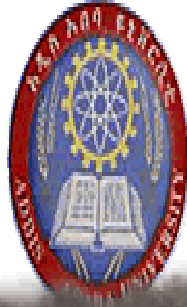


Addis Ababa
University
(Since 1950)



COLLEGE OF DEVELOPMENT STUDIES

CENTER FOR ENVIRONMENT AND DEVELOPMENT

**INSTITUTIONAL COLLABORATION IN DISASTER RISK
MANAGEMENT IN ETHIOPIA SINCE 2015: PRACTICES,
CHALLENGES AND OPPORTUNITIES**

BY

JEMBERU MOLA GIDYELEW

JUNE 2019

ADDIS ABABA, ETHIOPIA

Addis Ababa
University

(Since 1950)



COLLEGE OF DEVELOPMENT STUDIES

CENTER FOR ENVIRONMENT AND DEVELOPMENT

**INSTITUTIONAL COLLABORATION IN DISASTER RISK
MANAGEMENT IN ETHIOPIA SINCE 2105: PRACTICES,
CHALLENGES AND OPPORTUNITIES**

BY

JEMBEERU MOLA GIDYELEW

ADVISOR

MESAY MULUGETA (PhD)

MA THESIS SUBMITTED TO

THE CENTER OF ENVIRONMENT AND DEVELOPMENT, COLLEGE OF
DEVELOPMENT STUDIES, ADDIS ABABA UNIVERSITY IN PARTIAL
FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF

MASTER OF ARTS IN

ENVIRONMENT AND SUSTAINABLE DEVELOPMENT

JUNE 2019

ADDIS ABABA, ETHIOPIA

ADDIS ABABA UNIVERSITY
COLLEGE OF DEVELOPMENT STUDIES
CENTER FOR ENVIRONMENT AND DEVELOPMENT

Declaration

This thesis is my original work and has not been presented for MA/MSC degree in any other University and that all the sources and materials used for the thesis have been properly acknowledged.

Declared By: Jemberu Mola

Signature: _____

Date: _____

Place: Addis Ababa University College of Development Studies, Center for Environment and Development

Approval Sheet

ADDIS ABABA UNIVERSITY

COLLEGE OF DEVELOPMENT STUDIES

CENTER FOR ENVIRONMENT AND DEVELOPMENT

As supervisor of the thesis, we certify that we have read and evaluated the thesis prepared by **Jemberu Mola Gidyelew** entitled “*Institutional Collaboration in Disaster Risk Management in Ethiopia since 2015: Practices, Challenges and Opportunities*” and recommend for Open Defense as fulfilling the requirement for the degree of **Master of Arts Degree in Environment and Sustainable Development**.

Messay Mulugeta

Name, Advisor

Signature and Date

As members of the Examining Board of the Thesis Open Defense, we certify that we have read and evaluated the thesis prepared by **Jemberu Mola Gidyelew** entitled “*Institutional Collaboration in Disaster Risk Management in Ethiopia since 2015: Practices, Challenges and Opportunities*” and recommend that it is acceptable as a thesis required for the degree of Master of Arts Degree in Environment and Sustainable Development.

Name, Chairman

Signature and Date

Ermias Teferi

Name, Internal Examiner

Signature and Date

Temesgen Tilahun

Name, External Examiner

Signature and Date

Final approval and acceptance of this thesis is contingent upon the candidates submission of the final copy of the thesis, incorporating all the comments by Examining Board, to the Council of Graduate Studies (CGS) through the Center Academic Committee (CAC) of the center.

Chairperson of the Centre or Graduate Program Coordinator

Acknowledgements

First and foremost, my greatest expression of thanks goes to the Almighty God and His Mother for giving me the strength and energy throughout my research process.

Secondly, my sincerest respect goes to my research advisor, Dr. Messay Mulugeta, for his untiring encouragement and critical comments right from the initial to the final of this particular thesis. I am really grateful to Dr. Messay for his ever friendly approach throughout my research work. He is not only raised my interest in this particular work but also in my academic life for the future. The moral and emotional support of him is memorable forever. I have learnt many things from you that seems impossible to persons but to be likely. You are not only an academic doctor but also a life skill teacher.

