adb.org/sites/default/files/publication/29892/armenia-water-supply-sanitation.pdf

9. Becker, E. (1999) *Exploring uncommon ground: sustainability and the Social Sciences*. Zed: New York, p. 1.

10. Beresnevièiûtë, V. (2003) Dimensions of Social Integration: Appraisal of Theoretical Approaches. Ethnicity Studies. Institute for Social Research, Vilnius, pp. 5-10. Retrieved from http://ces.lt/en/wp-content/uploads/2012/03/EtSt_Beresneviciute_2003.pdf

11. Bhattacherjee , A. (2012) *Social Science Research: Principles, Methods, and Practices*. University of South Florida, p. 38.

12. Bourdieu, P. (1983). *Ökonomisches Kapital, kulturelles Kapital, soziales Kapital. Soziale Welt*, Special Issue 2, pp.183-198.

13. Bourdieu, P. (1984). *Distinction: a social critique of the judgement of taste* (R. Nice trasl), London: Routledge and Kegan Paul.

14. Bourdieu, P. (1986). *'The forms of capital'* in J.G. Richardson (ed) *Handbook of theory and research for the sociology of education*, New York: Greenwood Press, pp. 241-258.

15. Bourdieu, P. (1989). *Social scope and symbolic power*, Sociological Theory, 7 (1), pp.14-25.

16. Burgos, Andrés, & Mertens, Frédéric. (2017). *Participatory management of community-based tourism: A network perspective. Community Development*: Journal of the Community Development Society, 48(4), pp. 546-565.

17. Campbell, T. D. and Stanley, C. J. (2015) *Experimental and Quasi-Experimental Designs for Research.* Ravenio Books.

18. Carpenter, A. (2012) *Introduction: the role of the European Union as a global player in environmental governance.* Journal of Contemporary European Research Volume 8, Issue 2 , p. 186.

19. Cavaye, J. (2001) *Understanding Community Development*. Cavaye Community Development, pp. 1-16.

20. Chambers, R. (1983) *Rural development: putting the last first.* Longman Inc. USA, pp. 14, 51, 58, 82, 140.

21. Chambers, R. (1992) *Rural appraisal: rapid, relaxed and participatory.* IDS Discussion paper 311.

22. Chambers, R. (1994) *Participatory Rural Appraisal (PRA): Challenges, Potentials and Paradigm.* World Development, Vol. 22, No. 10, pp. 1437-1454.

23. Chambers, R. (1994). *Paradigm shifts and the practice of participatory research and development. Institute of Development Studies*. Working Paper 2.

24. Chambers, R. (2007) *Who counts? The quiet revolution of participation and numbers.* Working Paper 296. Institute of Development Studies, UK.

25. Chambers R. and Conway. (1991) *Sustainable rural livelihoods: practical concepts for the 21st century.* IDS Discussion Paper 296. Brighton, UK. Institute of Development Studies.

26. Chase, R. (2002) *Supporting communities in transition : the impact of the Armenian Social Investment Fund - impact evaluation of social funds*. The World Bank economic review. Vol. 16, no. 2 (May 2002), pp. 219-240. Retrieved from: http://documents.worldbank.org/curated/en/519531468208168531/Supporting-communities-in-transition-the-impact-of-the-Armenian-Social-Investment-Fund-impact-evaluation-of-social-funds.

27. Chase, S., Wilkinson, E. (2015) What Happened to Integrated Rural Development? The Hunger Project. Retrieved from https://advocacy.thp.org/2015/08/11/what-happened-to-integrated-rural-development/.

28. Cienciala, A.M. (1999) *The Communist Nations Since 1917*.Chapter 3. (Revised Sept. 2010) Russia under Lenin and Stalin.1921-1939, pp. 192-208. Retrieved from http://acienciala.faculty.ku.edu/communistnationssince1917/ch3.html

29. Claridge, T. (2004) Designing Social Capital Sensitive Participation Methodologies. Social Capital Research, pp. 15-30.Retrieved from: https://www.socialcapitalresearch.com/wp-content/uploads/2013/01/Social-Capital-and-Participation-Theories.pdf

30. Cleaver, F. (2001) *Institutions, agency and the limitations of participatory approaches to development*. In: Cooke, Bill and Kothari, Uma eds. Participation: The New Tyranny? London: Zed Books, pp. 36-42.

31. Cohen, J. (1988) *Statistical Power Analysis for the Behavioral Sciences.* NY: Academic Press.

32. Coleman, J.S. (1988). *Social capital and the creation of human capital.* American Journal of Sociology, pp. 94, 95-120.

33. Cooke, B., Kothari U. (Ed.) (2001) *Participation: the new tyranny?* Published by Zed Books Ltd, London; New York : Zed Books.

34. Cornell Caspian Consulting (2002). The South Ca*ucasus: A Regional Overview and Conflict Assessment.* Swedish International Development Cooperation Agency. Department for Central and Eastern Europe.

35. Cornwall, A. (2008) *Unpacking 'Participation': models, meanings and practices.* Oxford University Press and Community Development Journal.

36. Cresswell, J. W. (2013). *Steps in Conducting a Scholarly Mixed Methods Study.* Retrieved from https://digitalcommons.unl.edu/cgi/viewcontent.cgi?article=1047&context=dberspeakers

37. Danish Institute for Human Rights (2018) *Human Rights and the 2030 Agenda For Sustainable Development Lessons Learned and Next Steps.* Retrieved from https://www.humanrights.dk/sites/humanrights.dk/files/media/dokumenter/udgivelser/sdg/hr_and_2030_agenda-web_2018.pdf

38. De Campos Guimaraes, J. P. (2009). *Participatory Approaches to Rural Development and Rural Poverty Alleviation.*Retrieved from: http://www.unescap.org/pdd/publications/poverty_and_development/participatory_rural.pdf.

39. Denzin, N. K. (2012). Triangulation 2.0. Journal of Mixed Methods Research,6(2), pp. 80-88.

40. Duban, E. (2010) *Gender Assessment USAID/Georgia*. DevTech Systems, Inc.

41. Ecolur (2018) *March 22 - World Water Day: Problems of Water Resources in Armenia.* Retrieved from https://ecolur.org/en/news/water/march-22--world-water-day-problems-of-water-resources-in-armenia/9992/

42. Ellis, F. and Biggs, S (2001) *Evolving themes in rural development 1950s-2000s*. Developing Policy Review, 19 (4). Overseas Development Institute.

43. European Communities (2006) *LEADER APPROACH*. A Basic Guide, Belgium.

44. European Commission (2017) *Results Oriented Monitoring – ROM Handbook. Guidance for ROM reviews and support to end-of-project results reporting for projects and programmes financed by the European Union within the framework of its external assistance.* Directorate general for International Cooperation and Development.

45. FAO (1990) *People's Participation Programme - the First 10 Years: Lessons Learnt and Future Directions*. Prepared by FAO consultant C.E. McKone. FAO, pp. 10-12. Retrieved from http://www.fao.org/tempref/docrep/fao/010/u0223e/u0223e00.pdf

46. FAO (2005) An approach to rural development: *Participatory and Negotiated Territorial Development (PNTD)*. Rural Development Division, p.10.

47. FAO Regional Office for Europe and Central Asia (REU) (2012) *Assessment of the Agriculture and Rural Development Sectors in the Eastern Partnership countries-Georgia.* The European Union's Neighbourhood Programme. Retrieved from: http://www.eesc.europa.eu/resources/docs/georgia_assesment_final_en.pdf

48. Francis (2002) *Participatory development and the World Bank: the primacy of process in B. Cooke and U. Kothari (eds) Participation: the New Tyranny*. London and New York: Zed Books Ltd, pp. 72-87.

49. Frey, K. (2008) *Development, good governance, and local democracy*. Braz. political sci. rev. vol.3 no.se Rio de Janeiro.

50. Gabrielyan, R., Mnasakanyan V. (2014) *Setting the Minimum Optimal Wage Level in Armenia: Adjustments in the Social Policy.* Policy- Oriented Research # R012. Caucasus Research Resource Center – Armenia. Yerevan, pp. 15-16. Retrieved from: https://www.crrc.am/hosting/file/_static_content/fellows/fellowship12/Final%20Paper_Vanuhi%20Mnatsakanyan.pdf.

51. Geographical Map of Armenia and Georgia. *The Caucasus Region.* Office of the Geographer and Global Issues: Bureau of Intelligence and Research. US Department of State

52. Georgia Agriculture Data. Trading Economics. Retrieved from: https://tradingeconomics.com/georgia/agricultural-land-percent-of-land-area-wb-data.html

53. Georgia Political Map (2015).www. Mapsoftheworld.com. Retrieved from https://www.mapsofworld.com/georgia/georgia-political-map.html

54. Gerring, J and Cojocaru, L. (2015) *Case-Selection: A Diversity of Methods and Criteria.* Retrieved from https://pdfs.semanticscholar.org/7ff9/124c7427e6404cd6dbd27cbed8cef666b8f1.pdf

55. Gharabegian, A. (2013) *Water Issues in Armenia.* The Armenian Weekly: Retrieved from http://armenianweekly.com/2013/05/10/gharabegian-water-issues-in-armenia/

56. GIZ (2012) *Participatory Appraisal of Competitive Advantages (PACA) Vaghashen. Local Economic Development in Vaghashen.* Gegharkunik Chamber of Commerce, "Small and Medium Entrepreneurship Development National Center" Fund (SME DNC of Armenia)

57. GIZ (2013) *Samtskhe-Javakheti Regional Development Strategy 2014-2021*. Tbilisi, pp. 16-17.

58. Gomm, R. and Hammersley, M. (2000). *Case Study Method: Key Issues, Key Texts.* London: Sage.

59. Google maps (2018) *Samtskhe–Javakheti Region, Georgia*. Map Google Data 2018. Retrieved from https://www.google.am/search?q=samtskhe%E2%80%93Javakheti+map&oq=samtskhe%E2%80%93Javakheti+map&aqs=chrome..69i57j0.5187j0j9&sourceid=chrome&ie=UTF-8

60. Google maps (2018) *Sample Villages in Georgia Map.* Google Data 2018. Retrieved from https://www.google.com/maps/place/Akhalkalaki,+Georgia/@41.5610291,43.4418189,14z/data=!4m5!3m4!1s0x4042f85def9360b9:0x156430e6c8a4de60!8m2!3d41.4025151!4d43.4871631

61. Google maps (2018) *Sample Villages in Armenia*. Map Google Data 2018. Retrieved from: https://www.google.am/search?q=vaghashen+map&oq=vaghashen+map&aqs=chrome..69i57j69i60l3.5538j0j4&sourceid=chrome&ie=UTF-8

62. Government of Georgia (2014) *Regions of Georgia.* Retrieved from http://gov.ge/index.php?lang_id=ENG&sec_id=227

63. GPM Global (2014) *The Green Project Management (GPM) P5 Standard for Sustainability in Project Management . GPM P5 Matrix.* First Edition Retrieved from

https://www.researchgate.net/publication/282816191_The_GPM_P5_Standard_for_Sustainability_in_Project_Management

64. Grootaert C, Van Bastelaer, T. (2002) *Understanding and measuring social capital : a multidisciplinary tool for practitioners.* World Bank: Washington, D.C. Retrieved from: https://openknowledge.worldbank.org/handle/10986/14098

65. Guttenstein, E., El-Hage Scialabba, N., Loh, J. and Courville, S. (2010) *A conceptual framework for progressing towards sustainability in the agriculture and food sector.* FAO - ISEAL Alliance Discussion Paper Conceptual Framework for Progressing Towards Sustainability in the Agriculture & Food Sectors.

66. Harrison, M. (1996) *Agriculture and Economic Growth from the Eighteenth Century to the Present*. Edited by John A. Davis and Peter Mathias. Oxford: Blackwell, pp. 3, 4, 8, 11, 12, 192-208.

67. Hays, J. (2008) *Agriculture in the Soviet Era.* Retrieved from http://factsanddetails.com/russia/Economics_Business_Agriculture/sub9_7e/entry-5179.html#chapter-7

68. Henkel, H. and Stirrat, R.L. (2001) *Participation as spiritual duty: empowerment and secular subjection: The New Tyranny.* London and New York: Zed Books Ltd, p. 168.

69. Hickey, S., G Mohan (Ed.) (2004). *Towards Participation as Transformation: Critical Themes and Challenges for a Post-Tyranny Agenda. In Participation: From Tyranny to Transformation? Exploring New Approaches to Participation in Development*. London: Zed Books.

70. Holmberg, J. (Ed.) (1992) *Policies for a small planet: from the International Institute for Environment and Development.*

71. Horberry, J. (2014) Environmental and Social Safeguards. DFID, p. 3. Retrieved from: https://assets.publishing.service.gov.uk/media/57a089aae5274a27b20001dd/EoD_HDYr3_12_Dec2014_Clim_Env_Safeguards.pdf

77. Hough, L. (2011). *Social Capital in Georgia.* Caucasus Analytical Digest No. 31, p. 2.

Retrieved from http://www.css.ethz.ch/content/dam/ethz/special-interest/gess/cis/center-for-securities-studies/pdfs/CAD-31.pdf.

78. Human Rights Based Approach to Development Cooperation (2003) *The Human Rights Based Approach to Development Cooperation: Towards a Common Understanding Among UN Agencies.* UN HRBA Portal, p. 91. Retrieved from: https://hrbaportal.org/the-human-rights-based-approach-to-development-cooperation-towards-a-common-understanding-among-un-agencies

79. Human Rights Based Approached to Programming. *What does the principle of participation mean for programming?* UN HRBA Portal. Retrieved from: https://hrbaportal.org/faq/what-does-the-principle-of-participation-mean-for-programming

80. Hunt, A. (2015). *A Researcher's Guide to Power Analysis.* Retrieved from: http://rgs.usu.edu/irb/wpcontent/uploads/sites/12/2015/08/A_Researchers_Guide_to_Power_Analysis_USU.pdf. Accessed 25.08.2017.

81. IFAD (2007). *Gender profile.* Retrieved from: http://www.ifad.org/english/gender/cen/profiles/geo.htm

82. IFAD (2012). *Rural areas economic development program project performance assessment.* Report No. 2571-AM. Document of the International Fund for Agricultural Development, p. 33.

83. IFAD (2013). *Gender and Rural Development Brief. Europe and Central Asia.* Retrieved from http://www.ifad.org/gender/pub/gender_cen.pdf

84. International Association for Public Participation (2017) *Spectrum of Public Participation.* Retrieved from https://sustainingcommunity.wordpress.com/2017/02/14/spectrum-of-public-participation/ ; www.iap2.org

85. Isham, J. and S. Kähkönen (1999). *What determines the effectiveness of community-based water projects? Evidence from Central Java, Indonesia on Demand*

Responsiveness, Service Rules, and Social Capital", Social Capital Initiative Working Paper No. 14.

86. Khan, M.A. (2000) *Planning for and Monitoring of Project Sustainability: A Guideline on Concepts, Issues and Tools.* UNDP

87. Kuhnen, F. (1977) *The Concept of Integrated Rural Development.* Korean Journal of Agricultural Economics, Vol. 19, pp. 137-147.Retrieved from: http://www.professor-frithjof-kuhnen.de/publications-pdf.htm

88. Law of Georgia on Water (1997) Retrieved from https://matsne.gov.ge/ru/document/download/33448/19/en/pdf

89. Leblanc, M., Eiweida, A.R.A (2010) Towards Improved Rural Sanitation in Georgia. SWAT Briefing Note 1. Water Partnership Program, p.1. Retrieved from www.worldbank.org/swat

90. Lijphart, A. (1971). *Comparative Politics and the Comparative Method.* The American Political Science Review, 65 (3), pp. 682-693.

91. Lohm, H. (2007) *Javakheti after the Rose Revolution: Progress and Regress in the Pursuit of National Unity in Georgia*. ECMI Working Paper #38 April 2007. European Center for Minority Issues (ECMI), pp. 15-16. Retrieved from from: https://www.ecmi.de/uploads/tx_lfpubdb/working_paper_38.pdf

92. Lokshin, M; Yemtsov, R (2005) *Has rural infrastructure rehabilitation in Georgia helped the poor?* The World Bank economic review. - Vol. 19, no. 2 (May 2005), pp. 311-333. Retrieved from http://documents.worldbank.org/curated/en/624391468031590554/Has-rural-infrastructure-rehabilitation-in-Georgia-helped-the-poor

93. Maddux, J.L (1981) The Development Philosophy of Robert S. McNamara. World Bank. Retrieved from: http://documents.worldbank.org/curated/en/327751468330998907/pdf/581940WP0Devel101public10BOX353791B.pdf

94. Mansuri, G., Rao, V. (2013). *Localizing Development: Does Participation Work?* Washington, DC: World Bank, pp. 8, 60. Retrieved from: http://siteresources.worldbank.org/INTRES/Resources/469232-1321568702932/8273725-1352313091329/PRR_Localizing_Development_full.pdf

95. McGee, R., Levene J., Hughes A. (2002). *Assessing participation in poverty reduction strategy papers: a desk-based synthesis of experience in sub-Saharan Africa.* Research Report 52, Institute of Development Studies, pp. vii-x, 7-10.

96. McMurry, A. (2004) *Research: A commonsense approach.* Australia: Cengage Learning.

97. Millns, J. (2013) *Agriculture and Rural Cooperation Examples from Armenia, Georgia and Moldova.* FAO Regional Office for Europe and Central Asia. Policy Studies on Rural Transition No. 2013-2, pp. 12-14, 18, 21. Retrieved from http://www.fao.org/3/a-ar424e.pdf.

98. Mohan, Giles (2006). *Beyond participation: strategies for deeper empowerment. In: Cooke, Bill and Kothari, Uma eds. Participation: The New Tyranny?* London: Zed Books, pp. 153–167.

99. Morse, J. (1994). *Critical issues in qualitative research methods*. Thousand Oaks, Calif ; London: Sage, p. 104.

100. Mosse, D. (2001). *People's knowledge', participation and patronage: operations and representations in rural development. In: Cooke, Bill and Kothari, Uma eds. Participation: The New Tyranny?* London: Zed Books, pp. 16-35.

101. Narayan, D. (1995). *The Contribution of People's Participation: Evidence from 121 Rural water Supply Projects*. Environmentally Sustainable Development Occasional Paper Series No.1. Washington, D.C.: The World Bank Publications

102. Narayan, D., Patel, R., Schafft, K., Rademacher, A., Koch-Schulte, S.(1999) *Can anyone hear us? Voices From 47 Countries. Voices of the poor.* Volume I, Poverty Group, PREM, World Bank, p. 25.

103. National Statistical Service of the Republic of Armenia (2016). *Social Snapshot and Poverty in Armenia.* Retrieved from: http://www.armstat.am/file/doc/99498923.pdf

104. National Statistical Committee of the Republic of Armenia (2017) *Armenia Unemployment Rate 2008 – 2017.*Retrieved from: https://www.ceicdata.com/en/indicator/armenia/unemployment-rate

105. National Statistical Committee of the Republic of Armenia (2018) Retrieved from https://www.armstat.am/en/?nid=12&id=08001

106. National Statistics Office of Georgia (2017) *Georgia Unemployment Rate 1991 – 2017.*Retrieved from: https://www.ceicdata.com/en/indicator/georgia/unemployment-rate

107. Nelson, G., Pancer, S., Hayward, K., & Kelly, R. (2004). *Partnerships and Participation of Community Residents in Health Promotion and Prevention: Experiences of the Highfield Community Enrichment Project (Better Beginnings, Better Futures).* Journal of Health Psychology, 9(2), 213-227.

108. NORAD. Norwegian Agency for Development Cooperation (2013). *A Framework for Anal*ysing Participation in Development. Report 1, Oxford Policy Management, p. 5, 14. Retrieved from https://www.oecd.org/derec/norway/NORWAY_A_FrameworkforAnalysingParticipationDevelopment.pdf

109. Oakley, P. (1987) *Strengthening People's Participation in Rural Development.* Occasional Paper Series Number 1. Society for Participatory Research in Asia.

110. Oakley, P. (1991) *Projects with People: The Practice of Participation in Rural Development.* Geneva: International Labour Office, p. 31.

111. Oakley, P. (1995) *People's participation in development projects. A critical review of current theory and practice.* INTRAC, p. 1.

112. OC Media (2017) *Georgian Parliament to discuss minimum wage in 2018.* Retrieved from: http://oc-media.org/georgian-parliament-to-discuss-minimum-wage-in-2018/

113. OECD (2005) *The Paris Declaration on Aid Effectiveness.* P. 3. Retrieved from: http://www.oecd.org/dac/effectiveness/34428351.pdf

114. OECD (2005) *Building Competitive Regions: strategies and governance*. Retrieved from: http://sgpwe.izt.uam.mx/files/users/uami/sppc/complementarias/OCDE_Building_Competitive_Regions_Strategies_and_Governance.pdf

115. OECD (2016) *Georgia Unitary Country.* Euro-Asia. United Cities and Local Governments. Retrieved from: from: https://www.oecd.org/regional/regional-policy/profile-Georgia.pdf

116. OECD (2016) *Armenia Unitary Country.* Euro-Asia. United Cities and Local Governments. Retrieved from: https://www.oecd.org/regional/regional-policy/profile-Armenia.pdf

117. Office of the Geographer and Global Issues: Bureau of Intelligence and Research. US Department of State. *Map: The Caucasus Region.*

118. Paturyan, Y.J., Gevorgyan, V. (2014) *Armenian Civil Society after Twenty Years of Transition: Still Post-Communist?* American University of Armenia, Yerevan.

119. Pearce, E.K. (2011). *Poverty in the South Caucasus.* Caucasus Analytical Digest N 34. Georgetown University, Washington DC, p. 8.

120. Platteau, J. (2006). *Pitfalls of participatory development. In Participatory governance and the millennium development goals.* New York: United Nations, pp. 1-47.

121. Portes A. (1998). *Social capital: its origins and applications in modern sociology.* Annual Review of Sociology, 24, pp.1-24.

122. Portes A. (2000). *The two meanings of Social Capital.* Sociological Forum, 15(1), pp.1-12.

123. Pretty, J. (1995). *Participatory learning for sustainable agriculture.* World Development, 23 (8), pp. 1247–1263.

124. Putnam, R. D.(1993a). *The prosperous community.* The American Prospect, 4(13)

125. Putnam, R. D. (1993b). *What makes democracy work?* National Civic Review, 82(2)

126. Putnam, R. D. (1995). *Bowling alone: America's declining social capital*. Journal of democracy no. 6 (1), pp.65-78.

127. Putnam, R. D. (2000) Bowling Alone: *The Collapse and Revival of American Community* (New York: Simon and Schuster).

128. Rahnema, M. (1992) *Participation in W. Sachs* (ed), The Development Dictionary. London: Zed Books Ltd.

129. Rauch, T., Bartels, M., Engel. A. (2001) *Regional Rural Development: A regional response to rural poverty*, pp. i-1.

130. Reyes, G.E. (2001) *Four Main Theories of Development: Modernization, Dependency, World-System, and Globalization.* Nómadas. Revista Crítica de Ciencias Sociales y Jurídicas | 04 (2001.2) University of Pittsburgh, USA. Retrieved from: https://www.google.am/search?q=Four+Main+Theories+of+Development%3A+Modernization%2C+Dependency%2C+World-System%2C+and+Globalization&oq=Four+Main+Theories+of+Development%3A+Modernization%2C+Dependency%2C+World-System%2C+and+Globalization&aqs=chrome..69i57.605j0j4&sourceid=chrome&ie=UTF-8

131. Ruttan, V. W. (1984) *Integrated rural development programmes: A historical perspective.* World Development. Volume 12, Issue 4. Elsevier, pp. 393-401. Retrieved from:

https://www.sciencedirect.com/science/article/abs/pii/0305750X84900172?via%3Dihub

132. Sabini, L. (2016) *Project Management and Sustainability.* Brief for GSDR – 2016 Update. Newcastle University Business School. Retrieved from: https://sustainabledevelopment.un.org/content/documents/998449_Sabini_Project%20Management%20and%20Sustainability.pdf

133. Sadosh, W. R., Cook ,Th. D., Campbell, D. T. (2002) *Experimental and quasi-experimental designs for generalized causal inference.* Houghton Mifflin Company, p. 14.

134. SDC (2008) *A Human Rights-Based Approach to Water And Sanitation.* Briefing Paper. Swiss Agency for Development and Cooperation, p. 6. Retrieved from: https://www.eda.admin.ch/dam/deza/en/documents/themen/staats-wirtschaftsreformen/170500-human-rights-approach-water-sanitation_EN.pdf

135. Sen, A. (1981) *Poverty and Famines: An Essay on Entitlement and Deprivation.* Oxford: Clarendon Press, pp. 45; 154-155. Retrieved from: https://www.prismaweb.org/nl/wp-content/uploads/2017/06/Poverty-and-famines%E2%94%82Amartya-Sen%E2%94%821981.pdf

136. Sen A. (1993) *Capability and Well-Being*. In: Nussbaum, Sen The Quality of Life. Oxford: Clarendon Press, 1993, p. 30.

137. Service, R. (1997) *History of Twentieth Century Russia.* Harvard University Press; 1st edition.

138. Shilling, F,. Khan, A, Juricich, R., Fong. V. *(2013) Using Indicators to Measure Water Resources Sustainability in California.* World Environmental and Water Resources Congress 2013. Retrieved from: https://ascelibrary.org/doi/10.1061/9780784412947.268

139. Shinee (2012) *Advisory Assistance Programme for Environmental Protection in the Countries of Central and Eastern Europe, the Caucasus and Central Asia. Support to*

*the introduction of ecological management of water protection zones as a first step to the introduction of water safety plans in small scale wat*er supply systems in the Dusheti and Marneuli districts in Georgia. Final Report 2012. World Health Organization (WHO), Federal Environment Agency (Umweltbundesamt). Retrieved from www.umweltbundesamt.de/sites/default/files/medien/beratungshilfe/long/47-3-A-EN.pdf

140. Social Research Association (2003) *Ethical Guidelines*. Retrieved from http://the-sra.org.uk/wp-content/uploads/ethics03.pdf

141. Soviet Union: *Policy and Administration.*(1989) Retrieved from: http://www.country-data.com/cgi-bin/query/r-12746.html

142. TACIS: European Union's Technical Assistance to Commonwealth of Independent States (2003) *European Commission Inception Report, Joint River Management Programme (JRMP) of the Kura Basin, Annex 6: Georgia Country Report.* CITED in Vener, 2007.