I am grateful to Dr. Tesfaye Zeleke for his candid collaboration and encouragement in my work. You may not remember your cooperation that you deserve to me, but you are a source of energy for me to successfully complete this thesis.

I am also grateful for the time and information given to me by the staff members of NDRMC and some of the Working group coordinators. You have shown your sincerely cooperation during my data collection. I obliged to express my deep gratitude to the Deputy Commissioner, Directors, Consultants and all experts of the institution, especially Dr. Temesgen Tadesse, Mr. Melaku Asmare, W/o Beletu Tefera and W/o Zinet Ahmed for the time you lost and the information you provided to me.

I would like to express my deep gratitude to my parents Mola Gidyew and Ayelech Assefa who stamped the courage of working hard, virtuousness and politeness in my mind since my childhood. All my successes are the direct effects of their unwavering effort to educate me besides their abnormal work to cope with the wide-ranging unfavorable rural life.

The last but not the least, I wish to express my deepest gratitude to my wife Workye Semagn who endure the boredom of loneliness during my prolonged data collection and analysis work. Words fall short to express your patience and making me free to devote my time to the study.

Jemberu Mola

June 2019

Table of Contents

<i>Acknowledgements</i>	VI
Table of Contents	VII
List of tables	X
Abbreviations	XI
<i>Abstract</i>	XIV
CHAPTER ONE: INTRODUCTION	1
1.1. Background of the study	1
1.2. Statement of the problem	4
1.3. Objectives of the study	5
1.3.1. General objective of the study	5
1.3.2. Specific objectives	5
1.4. Research questions	6
1.5. Significance of the study	6
1.6. Scope and limitation of the study	7
1.7. Ethical considerations	7
1.8. Organization of the study	8
CHAPTER TWO: REVIEW OF RELATED LITERATURES	9
2.1. The concept of institutional collaboration	9
2.1.1. Functions of institutional collaboration	10
2.1.2. Themes in institutional collaboration	11
2.1.3. Factors contributing to institutional collaboration	13
2.1.4. Challenges of institutional collaboration	15
2.2. The concept of DRM	17
2.2.1. Components of DRM	19
2.3. Brief historical description of DRM institutional arrangements in Ethiopia	22
2.3.1. Relief and Rehabilitation Commission (RRC) of Ethiopia	23
2.3.2. Disaster Prevention and Preparedness Commission (DPPC) of Ethiopia	25
2.3.3. Disaster Prevention and Preparedness Agency (DPPA) of Ethiopia	26
2.3.4. Disaster Risk Management and Food Security Sector (DRMFSS) of Ethiopia	27

2.3.5.	National Disaster Risk Management Commission of Ethiopia	28
2.4.	The policy framework of DRM in Ethiopia	29
2.5.	Empirical literature review.....	31
CHAPTER THREE: RESEARCH METHODS.....		33
3.1.	Research design and approach	33
3.2.	Data types and sources	33
3.3.	Sampling technique	34
3.4.	Data collection instruments.....	35
3.4.1.	Key informant interview	35
3.4.2.	Document review	36
3.5.	Methods of data analysis	37
CHAPTER FOUR: RESULTS AND DISCUSSION.....		38
4.1.	Collaborative institutions institutional set-up and their role in DRM in Ethiopia	38
4.1.1.	National governmental institutions	38
4.1.2.	NDRMC administration structure.....	42
4.1.3.	International governmental and non-governmental institutions in DRM.....	49
4.2.	Practices undertaken by institutions collaboration in DRM in Ethiopia.....	55
4.2.1.	Activities of institutions at the pre-disaster phase of DRM.....	56
4.2.2.	Activities of institutions at the disaster phase of DRM	61
4.2.3.	Activities of institutions at the post-disaster phase of DRM	67
4.2.4.	Achievements of collaborative institutions in DRM in Ethiopia.....	68
4.3.	Challenges that hinder institutional collaboration in DRM in Ethiopia.....	71
4.4.	Opportunities that exist to foster institutional collaboration in DRM in Ethiopia.....	76
4.5.	The role of institutional collaboration in DRM for environmental management and sustainable development	80
CHAPTER FIVE: CONCLUSION AND RECOMMENDATIONS		83
5.1.	Conclusion.....	83
5.2.	Recommendations	86
References.....		88
Appendices.....		95

List of figures

Figure 1.1: Historical development of DRM institutional arrangement in Ethiopia-----	28
Figure 4.1: Government institutional collaboration structure in Ethiopia-----	44
Figure 4.2: National and international institutions collaboration structure in DRM-----	54
Figure 4.3: DRR profile used by both the government and humanitarian partners-----	57
Figure 4.4: Trends that show people in need in Ethiopia-----	65
Figure 4.5: The relation between DRM, Environment and sustainable development-----	81

List of tables

Table 1.1:	The government agencies of Derg and their major roles-----	24
Table 4.1:	Lead sector institutions and their major tasks towards DRM-----	39
Table 4.2:	Selected sectors and lead sector institutions for Mainstreaming-----	41
Table 4.3:	Some UN agencies and their major activities related to DRM-----	50
Table 4.4:	The disasters occurred and interventions done by institutions-----	63
Table 4.5:	Number of humanitarian partners that support the needy-----	66
Table 4.6:	Components of DRM and their intervention opportunities-----	77

Abbreviations

- AAU: Addis Ababa University
- BDU: Bahir Dar University
- BPR: Business Processing Re-engineering
- CCAFS: Climate Change, Agriculture and Food Security
- CCRDA: Consortium of Christian Relief Development Associations
- CRGE: Climate Resilience Green Economy
- CSOs: Civil Society Organizations
- DPPA: Disaster Prevention and Preparedness Agency
- DPPC: Disaster Prevention and Preparedness Commission/ Committee
- DRM: Disaster Risk Management
- DRMC: Disaster Risk Management Council
- DRMFSS: Disaster Risk Management and Food Security Sector
- DRMSD: Disaster Risk Management and Sustainable Development
- DRM-SPIF: Disaster Risk Management Strategic Program and Investment Framework
- DRMTWG: Disaster Risk Management Technical Working Group
- DRR: Disaster Risk Reduction
- EACS: East African Community Secretariat
- ECA: Economic Commission of Africa
- EHCT: Ethiopian Humanitarian Country Team
- EOC: Emergency Operation Centre
- EPA: Environmental Protection Authority
- EWER: Early Warning and Emergency Response
- EWRD: Early Warning and Response Directorate
- EWS: Early Warning System
- EWWG: Early Warning Working Group
- FDRE: Federal Democratic Republic of Ethiopia