143. Trading Economics (2015) Armenia - Agricultural land. Retrieved from: https://tradingeconomics.com/armenia/agricultural-irrigated-land-percent-of-total-agricultural-land-wb-data.html

144. Trading Economics (2016) *Georgia - Agricultural land* .Retrieved from: https://tradingeconomics.com/georgia/agricultural-land-percent-of-land-area-wb-data.html

145. UNDP (1993) *Human Development Report*. New York Oxford University Press, p. 21.

146. UNDP (2006) *Human Development Report 2006: Beyond scarcity: Power, poverty and the global water crisis.* UNDP, p.11. Retrieved from: http://hdr.undp.org/sites/default/files/reports/267/hdr06-complete.pdf

147. UNDP (2013) *Comparative Analysis of Agriculture in the South Caucasus.* UNDP, pp. 21, 36, 97. Retrieved from:

http://www.ge.undp.org/content/dam/georgia/docs/publications/GE_agriculture_2013.pdf.

148. UNDP (2018) *What does t mean to leave no one behind?* A UNDP discussion paper and framework for implementation, p.3. Retrieved from: http://www.undp.org/content/dam/undp/library/Sustainable%20Development/2030%20Agenda/Discussion_Paper_LNOB_EN_lres.pdf

149. UNDPCSD UN Division for Sustainable Development. (1995) *Work Program on Indicators of Sustainable Development*, Document UN/E/CN.17/1995/18. United Nations, New York

150. UNDSD Division for Sustainable Development. UN Department of Economic and Social Affairs (2000) *Indicators of Sustainable Development, Framework and Core Set. Draft of September 20th.* Department of Policy Co-ordination and Sustainable Development .United Nations. New York.

151. UNECOSOC United Nations Economic and Social Council (2001) *Implementing Agenda 21 - Report of the Secretary General.* UN Documents. Advance Unedited Text E/CN.17/2002/PC.2. New York

152. United Nations (1995) *Beijing Declaration and Platform for Action Beijing+5 Political Declaration and Outcome.* (P. 119) UN. Retrieved from: https://www.icsspe.org/system/files/Beijing%20Declaration%20and%20Platform%20for%20Action.pdf

153. United Nations (2015) Universal Declaration of Human Rights. Retrieved from: http://www.un.org/en/udhrbook/pdf/udhr_booklet_en_web.pdf

154. United Nations (2018) The Sustainable Development Goals Report 2018. UN, p. 7. Retrieved from: https://unstats.un.org/sdgs/files/report/2018/TheSustainableDevelopmentGoalsReport2018-EN.pdf

155. UN Resolutions (2015) Resolution adopted by the General Assembly on 25 September 2015. 70/1. *Transforming our world: the 2030 Agenda for Sustainable*

Development, pp. 1-19. Retrieved from http://www.un.org/ga/search/view_doc.asp?symbol=A/RES/70/1&Lang=E

156. UNWCED(1987) Report of the World Commission on Environment and Development: Our Common Future, p. 41. Retrieved from http://www.un-documents.net/our-common-future.pdf

157. Uphoff, N. (1992) *Local institutions and participation for sustainable development.* Gatekeeper Series No SA31, International Institute for Environment and Development, London, p. 11. Retrieved from: https://www.researchgate.net/profile/Norman_Uphoff/publication/242463814_Local_Institutions_And_Participation_For_Sustainable_Development/links/0f31753356a332b25a000000/Local-Institutions-And-Participation-For-Sustainable-Development.pdf?origin=publication_detail

158. USAID (2011) Social Capital in Georgia: *Final Report and Recommendations*. USAID Georgia. Retrieved from: http://www.crrc.ge/uploads/files/research_projects/CRRC_Social_Capital_Final_Report.pdf

159. US Department of State (2010) *Water for the Poor:* Fifth Annual Report to Congress on the Senator Paul Simon Water for the Poor Act. DIANE Publishing, pp. 55-56

160. Vener, B.B. (2007) *The Kura-Araks Basin: Obstacles and Common Objectives for an Integrated Water Resources Management Model among Armenia, Azerbaijan, and Georgia.* Retrieved from: https://digitalrepository.unm.edu/wr_sp/61

161. Verulava, T. (2018) *Pension System in the South Caucasus: Challenges and Reform Options* Bulletin of the Georgian National Academy Of Sciences, vol. 12, no. 1, 2018, p. 171. Retrieved from: http://science.org.ge/bnas/t12-n1/27_Verulava.pdf

162. Wanzer, D. (2017) *What is the developmental context? and why is it important to evaluation?* Retrieved from: https://danawanzer.com/what-is-the-developmental-context-and-why-is-it-important-to-evaluation/

163. WaterAid (2011) *Rights-based approaches to increasing access to water and sanitation.* WaterAid Discussion Paper, pp. 7, 19-20. Retrieved from: https://washmatters.wateraid.org/publications/rights-based-approaches-to-increasing-access-to-water-and-sanitation-0

164. Water Code of the Republic of Armenia (2002) Adopted by the National Assembly of the Republic of Armenia on June 4th, 2002. Retrieved from http://www.ielrc.org/content/e0218.pdf

165. WCED (1987) *Report of the World Commission on Environment and Development: Our Common Future.* Retrieved from: http://www.un-documents.net/our-common-future.pdf

166. Wheatley, J.(2004) *Obstacles Impeding the Regional Integration of the Javakheti Region of Georgia.* ECMI Working Paper # 22. European Centre for Minority Issues (ECMI)

167. White, S. C. (1996) *Depoliticizing development: the uses and abuses of participation.* Development in Practice, 6 (1), pp. 6–15.

168. Working group on sustainable development of rural areas (1999) GIZ, p.4.

169. World Bank (2005) *Shaping the Future of Water for Agriculture: A Sourcebook for Investment in Agricultural Water Management. Agriculture and Rural Development.* Washington, DC: World Bank. Retrieved from https://openknowledge.worldbank.org/handle/10986/7298, p. 47.

170. World Bank (2018). Georgia Country Economic Update: *Making the Recovery Sustainable.* World Bank, Washington, DC, p. 12. Retrieved from: https://openknowledge.worldbank.org/handle/10986/29389.

171. World Bank (2018). Armenia Country Economic Update: *Macroeconomics, Trade & Investment Global Practice.* World Bank Group, pp. 13-14. Retrieved from:

https://openknowledge.worldbank.org/bitstream/handle/10986/30115/128500-WP-PUBLIC-add-series-CEUARMENGWEB.pdf?sequence=1&isAllowed=y

172. World Commission on Environment and Development (1987) *Our Common Future.* Oxford University Press.

173. Woolcock, M. (1998). *Social capital and economic development: Toward a theoretical synthesis and policy framework.* Kluwer Academic Publishers, p. 153.

174. Woolcock, M., Narayan, D. (2000) *Social Capital: Implications for Development Theory, Research, and Policy.* To be published in Vol. 15(2), 2000. Final version submitted to the World Bank Research Observer.

175. Yerevan Scope. *Map of Gegharkunik Region, Armenia.* Retrieved from: http://www.yerevanscope.am/en/gegharkunik-marz

176. Yin, R. K. (2013) *Case Study Research: Design and Methods.* London: Sage.

Appendices

Appendix 1: Results of Quantitative Survey

Main findings

This section presents the results of the survey measuring the influence of community participation, in Infrastructure Rehabilitation Projects focused on Potable and Irrigation Water Supply, on project sustainability. The first part focuses on the level and forms of participation, while the second provides the empirical analysis of the effect of community participation on project sustainability and explores the relationship between income and participatory approaches.

Community Participation

This part describes the level and forms of Participation in the Community Infrastructure Rehabilitation Projects. The same questions have been asked to the respondents of both control and experimental groups, however all the questions related to participation, involvement and contribution to the projects received 'NO' responses in the control group, therefore *missing* is mentioned in the figures below instead of the *0 values*.

Involvement of respondents in Water Infrastructure Rehabilitation Projects

Table 31 presents data regarding number of respondents from experimental and control groups specified per country.

Table 31: Involvement of respondents in Water Infrastructure Rehabilitation Projects

	Those Involved (Experimental Group)	***Those Not Involved (Control Group)***
Armenia	51	52
Georgia	50	53
Total	101	105

Source: Author's construct

According to the Table 31, 51 respondents were involved in experimental group and 52 in control group from Armenia, 50 in experimental and 53 in control group from Georgia.

Participation

Table 32: Participation of respondents in the Water Infrastructure Rehabilitation Projects

Have you been involved in the project?	
	Percent
yes	48.8
no	51.2
Who suggested to you to get involved in the project accomplishment?	
	Percent
donor agency staff	80.0
municipality staff	20.0
How often have you been involved in the project?	
	Percent
1	66.7
2	21.7
3	11.7
Was the project implemented with your input?	
	Percent
yes	95.0
no	5.0
If yes, what kind of input did you have?	
	Percent
labor	86.2
cash	6.9
machinery/equipment	6.9
In which project activities were you involved? Please name	
	Percent
project planning activities via workshops, meetings, FGs	43.3
rehabilitation of water supply infrastructure	36.7
capacity building (trainings, seminars, discussions)	15.0
maintenance of the water supply system	5.0
Did you assist in the maintenance of the project output during the last 1-5 years?	
	Percent
never	80.0
not often	5.0
sometimes	15.0
Did you have more disadvantages or advantages from joining the project?	
	Percent
more benefits	98.3
more disadvantages	1.7

Source: Author's construct

Internal and External Factors

Table 33: Internal and External Factors

Has anyone asked you, which of your priority needs would you like to be addressed by the project?	
	Percent
yes	48.8
no	51.2

Who asked you, which of your priority needs would you like to be addressed by the project?	
	Percent
donor	83.3
municipality	16.7

Do you think the donor agency cared for the community and wanted to address one of the major needs?	
	Percent
yes	54.5
no	45.5

Have community groups been formed for the project accomplishment?	
	Percent
yes	48.8
no	51.2

Have you been regularly invited to project events?	
	Percent
yes	46.3
no	53.7

Has the community faced any of the below-mentioned problems after the project accomplishment?	
	Percent
drought	3.3
high rate of inflation	96.7

Do you consider that the project was important for the overall community?	
	Percent
yes	94.3
no	5.7

Source: Author's construct

Sustainability

Table 34: Sustainability

What is the quality of water now?	
	Percent
bad	23.6
sufficient	25.2
good	11.4
very good	39.8

What is the frequency of water supply?

	Percent
once in two days	20.3
once a day	35.8
more than once a day	43.9

Is the quantity of water that you receive adequate/enough for your consumption and needs?	
	Percent
yes	53.7
no	46.3

What is the level of your access to both potable and irrigation water?	
	Percent
insufficient	8.1
adequate	37.4
sufficient	14.6
very sufficient	39.8

Besides your own consumption, do you use water for…?	
	Percent
watering gardens	30.9
watering livestock	17.9
both for watering gardens and for livestock	49.6
small industrial use	1.6

Do all the people in the community have equal access to water?	
	Percent
yes	61.0
no	39.0

Has the quality improved?	
	Percent
yes	76.4
no	23.6

Do you know about stomach infections in the community caused by water before the system construction?	
	Percent
yes	88.6
no	11.4

Do you think the water supply system will function in 5 years?	
	Percent
yes	61.8
no	38.2

Source: Author's construct

Social Capital

Table 35: Social Capital

Who is accomplishing water system renovation?	
	Percent
community members	57.7
municipality	25.2
myself	10.6
nobody	6.5
Do you have many relatives in the community?	
	Percent
yes	78.9
no	21.1
Do you organise activities with your relatives and/or other community members?	
	Percent
yes	72.4
no	27.6
Has the local knowledge and practice been used in the project implementation?	
	Percent
yes	48.0
no	52.0
Do you consider …	
	Percent
... water supply system to be the ownership of community population?	54.5
... water supply system has more to do with local authorities or donors?	45.5
Do you consider yourself to be part of the community where you have your voice to raise for community issues?	
	Percent
yes	77.2
no	22.8
Do you trust the local population?	
	Percent
yes	75.6
no	24.4
Are more women participating in the project and/or other community activities now than before the project started?	
	Percent
yes	48.8
no	51.2

Source: Author's construct

Participation

Table 36: Disaggregation by Gender

	Male	**Female**
Who suggested to you to get involved in the project accomplishment?		
donor agency staff	83.7%	70.6%
municipality staff	16.3%	29.4%

How often have you been involved in the project?		
1	65.1%	70.6%
2	20.9%	23.5%
3	14.0%	5.9%
Was the project implemented with your input?		
yes	93.0%	100.0%
no	7.0%	0.0%
What kind of input did you have?		
labor	85.4%	88.2%
cash	7.3%	5.9%
machinery/equipement	7.3%	5.9%
In which project activities were you involved? Please name		
project planning activities via workshops, meetings, FGs	51.2%	23.5%
Rehabilitation of water supply infrastructure	30.2%	52.9%
capacity building (trainings, seminars, discussions)	14.0%	17.6%
maintenance of the water supply system	4.7%	5.9%
Did you assist in the maintenance of the project output during the last 1-5 years?		
never	76.7%	88.2%
not often	7.0%	0.0%
sometimes	16.3%	11.8%
Did you have more disadvantages or advantages from joining the project?		
more benefits	100.0%	94.1%
more diadvantages	0.0%	5.9%

Source: Author's construct

Internal and External Factors

Table 37: Internal and External Factors

	male	**female**
Has anyone asked you, which of your priority needs would you like to be addressed by the project?		
yes	55.0%	37.2%
no	45.0%	62.8%
Who asked you, which of your priority needs would you like to be addressed by the project?		
donor	83.7%	82.4%
municipality	16.3%	17.6%
Do you think the donor agency cared for the community and wanted to address one of the major needs?		
yes	58.8%	46.5%
no	41.3%	53.5%
Have community groups been formed for the project accomplishment?		
yes	53.8%	39.5%
no	46.3%	60.5%

Have you been regularly invited to project events?		
yes	51.3%	37.2%
no	48.8%	62.8%
Has the community faced any of the below-mentioned problems after the project accomplishment?		
drought	2.5%	4.7%
high rate of inflation	97.5%	95.3%
Do you consider that the project was important for the overall community?		
yes	96.3%	90.7%
no	3.8%	9.3%

Source: Author's construct

Sustainability

Table 38: Sustainability

	male	female
What is the quality of water now?		
bad	21.3%	27.9%
sufficient	22.5%	30.2%
good	11.3%	11.6%
very good	45.0%	30.2%
What is the frequency of water supply?		
once in two days	16.3%	27.9%
once a day	32.5%	41.9%
more than once a day	51.3%	30.2%
Is the quantity of water that you receive adequate/enough for your consumption and needs?		
yes	57.5%	46.5%
no	42.5%	53.5%
What is the level of your access to both potable and irrigation water?		
insufficient	6.3%	11.6%
adequate	33.8%	44.2%
sufficient	15.0%	14.0%
very sufficient	45.0%	30.2%
Do all the people in the community have equal access to water?		
yes	66.3%	51.2%
no	33.8%	48.8%
Has the quality improved?		
yes	82.5%	65.1%
no	17.5%	34.9%
Do you know about stomach infections in the community caused by water before the system construction?		
yes	90.0%	86.0%
no	10.0%	14.0%
Do you think the water supply system will function in 5 years?		
yes	70.0%	46.5%
no	30.0%	53.5%
Who is accomplishing water system renovation?		
community members	48.8%	74.4%
municipality	30.0%	16.3%
myself	13.8%	4.7%
nobody	7.5%	4.7%

Source: Author's construct

Social Capital

Table 39: Social Capital

	male	female
Do you have many relatives in the community?		
yes	77.5%	81.4%
no	22.5%	18.6%
Do you organize activities with your relatives and/.or other community members?		
yes	75.0%	67.4%
no	25.0%	32.6%
Has the local knowledge and practice been used in the project implementation?		
yes	52.5%	39.5%
no	47.5%	60.5%
Do you consider …		
… water supply system to be the ownership of community population?	63.8%	37.2%
… water supply system has more to do with local authorities or donors?	36.3%	62.8%
Do you consider yourself to be part of the community where you have your voice to raise for community issues?		
yes	78.8%	74.4%
no	21.3%	25.6%
Do you trust the local population?		
yes	76.3%	74.4%
no	23.8%	25.6%
Are more women participating in the project and/or other community activities now than before the project started?		
yes	53.8%	39.5%
no	46.3%	60.5%

Source: Author's construct

Project Involvement

Table 40: Project Involvement

	male	female
Have you been involved in the project?		
yes	55.4%	37.0%
no	44.6%	63.0%
In which project interventions were you involved?		
construction	67.7%	60.0%
meetings	6.5%	10.0%
trainings	16.1%	30.0%
workshops	9.7%	0.0%
How often have you been involved in the project?		
Every Day	54.8%	80.0%
Several times per week	29.0%	10.0%
Once a week	16.1%	10.0%

Source: Author's construct

Effect of community participation on household economic situation

This part describes the relationship between participation and household economic situation in the Community Infrastructure Rehabilitation Projects of the selected communities.

Table 41: Household Net Income in relation to the agricultural income and expenditures in AMD

Have you participated in the project?	*Farm-related income*	*Farm related expenses*	*Profit*
Yes	41.687.000	7.990.400	33.696.600
No	17.376.000	7.562.900	9.813.100

Source: Author's construct

Table 42: Annual income from agriculture and cattle-breeding related activities in AMD

Have you participated in the project?	**Cropping**	**Agro products, ex. Beekeeping**	**Sale of farm. products (eg. meat, wool)**	**Sale of self- produced dairy products**	**Total income from agriculture and cattle-breeding related activities**	**Other sources (e.g. salaries, pensions, social assistance, transfer from relatives abroad, etc.)**	**Total Income**
Yes	39.510.000	105.000	772.000	1.300.000	41.687.000	72.360.000	114.047.000
No	14.766.000	80.000	880.000	1.650.000	17.376.000	66.120.000	83.496.000

Source: Author's construct

Table 42 shows the income of the respondents in both control and experimental groups related to agriculture, cattle-breeding and other sources of income, such as salaries, pensions, social assistance, and other categories in AMD (Armenian Dram), as the major part of the respondents from Georgia also use AMD considering their geographical location near to the boarder of Armenia and their close trade and family links with Armenia.

According to the data, the income of the respondents from cropping in experimental group is 39.510.000 AMD, which is more than twice more than that in the control group - 14.766.000. The income from agro products is 105.000 in the experimental group and 80.000 in the control one. The income from sale of farm products, such as meat, wool is not considerably different in the two groups: 772. 000 and 880.000 in the experimental and control groups respectively. Income from sales of self-produced products is 1.300.000 in the experimental group and 1.650.000 in the control group. Thus the overall income from agriculture and cattle-breeding related activities is 41.687.000 for the respondents from experimental group and 17.376.000 for those from the control group. The other sources of income, such as salaries, pensions are 72.360.000 for the experimental group and 66.120.000 for the control group, while the overall income has been identified as 114.047.000 and 83.496.000 for the experimental and control groups respectively.

Table 43: Agriculture and cattle-breeding related expenses in AMD

Have you participated in the project?	***Farm-related***	***Agriculture, Including equipment***	***Livestock, e.g. vet. services***	***Total***
Yes	2. 122.400	3.120.500	2.747.500	7.990.400
No	2.330.400	3.060.500	2.172.000	7.562.900

Source: Author's construct

According to the Table 3, agriculture and cattle-breeding related expenses have not registered a considerable difference among the respondents of the control and experimental groups. Thus the farm expenses were 2.122.400 and 2.330.400 in the experimental and control groups respectively. The expenses related to agriculture were 3.120.500 for the experimental group, and 3.060.500 for the control group. The overall expenses were 7.990.400 and 7.562.900 in the experimental and control groups respectively.

Table 44: Non-Farm related Expenses in AMD

Have you participated in the project?	*Household-related*	*Health*	*Education*	*Social expenditures*	*Transport*	*Total*
Yes	5.283.000	4.196.000	3.341.000	1.559.000	660.100	15.039.100
No	4.967.000	3.998.000	3.080.000	967.000	559.100	13.571.100

Source: Author's construct

Non-farm related expenses have the following distribution: household-related expenses of the experimental group were 5.283.000, and that of control group - 4.967.000. Those for health were 4.196.000 and 3.998.000 for the experimental and control groups respectively. The expenditures related to education were 3.341.000 for experimental group and 3.080.000 control one. The social expenditures were 1.559.000 and 967.000 for the experimental and control groups respectively, while those for transport were 660.100 for experimental group and 559.100 for the control one. The overall expenses were 15.039.100 and 13.571.100 in the experimental and control groups respectively.

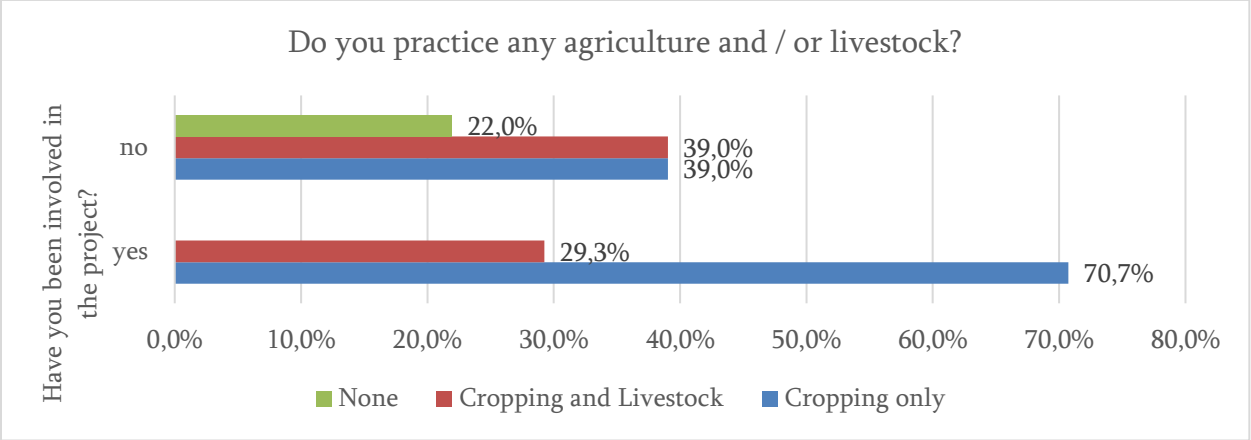
Table 45: Household Net Income in relation to the overall income and expenditures in AMD

Have you participated in the project?	*Overall Income*	*Non-farm related expenses*	*Farm related expenses*	*Profit*
Yes	114.047.000	15.039.100	7.990.400	91.017.500
No	83.496.000	13.571.100	7.562.900	62.362.000

Source: Author's construct

The profit for those from the experimental group is 91.017.500 AMD, and those from the control group - 62.362.000AMD.

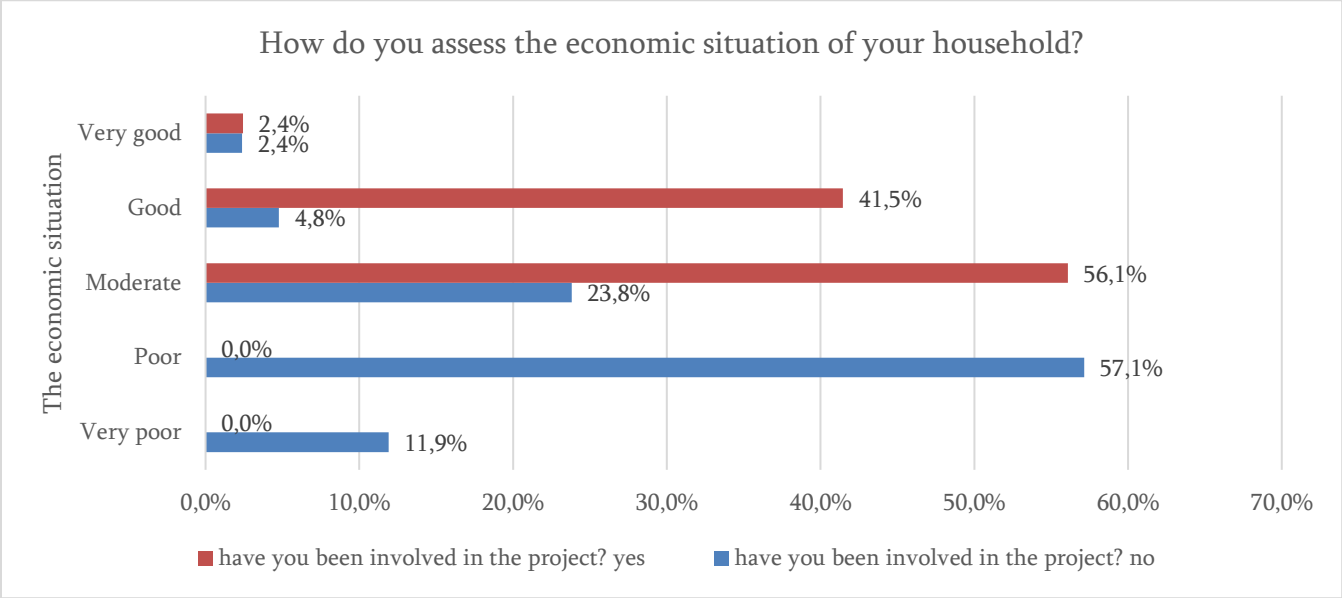
Figure 25: Do you practice agriculture and/or livestock?



Source: Author's construct

Figure 25 demonstrates the difference between the control and experimental groups in terms of being involved in agricultural activities and/or cattle breeding. As the figure shows, in the communities where the project was implemented with participation cropping practices are prevailing.

Figure 26: Self-assessment of economic situation of household



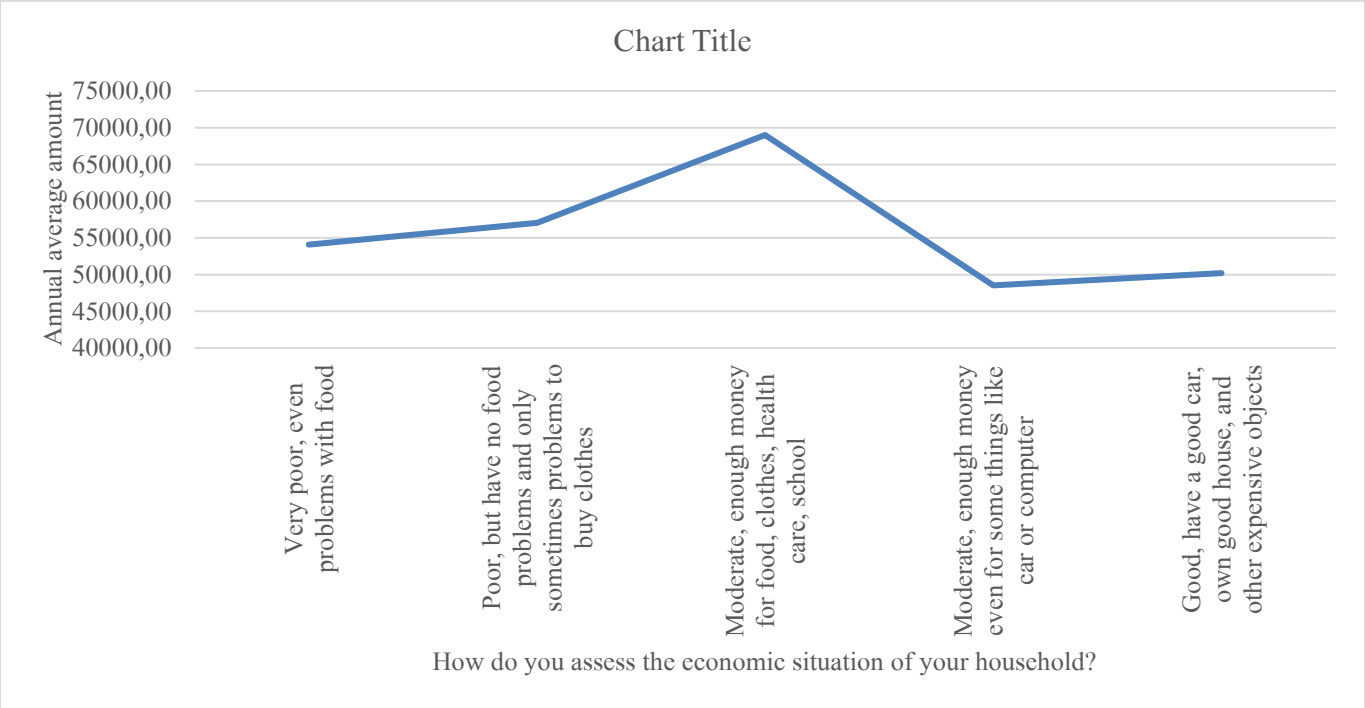
Source: Author's construct

Figure 26 shows the difference between the control and experimental groups regarding their assessment of the economic situation of the household. 56.1% of the respondents in the

experimental group assess their economic situation as moderate, and have enough money for food, clothes, health care, and school, while more than half of the respondents in the control group explain their economic situation as poor, although they do not have food problems, only sometimes problems to buy clothes.

The average relationship between participation and economic situation of the household is statistically significant *(Pearson Chi-Square= 45.958, Cramer's V=.744, p<.001)*. The test rejects the null hypothesis.

Figure 27: Comparison between perception and real economic situation of the households



Source: Author's construct

According to Figures 27, the p value is .644 and thus rejects the influence of the percepted economic situation to the real-life overall annual income. It shows us that people expressing themselves as those having moderate, enough money for food, clothes, health care have higher annual income than those having a car, and computer or those having a good car, etc. The researcher supposes that relatively rich people have avoided telling the actual income.

Table 46: Interrelation between Income Level and Occupation

	Annual income	
Occupation	Low Income	Middle Income
farming	41.2%	0.0%
trading	0.0%	18.5%
civil servant	0.0%	51.9%
privately employed	0.0%	24.1%
retired	58.8%	5.6%

Source: Author's construct

The levels of the income of the respondents grouped in low, middle and high income groups are interrelated with their occupation. 41.2% of farmers and 58.8% of retired are included in low-income group, while 18.5% traders, 51.9% civil servants, 24.1% privately employed and 5.6% retired respondents are involved in the middle-income group. According to Table 46, the p value of .000 is lower than .005, which implies that the relationship between occupation and the income level is significant (Pearson Chi-Square= 58.328, p<.001). The test suggests that occupation has an influence on annual income level.

Table 47: How many hours of water access are now available in your community?

ANOVA

	Sum of Squares	**df**	**Mean Square**	**F**	**Sig.**
Between Groups	5234.96	1	5234.96	1171.891	.000
Within Groups	540.52	121	4.467		
Total	5775.48	122			

Source: Author's construct

Table 47 shows possible link between participation and the number of hours of water access presently available in the community. The p value of .000 of the question is lower than .005. This implies that the average relationship between participation and the present access to water is statistically significant. The test rejects the null hypothesis.

Table 48: How often did the water supply system break during the last year?

	Sum of Squares	**df**	**Mean Square**	**F**	**Sig.**
Between Groups	204.462	1	204.462	397.301	.000
Within Groups	62.270	121	.515		
Total	266.732	122			

Source: Author's construct

The p value of .000 of the question is lower than .005. This implies that the average relationship between participation and the frequency of breaking of water system supply during the last year. The test rejects the null hypothesis.

Appendix 2: Household Socio-Economic Survey

Questionnaire Number: _____

Date: _____

Community _____

Name of Project_____

Part A: Data on demographics and education

Household Member 1

1. Age of Respondent _____

2. Sex of Respondent?

Male [01] Female [02]

3. Highest educational level?

Secondary School	[01]
College	[02]
Vocational Training	[03]
University Degree	[04]

4. Occupation

Farming	[01]
Trading	[02]
Civil Servant	[03]
Privately employed	[04]
Retired	[05]
Unemployed	[06]
Other	[07]

Household Member 2

1. Age of Respondent _____

2. Sex of Respondent?

Male [01] Female [02]

3. Highest educational level?

Secondary School [01]
College [02]
Vocational Training [03]
University Degree [04]

4. Occupation

Farming [01]
Trading [02]
Civil Servant [03]
Privately employed [04]
Retired [05]
Unemployed [06]
Other [07]

Household Member 3

1. Age of Respondent _____

2. Sex of Respondent?

Male [01] Female [02]

3. Highest educational level?

Secondary School [01]
College [02]
Vocational Training [03]
University Degree [04]

4. Occupation

Farming [01]
Trading [02]
Civil Servant [03]
Privately employed [04]
Retired [05]
Unemployed [06]
Other [07]

Household Member 4

1. Age of Respondent _____

2. Sex of Respondent?

Male [01] Female [02]

3. Highest educational level?

Secondary School [01]
College [02]
Vocational Training [03]
University Degree [04]

4. Occupation

Farming [01]
Trading [02]
Civil Servant [03]
Privately employed [04]
Retired [05]
Unemployed [06]
Other [07]

Household Member 5

1. Age of Respondent _____

2. Sex of Respondent?

Male [01] Female [02]

3. Highest educational level?

Secondary School [01]
College [02]
Vocational Training [03]
University Degree [04]

4. Occupation

Farming [01]
Trading [02]
Civil Servant [03]
Privately employed [04]
Retired [05]
Unemployed [06]
Other [07]

Part B: Project Involvement

5. Have you been involved in the Project Implementation?

1. Yes 2.No

5.1. If no, cont. with Part C.

6. How often have you been involved in the Project?

Every Day [01]

Several times per week [02]

Once a week [03]

Several times per month [04]

Once a month [05]

7. Was the Project implemented with your input?

1. Yes 2.No

7.1. If yes, what kind of input?

Labor [01]
Cash [02]
Machinery/equipment [03]
In-kind [04]
Other [05]

Part C: Farming Practices

8. Do you practice agriculture and / or livestock?

Cropping only [01] (cont. with Part D)

Cropping and Livestock [02]

Livestock only [03]

None [04] (cont. with Part E for those Participated and Part F for Not Participated)

9. In case you own livestock, what kind of livestock do you own?

Livestock	**No of**
[01] Pigs	
[02] Cattle	
[03] Chicken	

[04] Goats	
[05] Sheep	
[06] Donkeys	

10. In case you own cattle, please specify the quantity and inform on milk production

N	**L milk per year (average per cow)**	**Number of liters sold**	**Price per liter (in local currency)**
Total:			

11. What other products do you sell?

Name of the Product	**Average quantity per year**	**Average price per kg**	**Overall Income**
Meat [01]			
Wool [02]			
Self-produced dairy products [03]			
Other [04]			
Other [05]			
Total Income			

12. Do you produce dairy products for sale?

1. Yes 2.No

12.1. If, yes what and how much per year?

13. What is the average annual income from the sale of the self-produced dairy products?

14. Do you produce fodder?

1.Yes 2.No

14.1. In case not, how much do you spend annually on fodder procurement (in local currency)?

Part D: Cropping Practices

15. Do you practice cropping (incl. of vegetables, fruits, trees…)?

1. Yes 2.No

15.1. If no, why? Please explain. (cont. with Part E)

15.2. If yes, please provide more details.

N	**Crops/Tree**	**Annual Yield**	**Annual Quantity Sold**	**Annual Revenue in local currency**
1				
2				
3				
4				
5				
	Total			

16. What other agricultural products do you produce? (eg. Beekeeping)

N	**Product**	**Annual yield**	**Annual quantity sold**	**Annual Revenue**
1				
2				
3				
4				
5				
	Total:			

17. What kind of costs do you have related to your farm (farm inputs, taxes, veterinary costs, hired labor, pesticides, etc.)?

N	Expenditure	Annual Amount
1		
2		
3		
4		
5		
6		
7		
	Total:	

18. Are you able to provide food for your family from your own products?

1.Yes 2.No

PART G: ECONOMIC SITUATION

Household member 1

19. Do you have other sources of household income?

1. Yes 2.No

19.1 If Yes, what kind of sources (e.g. salaries, pensions, social assistance, transfer from relative from abroad, bank credits, microfinance donated animals, cloths, etc.)?

N	Types of Sources	Annual amount
1		
2		
3		
4		
5		
6		
7		
	Total	

Household member 2

20. Do you have other sources of household income?

1. Yes 2.No

20.1 If Yes, what kind of sources (e.g. salaries, pensions, social assistance, transfer from relative from abroad, bank credits, microfinance donated animals, cloths, etc.)?

N	Types of Sources	Annual amount
1		
2		
3		
4		
5		
6		
7		
	Total	

Household member 3

21. Do you have other sources of household income?

1. Yes 2.No

21.1 If yes, what kind of sources (e.g. salaries, pensions, social assistance, transfer from relative from abroad, bank credits, microfinance donated animals, cloths, etc.)?

N	Types of Sources	Annual amount
1		
2		
3		
4		
5		
6		
7		
	Total	

Household member 4

22. Do you have other sources of household income?

1. Yes 2.No

22.1 If yes, what kind of sources (e.g. salaries, pensions, social assistance, transfer from relative from abroad, bank credits, microfinance donated animals, cloths, etc.)?

N	Types of Sources	Annual amount
1		
2		
3		
4		
5		
6		
7		

	Total	

Household member 5

23 Do you have other sources of household income?

1. Yes 2.No

23.1 If yes, what kind of sources (e.g. salaries, pensions, social assistance, transfer from relative from abroad, bank credits, microfinance donated animals, cloths, etc.)?

N	Types of Sources	Annual amount
1		
2		
3		
4		
5		
6		
7		
	Total	

24. How much are your monthly expenditures?

N	Type of Expenditure	On Monthly Basis	On Annual Basis in local currency
1	Household expenditures (food, soap, phone, taxes) [1]		
2	Health [2]		
3	Education/School [3]		
4	Agriculture (incl. of staff, equipment) [4]		
5	Livestock (incl. of staff, veterinary services) [5]		
6	Social expenditures (gifts, weddings) [6]		
7	Transport [7]		
8	Rent: agricultural land [8]		
9	Rent: for house [9]		

10	Repayment of a credit [10]		
11	Other [11]		
	Total [12]		

25. How would you define the economic situation of your household?

Very poor, even problems with food [1]

Poor, but no problems with food [2]

Moderate, have money for food, clothes, health care, school [3]

Moderate, have money for things like car, computer [4]

Good, own a car, house, expensive furniture, etc. [5]

PART E: For Those Participated in Project Activities

26. Did you have more disadvantages or advantage from joining the project?

More benefits [01]

More disadvantages [02]

27. Did your income increase after joining the project?

1.Yes 2.No

Thank You Very Much!

Annex 3. Household Survey

Questionnaire Number: _____

Date: _____

Country, Community _____

Name of Project_____

Part 1. Data on demographics and education

1. Age of Respondent _____

2. Sex of Respondent

Male [01] Female [02]

3. Highest educational level?

Secondary School [01]
College (texnikum) [02]
Vocational Training [03]
University Degree [04]

4. Occupation

Farming [01]
Trading [02]
Civil Servant [03]
Privately employed [04]
Retired [05]
Unemployed [06]
Other [07]

5. Have you been involved in the '……' Project?

1. Yes 2.No (Cont. with Part 3).

Part 2. Participation

6. Who suggested to you to get involved in the project accomplishment?

Donor agency staff [01]
Municipality staff [02]
Water Users Association staff [03]
Other _____ [04]

7. How often have you been involved in the '….' Project?

8. Was the '……..' project implemented with your input?

1. Yes 2.No

8.1. If yes, what kind of input?

Labor [01]
Cash [02]
Machinery/equipment [03]
In-kind [04]
Other [05]

9. How many meetings did you attend?

_____

10. In which project activities were you involved? Please name those.

Project Planning Activities via Workshops, Meetings, FGs [01]
Rehabilitation of water supply infrastructure [02]
Capacity Building (Trainings, seminars, discussions) [03]
Maintenance of the water supply system [04]
Other [05]

11. Did you assist in the maintenance of the project output during the last 1-5 years?

1. Never 2. Not often 3. Sometimes 4.Often 5. Very often

12. Did you have more disadvantages or advantage from joining the project?

More benefits [01]

More disadvantages [02]

Part 3. Internal and External Factors

13. Has anyone asked you, which of your priority needs would you like to be addressed by the project?

1. Yes 2.No

13.1. If yes, who?

14. Do you think the donor agency cared for the community and wanted to address one of the major needs?

1. Yes 2.No

15. Have community groups been formed for the project accomplishment?

1. Yes 2.No

16. Have you been regularly invited to attend project events?

1. Yes 2.No

16.1. If yes, who invited you?

17. Has the community faced any of the below-mentioned problems after the project accomplishment?

Drought [01]

High rate of inflation [02]

Massive Migration [03]

Increased Poverty [04]

Political instability [05]

Military interventions [06]

Other [07]

18. Do you consider the project was important for the overall community?

1. Yes 2.No
2.

Part 3. Sustainability

19. What is the quality of water now?

1. Very Bad 2. Bad 3. Sufficient 4.Good 5. Very Good

20. What is the frequency of water supply?

1. Once a week 2. Once in three days 3. Once in two days 4. Once a day 5. More than once a day

21. How many hours of water access are now available in your community?

_____

22. Is the quantity of water that you receive adequate/enough for your consumption and needs?

1. Yes 2.No

23. How often did the water supply system break during the last year?

24. What is the level of your access to both potable and irrigation water?

1. Very Insufficient 2. Insufficient 3. Adequate 4.Sufficient 5. Very Sufficient

25. Besides own consumption, do you use the water for:

1) Watering gardens? [01]

2) Watering livestock? [02]

3) 1 & 2 together [03]

4) Small industrial uses? [04]

5) For other purpose [05]

26. Do all the people in community have equal access to water?

1. Yes 2.No

26.1. If no, approximately which percentage of population has access to water?

27. Has the water quality improved?

1. Yes 2.No

28. Do you know about stomach infections in the community caused by water before the system construction?

1. Yes 2.No

29. Do you know about stomach infections in the community caused by water after the system construction?

1. Yes 2.No

30. Do you think the water supply system will function in 5 years?

1. Yes 2.No

31. Who is accomplishing water system renovation?

Part 4 . Social Capital

32. Do you have many relatives in the community?

1. Yes 2.No

33. Do you organize activities with your relatives and/or other community members?

1. Yes 2.No

34. Has the local knowledge and practice been used in the project implementation?

1. Yes 2.No

35. Do you consider water supply system to be the ownership of community population?

1. Yes 2.No

36. Do you consider yourself to be a part of the community where you have your voice to raise for community issues?

2. Yes 2.No

37. Do you trust the local population?

1. Yes 2.No

38. Are more women participating in the project and/or other community activities now than before the project started?

1. Yes 2.No

Thank you!

Annex 4: Key Stakeholder Interview Guide

Name of Project……

Questionnaire Number ….. ….

Interview Date……

Community/Country ……..

Part 1. Data on demographics and education

1. Age of Respondent _____

2. Sex of Respondent

Male [01] Female [02]

3. Highest educational level?

Secondary School	[01]
College (texnikum)	[02]
Vocational Training	[03]
University Degree	[04]

4. Occupation

Farming	[01]
Trading	[02]
Civil Servant	[03]
Privately employed	[04]
Retired	[05]
Unemployed	[06]
Other	[07]

5. Have you been involved in the '……' Project?

1. Yes 2.No (cont. with Part 3)

Part 2. For those involved in the project

Participation

1. Can you tell me the history of the '……' water project
2. Can you tell me about your experience with the '……' water project?
3. How did you participate? Please describe you role in the project implementation.
4. Has anyone checked who and how often was involved in the project?
   If yes, who and how?
5. How was the project organized? Could you please describe?
6. What did you like and what you didn't like regarding project organization and implementation?
7. Do you have access to potable and irrigation water?
   If yes, how many hours per day?
8. Which % of the local population has benefited from the project?
9. How is the water supply system being maintained?
10. How many times was the water supply interrupted in the last year?
11. How is the participation of youth and adults in community life in general?
12. Are you satisfied with the project results? Why? Please describe.
13. What are the most positive changes resulting from project implementation in your community?
14. Do you feel ownership for the water supply system? Could you please explain?
15. Does community benefit from participating in the project? Please explain.
16. Does the project implementation benefit from people's participation? Why?
17. What are the main problems that hinder people from participating?
18. What worked well? Please describe.
19. What would you consider the major problems in the Project? Could you please explain?

Project Design

20. When did you hear first about the project?
21. How did the donor agency organize the local population to be involved in the project?
22. Was the local knowledge used for project design or implementation?
23. Did you have an idea about the project budget? Please describe
24. Have there been any capacity building activities, e.g. on community mobilization, development?
25. How could you express your satisfaction or dissatisfaction regarding the project organization and/or outputs?
26. Have you contributed to the problem identification, prioritization and project design?

If yes, how?

27. Was a baseline survey conducted in the community before the start of the project? If yes, were you involved in it? Do you find it useful? Why?
28. Do you know about any community groups that were formed in the framework of the project?
29. Have you or other members of the community been involved in project monitoring and/or evaluation? Please describe.
30. In your opinion, what should the donor agency or local municipality do to ensure people's involvement in community development initiatives?
31. What would you recommend to do differently next time? Please explain.

Part 3. For those not involved in the project

1. Can you tell me about your experience with the '……..' water project ?
2. Could you explain why were you not involved in the project?
3. How was the project organized? Could you please describe?
4. Who decided whether the people should be involved or not in the project?
5. How should the project be organized for you to join it?

32. What did you like and what you didn't like regarding project organization and implementation?

6. Do you have access to potable and irrigation water? If yes, how many hours per day?
7. Which % of the local population benefited from the project?
8. How is the water supply system being maintained?
9. How many times was the water supply interrupted in the last year?
10. How is the participation of youth and adults in community life in general?
11. Are you satisfied with the project results? Why? Please describe.
12. What are the most positive changes resulting from project implementation in your community?
13. Do you feel ownership for the water supply system? Please describe.
14. Would the community benefit from participating in the project? Why? Please explain.
15. Would the project implementation benefit from people's participation? Please describe how.
16. What were the main problems that hindered people from participating?
17. What worked well in the project? Please describe.
18. What would you consider the major problems in the Project? Please describe.

Project Design

19. What kind of information was accessible to you regarding the project?
20. Was the local knowledge used for project design or implementation?
21. Did you have an idea about the project budget? Please describe
22. Have there been any capacity building activities, e.g. on community mobilization, development?
23. How could you express your satisfaction or dissatisfaction regarding the project organization and/or outputs?
24. Have you contributed to the problem identification, prioritization and project design?
25. If yes, how?
26. Was a baseline survey conducted in the community before the start of the project?
27. Were you and/or other member of the community asked about priority needs?
28. Do you know about any community groups that were formed in the framework of the project?
29. In your opinion, what should the donor agency or local municipality do to ensure people's involvement in community development initiatives?
30. What would you recommend to do differently next time? Please explain.

Thank you!

Annex 5: Municipality Representative Interview Guide

Name of Project……

Questionnaire Number …..

Interview Date……..

Community/Country ……..

Part 1.

Data on demographics and education

1. Age of Respondent _____
2. Sex of Respondent

   Male [01] Female [02]

3. Position in the Municipality

4. Could you please tell me about the history of the '…….' Project?

5. What was your role in the '…….' Project, in what capacity were you involved?

6. Was the local population involved in the '……' project?

6.1.If yes, how? Please explain.

6.2.If no, why? Who accomplished the Project? Please explain.

7. Could you please describe your collaboration with the donor agency regarding the '…..' project organization and implementation?

8. How were the indicators for participation decided, e.g. who and how should participate?

9. Are the local people actively involved in community life?

9.1.If yes, how? Could you please bring an example?

9.2.If no, why?

10. How was water supply identified as the priority issue for the community?

11. Did the donor agency discuss with local municipality project design and organization prior to the project start?

12. What was the role of the local municipality in the project?

13. Does local municipality usually involve population in decision making process regarding the local priorities? Yes/ No If Yes, how?

14. How was your cooperation with the donor agency? Please describe.

15. What did you like and what you didn't like regarding project organization and implementation?

16. Are you satisfied with the project results? Why? Please describe.

17. What are the most positive changes resulting from project implementation in your community?

18. Do you feel ownership for the water supply system? Please describe.

19. Does community benefit from participating in the project? Please explain.

20. Does the project implementation benefit from people's participation? Why?

21. What are the main problems that hinder people from participating?

22. Were the local structures strengthened via the project?

23. Have community groups been created in the framework of the project?

24. Was the budget accessible to the local population? Please describe.

25. How is the system being maintained?

26. Were any trainings or other capacity building events accomplished in the framework of the project? Do you consider them important? Why? Please describe.

27. What worked well in the Project? Please describe.

28. What would you consider the major problems in the Project? Please describe.

29. What do consider the overall project's impact?

30. What are your recommendations for the future?

Thank you!

Annex 6: Excerpts from transcripts of the interviews and Focus Group Discussions conducted during the fieldwork in July-August, 2016

1. Excerpts from a transcript of a Focus Group Discussion with villagers

Vaghashen village, Armenia, August 05, 2016

Experimental Village - A 1

'I was informed from the donor organisation that there is an intention to do a water supply project in our region and they have to discuss the priorities in a community meeting, and see if there is a need for that and if the community members will be actively supporting the project implementation. Of course I said it is acceptable, and organised a community meeting next week, where the members of the donor organisation told the people about their ideas, and people mentioned the priority needs, among those water was the highest priority. Then people were asked if they will support the project implementation if our community is selected, and most of those present at the meeting confirmed that they will help. The funding agency asked for volunteers, and more than 15 people, both young and old, volunteered to become members of the active group. I was told that the reason behind was to have a group of active members who will be informed about everything and make decisions related to that project, and I was never against it, everything which is good for the community and our people, I support all those ideas.'- head of local administration, A1.41 (see Annex 7)

'During one of our meetings we were asked what can be the contribution of our people, so that the paying organisation can decide what they should spend money for. And many people of our group asked about the amount that can be invested in our community. We were told that the amount is not enough for the overall water supply system rehabilitation, and then we suggested that they spend their money only on the pipes and other construction material, while the local people will work on the rehabilitation and bring the necessary machinery. This worked very well, as they sent a very good specialist to our village who guided and supported us as necessary.' – Male Farmer, A1.6. (see Annex 7)

'For me water supply is the most important in our village and I am very happy that we and the funding organisation worked so well together and since the end of the project we have regularly both potable and irrigation water. I remember how we, women, were bringing food for our men, who including our sons worked day and night on the renovation. They did all the

works related to digging the soil and placing each pipe after another, connecting them and closing again with soil. We were scared that during the process of the renovation activities, pipes or some other construction materials can be stolen at night by someone from the neighboring communities, and then old men who were not busy in the construction works, said they will stay in that venue overnight and take care of security. Several of them did that, and I am really proud that all of us did something we could to make it happen.'-Female farmer, A1.11 (see Annex 7)

'A lot of trainings were organised for us, I remember we learned what is a community, how we can help as an active group to develop it, we learned also how to write projects and submit those to funding agencies. By the way, we submitted one project to the province administration and our project was considered to be the best, so we received a grant to renovate a hall for the youth. After that we wrote several projects and then one of the NGOs helped us to establish a Community-Based Organisation for our community, and until today we do a lot of things for our community; we organise cleaning of the community, some events, fundraising to take care of the old people, those families who face financial difficulties, we help the local authorities to develop their plans and other things.'- Male, teacher A1.33. (see Annex 7)

'The project was something fresh for all of us and the trainings helped us a lot as well. But I value mostly how the funding organisation could unite all of us to work day and night for one goal-water for all. After the project, we did regular minor renovations as there were not any big problems, as the pipes are of high quality which the funding organization could procure only while we contributed the rest materials and the labor force.'- Male, farmer, A 1.50 (see Annex 7)

2. Excerpts from a transcript of a key stakeholder interview with a member of the local council

Lomaturskh village, Georgia, July 14, 2016

Experimental Village - A 2

Question: Can you tell me about your experience with that specific water project?

'The project employees informed us that there should be a monitoring group, which should be responsible for the monitoring of the renovation activities and inform the population about all the steps. I volunteered to be in the group as I tried to improve our water supply for many reasons as it is in a drastic situation. We did not have any more money to buy always water, it was becoming impossible…

Question: Could you please bring an example of what you did as a member of the monitoring team and how many members did it have?

Response: If I remember correctly there were 7 members of the monitoring group: head of the kindergarten, I as a member of the local council, one of the teachers and the rest were farmers, although all of us are farmers as well. Actually we were quite active as a team and did a lot to contribute to what was done by the funding agency.'

Question: Do you remember one of your activities or that of your team members related to monitoring of the project?

Response: We knew that the potable has a very bad quality. We presented a claim to the village and province administration, that there are a number of insects coming from the tape and a number of dead snaked, dogs, cats, etc. are in the source, therefore the local population mainly buys water. The source is not closed according to the norms, the steel is mostly broken, moreover most pipes are in bad situation, and the main system is always broken, therefore the population gets infection and worms from the tape. The source is not locked, has no barriers and is accessible to anyone.

Most of the kindergarten children were ill due to the water. After the successful end of the project, until now we make a follow-up of all our problems, we know the mechanisms, now

we know our rights, and the water supply company and the local authorities are afraid of the knowledgeable citizens.

Question: How did you contribute to the project during its planning and implementation?

Response: We were not much involved in the planning of the project, I mean from which material should be the pipes, etc. Our role was more to learn about our rights related to water so that we can apply to different authorities and advocate for our rights, as the whole population cannot do it, there should be a group who can do it for the whole community. Also we had to seek some more money from other possible sources for the project.'

Question: Can you remember a case when you or your team members did something to fundraise money for that particular project?

Response: Well, our potable water system was 60 years old, there were some minor repair done which was not enough. There were a lot of crop losses due to the broken system. After we attended many trainings on advocacy, our rights to water, etc. we as members of the monitoring group made a pressure on our local authority, then local authority applied to the Government regarding the water problems with the water supply company. The percentage of chlorination was not correct, as the project did the analysis of the samples and we learned about the problems there as well. With the support of the employees of the funding agency, we made a claim to the water supply company that people suffer due to the poisoned water, as the water supply company does not provide everyday water therefore population has to use their springs.

Question: Thank you very much, what other changes did you observe as a result of the project besides the rehabilitation of the water supply system?

Response: The project was aspiring that something will change in our community. Although one agricultural season was omitted and this already had a negative impact on the loss as the project was delayed.

But the training of the project helped us a lot, as previously we did not know where and how to apply when there are problems regarding water supply. Now we know everything and are better informed. We inform our population and each resident is very active and requires accountability. They go to the regional authorities and advocate for their rights. We have

already given several news articles to the local new agency, about all the problems related to the water supply.

Question: Did you know about the problems related to the construction material? Did your group try to solve it with the donor agency?

Response: Yes, you mean that they wanted to build with azbest? Well, the donor agency had no fault, they contracted a construction company who wanted that and we struggled a lot against it. You know I think the main problem was that we never knew about the budget of the project, otherwise we could advise on the selection of the construction materials, as we live in a mountainous area, which is steep and high, and not everything is good for this area. However it is important that the part which was done with azbest was changed by our local authorities later on with the community budget and peoples' contributions; it is more important that most of the population has now access to water, and those who do not, we do a lot from what we learned from the trainings, to advocate for their rights, access and quality of our water. Nowadays the water supply companies and authorities cannot cheat us as before, as we even make claims to the court when necessary, and honestly all this is thanks to the project, their attitude to us, that we can change something in our lives, and the trainings. Although at first none of us had any trust and interest to participate in those trainings, but we saw how useful they are already the first days.

3. Excerpts from a transcript of a key stakeholder interview with a member of the local municipality

Astghadzor village, Armenia, August 10, 2016

Control Village - B1

Question: Could you please tell me about the history of the Project?

Response: We were used by the project staff, all our people were just used for the sake of the salaries of the project staff, so that the project staff can write that they did a great job and receive high salaries, all this was about that, nothing else. I was told for years that the water rehabilitation project should be implemented in our village, was told that we should contribute certain financial resources, thus I reserved that amount from the municipality budget and did

not touch it for 3 years, despite all the needs of the villagers, I thought water is the main priority and we should not touch that money, as nobody is sure if we can collect that amount the next year, as mainly people do not pay land tax, as they do not use their lands because there is no irrigation water.

Question: Could you please describe your collaboration with the donor agency regarding the project organization and implementation?

Response: The constructing specialist from their company came to the village and said the water line should be built with basalt, which in my view and that of our hydrologist was not necessary and relevant. Moreover it is very expensive to build a canal with basalt, we said it is not the right way, but nobody heard to us. Nobody told us what is the budget of the project and we did not see any technical plans for the rehabilitation works. So the whole population of the village did not know how much the budget of the project is, and none of us was aware how and what is going to be done.

Question: Did you contact the funding agency to inform them about the difficulties with the construction company?

Response: We were not informed till the end who was the funding agency. The implementation office is a local NGO which made a contract with the construction company. The engineer of the construction company wanted to build with basalt, which will be more expensive, while we have often landslides, so any construction could not be sustainable.

Question: Were you or anyone from the community members involved in the planning of the project?

Response: None of us was involved either in planning or implementation of the water rehabilitation project; the construction company is the one who decided everything. We never knew when the project will start, or whether it will start or not, there was no information regarding it. We never saw the construction plan developed by the engineer, not even sure if there was one.

I even informed the engineer that there is a big problem related to the overall quality of water, as the water supply company often mixes groundwater with the potable one, and there were

several people who got poisoned in the village, and the taste was different from the one before. However, nobody was interested.

Question: What do you remember from the project implementation?

Response: Well, they did construct a part of the canal from basalt, I am pretty sure the engineer did possess a basalt plant, therefore instead of replacing the network with good quality pipes, he decided to built quite a long canal from basalt, while the pipeline was done with very poor quality pipes, which got broken after some 6 months after the project, leaving the majority of the population again without water. We repair from time to time with the village budget, but it does not make a big change due to minor renovations and lack of finance.

Question: Did you express your dissatisfaction to the regional authorities, the local NGO which was in charge of the project?

Response: Of course, all of them know the real situation but nobody wants to accept and do something, and as a result all the people want to leave the village, as they cannot always buy potable water and carry irrigation water from the springs, it just does not make much sense.

4. Excerpts from a transcript of a key stakeholder interview with one of the villagers

Turskh village, Georgia, July 20, 2016

Control Village- B2

Question: Could you please tell me about the water situation in your village?

Response: Around 40% of the population have left the village due to the absence of water and the very poor socio-economic situation. The water absence is one of the main reasons why so many people have left the village. Potable water is the main problem for our community, the funding agency of the project you asked for has established the water network which is still there but unfortunately could not be used.

Question: Could you please explain why the water network could not be used?

It has never been used, since the source could not be used, which is located in village Bejano. Three years ago when the donor agency started the project, they announced that they will ensure the provision of 50% of the population with potable water. The established water network has never functioned as the villagers of the village Bejano where the source is located, have not agreed to allow the water come through the network, as otherwise there would not be enough water for both their community and the other ones to benefit from the water pipeline.

Question: Have you informed the funding agency about the absence of the potable water?

Response: Sure we did, thousand times, but they did not do anything. They did the opening on the first day after the construction, took a lot of pictures and disappeared. We never understood the truth because nobody ever asked us or invited to talk about it. We asked the local authorities where is the water promised for so many years, and he showed us that the water system had to be constructed in a different way and water should be taken from another source, which is up the mountain further to the village Bejano.

Question: Do you know why the initial plan was not fulfilled?

Response: Well, we were all informed that the problem was between the funding agency and the company which had to buy all the pipes and other materials and establish the water system. Since the water source preferred by our local authorities required more pipes than the one in village Bejano, the funding agency or the construction company on its own decided to do it in village Bejano, without informing them.

Question: Do you mean village Bejano and its authorities were not informed about the construction of a new pipeline in their village?

Response: Well, they knew that something is being constructed in the mountains but had no idea how much water it will take from them and on which conditions; there had been no discussions about all this.

Question: I see, and what happened afterwards?

There was an opening, the funding agency and the construction one made a lot of photos and came never back afterwards. The water was supplied through the system only the first day, while the second day the village E decided there is not enough water and never allowed water expended again from that source. We had a big problem with the population of village Bejano, there were many unpleasant moments which I would not like to talk about.

Question: Yes, sure. Has the situation changed since then?

Response: The project started 3 years ago, and after 1.5 years our local authorities managed to receive from the central government certain financial resources to extend the constructed pipeline to another source, the one which was planned in the project but never accomplished. After the specialists started to examine everything; they found out that 3 km pipes from the

pipeline were missing. It became clear that someone has stolen them and nobody knew about it, as there was no water coming though the pipeline anyway. We never learned who had stolen that.

Question: Did the funding agency contact you or any of the villagers you know before, during or after the project?

Response: No, they had only one meeting with our local authorities before the start, and we saw them for the first time as they did the opening of the constructed pipeline. We wrote a number of letters however got no answer. Our head of the local administration is afraid that if we make all this public, then no other funding agencies would come and work here. Until now it is not clear whether that was the purpose of the funding agency or they left everything on the contractor who decided to establish the pipeline without considering any opinions, and maybe established that way, since the pipeline from that source was shorter than from the other safer sources.

Question: What happened to the funding which was allocated from the central government?

Response: We have worked on the extended pipeline, all was done by our villagers, and only pipelines were bought from the state budget. Now we wait to see how to solve the problem for the missing 3 km pipes, which is again a lot of money which we do not have.

Question: How do you get water for your daily use?

We collect rainwater and buy water once per 2 days. There are some of the poor villagers who do not have money to buy water, make use mainly of the rain water. It means if we did not have yesterday rain water, most of the people would not have access to water. We collect mainly rainwater, which we use both for irrigation and our use at home. Sometimes we get access to water once per two days via another network, but it does not properly function in winter and summer time.

Question: What about the funding agency, they never came to see the situation? Or the results of their work?

Response: No, they never came again

Question: Were you invited to any meetings organized by the funding agency?

Response: No, never although I would be happy to, in the end this is our village, our home and we know our main problems. The result of their work caused all our problems and discussions with the local population of village Bejano, with whom prior to the project we always had a good relationship.

Question: Were there any other projects or initiatives where local population was involved?

Response: We were never involved, or asked what our need is. I think the funding agencies know for sure what they are going to do, before even they come to us. This is why we do not believe in anyone.

Question: I finished my questions, do you have any questions or comments to me?

Response: You should take photos of the people and the situation here to show the world in which conditions we live.

Thank you very much for your responses and time.

Annex 7: List of Respondents in the four selected communities A1, A2, B1, B2

Village A1		Village A2	
Code/Number	**Occupation**	**Code/Number**	**Occupation**
A1.1.	Farmer	A2.1.	Member of the local council
A1.2.	School Director	A2.2.	Farmer
A1.3.	Unemployed	A2.3.	Kindergarten employee
A1.4.	Unemployed	A2.4.	Farmer
A1.5.	Unemployed	A2.5.	Farmer
A1.6.	Farmer	A2.6.	Retired
A1.7.	Farmer	A2.7.	Farmer
A1.8.	Student	A2.8.	Farmer
A 1.9.	Entrepreneur	A 2.9.	Unemployed
A 1.10.	Member of the local council	A 2.10.	Unemployed
A1.11.	Farmer	A2.11.	Farmer
A1.12	Teacher	A2.12	Retired
A1.13	Farmer	A2.13	Seller
A1.14	Retired	A2.14	Farmer
A1.15	Cashier at the local administration	A2.15	Entrepreneur
A1.16	Farmer	A2.16	Farmer
A1.17	Unemployed	A2.17	Unemployed
A1.18	Farmer	A2.18	Seller
A1.19	Unemployed	A2.19	Farmer
A1.20	Unemployed	A2.20	Farmer
A1.21.	Unemployed	A2.21.	Employee of local administration
A1.22.	Retired	A2.22.	Unemployed
A1.23.	Farmer	A2.23.	Retired
A1.24.	Farmer	A2.24.	Farmer
A1.25.	Teacher	A2.25.	Farmer
A1.26.	Agricultural specialist at the local administration	A2.26.	Employee at local administration
A1.27.	Soldier	A2.27.	Farmer
A1.28.	Unemployed	A2.28.	Unemployed
A1.29.	Retired	A2.29.	Farmer
A1.30	Unemployed	A2.30	Unemployed
A1.31.	Farmer	A2.31.	Unemployed
A1.32.	Farmer	A2.32.	Retired
A1.33.	Teacher	A2.33.	Farmer
A1.34.	Cleaner at the local administration	A2.34.	Farmer

A1.35.	Farmer	A2.35.	Teacher
A1.36.	Farmer	A2.36.	Farmer
A1.37.	Unemployed	A2.37.	Retired
A1.38.	Retired	A2.38.	Unemployed
A 1.39.	Unemployed	A 2.39.	Cashier
A 1.40.	Farmer	A 2.40.	Farmer
A1.41.	Employee at local administration	A2.41.	Unemployed
A1.42.	Farmer	A2.42.	Farmer
A1.43.	Farmer	A2.43.	Unemployed
A1.44.	Unemployed	A2.44.	Retired
A1.45.	Cashier	A2.45.	Farmer
A1.46.	Farmer	A2.46.	Farmer
A1.47.	Farmer	A2.47.	Unemployed
A1.48.	Farmer	A2.48.	Farmer
A 1.49.	Unemployed	A 2.49.	Unemployed
A 1.50.	Farmer	A 2.50.	Student
A1.51	Farmer		

Village B1		**Village B2**	
Code/Number	**Occupation**	**Code/Number**	**Occupation**
B1.1.	Cashier	B2.1.	Retired
B1.2.	Retired	B2.2.	Retired
B1.3.	Retired	B2.3.	Employee at Water User Association
B1.4.	Farmer	B2.4.	Farmer
B1.5.	Farmer	B2.5.	Assistant of the head of local administration
B1.6.	Farmer	B2.6.	Seller
B1.7.	Keeper	B2.7.	Unemployed
B1.8.	Seller	B2.8.	Unemployed
B 1.9.	Unemployed	B 2.9.	Farmer
B 1.10.	Hydrologist at local administration	B 2.10.	Unemployed
B1.11.	Unemployed	B2.11.	Cashier
B1.12	Entrepreneur	B2.12	Teacher
B1.13	Seller	B2.13	Keeper
B1.14	Student	B2.14	Employee of Regional Administration
B1.15	Entrepreneur	B2.15	Seller
B1.16	Seller	B2.16	Farmer
B1.17	Farmer	B2.17	Unemployed
B1.18	Unemployed	B2.18	Student
B1.19	Entrepreneur	B2.19	Retired
B1.20	Teacher	B2.20	Unemployed
B1.21.	Farmer	B2.21.	Farmer
B1.22.	Retired	B2.22.	Farmer

B1.23.	Unemployed	B2.23.	Employee at local administration
B1.24.	Cashier	B2.24.	Unemployed
B1.25.	Farmer	B2.25.	Unemployed
B1.26.	Retired	B2.26.	Farmer
B1.27.	Unemployed	B2.27.	Farmer
B1.28.	Cashier	B2.28.	Retired
B1.29.	Farmer	B2.29.	Seller
B1.30	Teacher	B2.30	Retired
B1.31.	Employee of Water Association	B2.31.	Farmer
B1.32.	Retired	B2.32.	Farmer
B1.33.	Farmer	B2.33.	Employee at local administration
B1.34.	Farmer	B2.34.	Farmer
B1.35.	Retired	B2.35.	Unemployed
B1.36.	Farmer	B2.36.	Farmer
B1.37.	Unemployed	B2.37.	Entrepreneur
B1.38.	Retired	B2.38.	Entrepreneur
B 1.39.	Retired	B 2.39.	Keeper
B 1.40.	Entrepreneur	B 2.40.	Farmer
B1.41.	Car repair specialist	B2.41.	Farmer
B1.42.	Teacher at kindergarten	B2.42.	Unemployed
B1.43.	Farmer	B2.43.	Cashier
B1.44.	Retired	B2.44.	Retired
B1.45.	Farmer	B2.45.	Entrepreneur
B1.46.	Employee at local municipality	B2.46.	Seller
B1.47.	Seller	B2.47.	Teacher
B1.48.	Construction Specialist	B2.48.	Farmer
B 1.49.	Farmer	B2.49.	Retired
B 1.50.	Farmer	B2.50.	Farmer
B1.51	Retired	B2.51	Farmer
B1.52	Farmer	B2.52	Farmer
		B2.53	Retired

Source: Own construct from fieldwork, 2015

Note: The quantitative data was collected in the two villages in Armenia in July 2015 and in the two villages in Georgia in August 2015.

The qualitative interviews and FGDs were conducted in the two villages in Georgia in July 2016 and in the two villages in Armenia in August 2016.

Annex 8: Lists of Interviews

Village - A1 Vaghashen village, Armenia

1. Municipality Representative Interviews, August 04, 2016

1. A 1.10 – Member of the local council – interview conducted 10.00-11:00

2. A1.26 – Agricultural Specialist at the local administration- 11:30-13:30

3. A1.15- Cashier at the local administration - interview conducted -15:00-15:40

4. A1.41-Employee at local administration – Interview conducted 16:00-17:30

2. Focus Group Discussion with villagers held on August 05, 2016 from 13.00-15:00

1. A1.41- Employee at local administration
2. A1.6.- Farmer
3. A 1.50- Farmer
4. A1.49 – Unemployed
5. A1.11- Farmer
6. A1.33- Teacher
7. A1.32-Farmer
8. A1.27-Soldier
9. A1.34-Cleaner at the local administration
10. A1.36-Farmer
11. A1.44-Unemployed
12. A1.46 –Farmer

3. Key Stakeholder Interviews, August 07, 2016

The average duration of each interview was one hour.

Interviews were conducted in the morning:

1. A1.1. – Farmer
2. A1.25 -Teacher

3. A1.2. – School Director

Interviews were conducted n the afternoon:

4. A1.9 – Entrepreneur
5. A1.14-Retired
6. A1.22 – Retired

4. Key Stakeholder Interviews, August 08 , 2016

The average duration of each interview was one hour

Interviews were conducted in the morning:

1. A.1.21-Unemployed
2. A1.16-Farmer
3. A1.3- Unemployed

Interviews were conducted in the afternoon:

4. A1.18-Farmer
5. A1.23-Farmer
6. A1.35-Farmer

5. Key Stakeholder Interviews, August 09 , 2016

The average duration of each interview was one hour

Interviews were conducted in the morning

1. A1.40-Farmer
2. A1.47-Farmer
3. A1.28-Farmer

Interviews were conducted in the afternoon

4. A1.42-Farmer
5. A1.45-Cashier
6. A1.51-Farmer

6. Key Stakeholder Interviews, August 13 , 2016

The average duration of each interview was one hour

Interviews were conducted in the morning

1. A1.24-Farmer
2. A1.31-Farmer

Village –B1 Astghadzor village, Armenia, August 10, 2016

1. **Municipality Representative Interviews**

1. B1.46-Employee at local municipality - interview conducted 10.00-11:00
2. B1.48-Construction specialist – 11:00-12:00
3. B1.10 – Hydrologist at local administration – 12:30-14:30
4. B1.1-Cashier at the local administration – 16:00-16:40

2. **Focus Group Discussion with villagers held from 11.00-13:30 on August 15, 2016**

1. B1.2.-Retired
2. B1.3.-Retired
3. B1.9.-Unemployed
4. B1.11-Unemployed
5. B1.17-Farmer
6. B1.18- Unemployed

7. B1.22-Retired
8. B1.23-Unemployed
9. B1.20-Teacher
10. B1.21-Farmer
11. B1.25-Farmer
12. B1.30-Teacher
13. B1.29-Farmer
14. B1.33-Farmer
15. B1.34-Farmer

3. Key Stakeholder Interviews, August 16, 2016

The average duration of each interview was one hour

Interviews were conducted in the morning:

1. B1.31-Employee of Water Association
2. B1.40-Enterpreneur
3. B1.42-Teacher at kindergarten

Interviews were conducted in the afternoon:

4. B1.49-Farmer
5. B1.50 -Farmer
6. B1.52 -Farmer

4. Key Stakeholder Interviews, August 17, 2016

The average duration of each interview was one hour.

Interviews were conducted in the morning

1. B1.4.-Farmer
2. B1.5. -Farmer
3. B1.6. –Farmer

Interviews were conducted in the afternoon:

4. B1.7.-Keeper
5. B1.8.-Seller
6. B1.13. –Seller

5. Key Stakeholder Interviews, August 18, 2016

The average duration of each interview was one hour

Interviews were conducted in the morning:

1. B1.12-Enterpreneur
2. B1.15-Entepreneur
3. B1.16-Seller

Interviews were conducted in the afternoon:

4. B1.24-Cashier
5. B1.22-Retired
6. B1.23-Unemployed

6. Key Stakeholder Interviews, August 20 , 2016

The average duration of each interview was one hour

Interviews were conducted in the morning:

1. B1.41-Car repair specialist
2. B1.43-Farmer

Village –A2 Lomaturskh village, Georgia

1. Municipality Representative Interviews on July 10, 2016

1. A2.21-Employee of local administration interview conducted 10.00-11:30
2. A2.26- Employee of local administration 12:00-13:00

3. Key Stakeholder Interviews, July 11, 2016

The average duration of each interview was one hour

Interviews were conducted in the morning:

1. A.2.28-Unemployed
2. A2.30-Unemployed
3. A2.31-Unemployed

Interviews were conducted in the afternoon:

4. A2.32- Retired
5. A.2.13-Seller
6. A2.14-Farmer

4. Key Stakeholder Interviews, July 12, 2016

The average duration of each interview was one hour

Interviews were conducted in the morning:

1. A2.9.-Unemployed
2. A2.10-Unemployed
3. A2.41-Unemployed

Interviews were conducted in the afternoon:

4. A2.40-Farmer
5. A2.43-Unemployed
6. A2.39-Cashier

4. Focus Group Discussion with villagers held from 10:00-12:30 on July 13, 2016

1. A2.45-Farmer
2. A2.44-Retired
3. A2.46 – Farmer
4. A2.50-Student
5. A2.49-Unemployed
6. A2.47-Unemployed
7. A2.48-Farmer
8. A2.42-Farmer
9. A2.43- Unemployed
10. A2.37-Retired
11. A2.36-Farmer
12. A2.35-Teacher
13. A.2.33-Farmer
14. A2.34-Farmer
15. A2.38- Unemployed

5. Key Stakeholder Interviews, July 14, 2016

The average duration of each interview was one hour

Interviews were conducted in the morning:

1. A2.1-Member of the Local Council
2. A2.2-Farmer
3. A2.1-Enterpreneur

Interviews were conducted in the afternoon:

4. A2.17-Unemployed
5. A2.22-Unemployed
6. A2.23- Retired

6. Key Stakeholder Interviews, July 15, 2016

The average duration of each interview was one hour

Interviews were conducted in the morning:

1. A2.4-Farmer
2. A2.5-Farmer

Village B2-Turskh village, Georgia

1. Municipality Representative Interviews on July 19, 2016

1. B2.5-Assistant of the head of the local administration
2. B2.14 -Employee of Regional Administration
3. B2.23-Employee at local administration
4. B2.33 - Employee at local administration

2. Key Stakeholder Interviews, July 20, 2016

The average duration of each interview was one hour

Interviews were conducted in the morning:

1. B2.1-Retired
2. B2.46-Seller
3. B2.4-Farmer

Interviews were conducted in the afternoon:

4. B2.6-Seller
5. B2.11-Cashier
6. B2.17-Unemployed

3. Focus Group Discussion with villagers held from 11:00-13:30 on July 21, 2016

1. B2.15-Seller
2. B2.24-Unemployed
3. B.2.21-Farmer
4. B2.22-Farmer
5. B2.24- Unemployed
6. B2.25- Unemployed

7. B2.26-Farmer
8. B2.41-Farmer
9. B2.40-Farmer
10. B2.50-Farmer
11. B2.49-Retired
12. B2.53-Retired
13. B2.44-Retired
14. B2.42- Unemployed
15. B2.17- Unemployed
16. B2.18-Student

4. Key Stakeholder Interviews, July 22, 2016

The average duration of each interview was one hour

Interviews were conducted in the morning:

1. B2.19-Retired
2. B2.20-Unemployed
3. B2.28-Retired

Interviews were conducted in the afternoon:

4. B2.30-Retired
5. B2.35-Unemployed
6. B2.46-Seller

5. Key Stakeholder Interviews, July 23, 2016

The average duration of each interview was one hour.

Interviews were conducted in the morning:

1. B2.39-Keeper
2. B2.29-Seller
3. B2.2-Retired

Interviews were conducted in the afternoon:

4. B2.43-Cashier
5. B2.31-Farmer
6. B2.45-Enterpreneur

6. Key Stakeholder Interviews, July 24, 2016

The average duration of each interview was one hour.

Interviews were conducted in the morning

1. B2.3-Employee at Water User Association
2. B2.7-Unemployed

Thank you very much for your time.