FSCB: Food Security Coordination Bureau

HC: Humanitarian Coordinator

HDRP: Humanitarian and Disaster Resilience Plan

HEA: Household Economic Approach

HFA: Hyogo Framework for Action

HPP: Health Policy Project

HRD: Humanitarian Requirement Document

HRF: Humanitarian Response Fund

ICRC: International Committee of the Red Cross

IGAD: Inter-Governmental Authority on Development

INGOs: International Non-Governmental Organizations

IOM: International Organization for Migration

IPCC: International Panel for Climate Change

IRC: International Rescue Committee

KII: Key Informant Interview

LEAP: Livelihood Early Assessment and Protection

LIAS: Livelihood Impact Analysis and Seasonality

MoA: Ministry of Agriculture

MoFED: Ministry of Finance and Economic Development

NDPPC: National Disaster Prevention and Preparedness Commission

NDRMC: National Disaster Risk Management Commission

NEPAD: New Partnership for African Development

NGOs: Non-Governmental Organizations

NIMS: National Incident Management System

NMA: National Meteorological Agency

NMSA: National Meteorological Service Agency

NPC: National Planning Commission

NPDPM: National Policy on Disaster Prevention and Management

NPSDRM: National Policy and Strategy on Disaster Risk Management

PDRE: Peoples' Democratic Republic of Ethiopia

PSNP: Productive Safety Net Program

RFM: Risk Financing Mechanism

RRC: Relief and Rehabilitation Commission

SCJ: Science Council of Japan

SDGs: Sustainable Development Goals

S-MAC: Strategic Multi-Agency Coordination

TGE: Transitional Government of Ethiopia

UNDP: United Nation Development Program

UNFAO: United Nation Food and Agriculture Organization

UNFPA: United Nation Food Program

UNICEF: United Nation Children's Fund

UNISDR: United Nation International Strategy for Disaster Reduction

UNOCHA: United Nation Office for Coordination of Humanitarian Affairs

USAID: United States Agency for International Development

WASH: Water, Sanitation and Hygiene

WDRP: *Woreda* Disaster Risk Profiling

WFP: World Food Program

WHO: World Health Organization

Abstract

Institutional collaboration is the challenging aspect in DRM in Ethiopia. Due to this, there is an increasing nature of disasters in frequency and number in Ethiopia from time to time. Therefore, the main purpose of the study was to assess institutions collaboration in managing disaster risks in Ethiopia since 2015. To examine this, qualitative research approach with descriptive case study design was used. The data was collected by using both primary and secondary data sources. The subjects who participated in the study were selected by using purposive sampling. Seventeen interviewees were interviewed until the point of saturation. Directors, consultants and experts from NDRMC were interviewed since they have adequate knowledge about the issue. Semi structured KII and document review were data instruments employed for data collection. A combination of content and interpretive analysis was used to explore the collected data. The result indicated that even though large number of lead sector institutions and humanitarian partners were participated in DRM practices in Ethiopia, their collaboration was focused during the time of emergency response. Based on the finding, absence of due attention on prevention, mitigation and reconstruction practices towards disaster risk reduction were the main challenge that institutions face in collaboration towards DRM practices in Ethiopia. In this regard, the next points shall be taken in to account to enhance the role of institutions in DRM in Ethiopia: focus on pre-disaster prevention and mitigation; create center of excellence that give much emphasis on indigenous knowledge; develop the culture of tolerance and adopt DRM laws that enforce line ministers to do their roles as prescribed in the 2013 policy and strategies of NDRMC.

Keywords: *DRM practices, humanitarian institutions, institutional collaboration, lead sector institutions, opportunities and challenges, Ethiopia*

CHAPTER ONE: INTRODUCTION

1.1. Background of the study

Institutional collaboration is the engagement, promotion, management and implementation of activities conducted across different thematic institutions to deliver development outcomes like food security, nutrition, sustainable landscape and agriculture (FAO, 2017). It is a deliberate collaboration among stakeholders, organizations and sectors to jointly achieve a policy outcome (HPP, 2014) to address complex problems (Gabi and Michelle, 2016), to bring new skills, techniques, better outcomes, innovation and implementation of new services (Barth *et al.*, 2018), to enhance food security, sustainable management and use of resources. It is a method of addressing various disasters simultaneously by different concerned bodies. It is also part of DRM which calls for the engagement of all sectors in its multi-sector approach (FAO, 2017).

Institutional collaboration is now increasingly both necessary and desirable as a strategy for addressing many of society's most complex public challenges. It occurs for many reasons. The first is simply we live in a shared-power world in which many groups and organizations are involved in and affected by some partial responsibility to act on public challenges (Crosby and Bryson, 2005). The second is a way of creating institutional change. As relationships are developed among government agencies and across sectors, existing organizational structures, processes and norms are changed and new practices are adopted. In this context, collaborative work can become a catalyst for transcending existing institutional structures and approaches. The dynamic environment of disasters makes it imperative to invest in inter-sector and inter-agency cooperation and coordination (Naim and Vener, 2011). Due to the fact that DRM is characterized by complexity, urgency and uncertainty, it is essential for institutions to have a fast, smooth and effective collaboration process.

Recent global studies indicated that disasters have been increasing from time to time in terms of magnitude, number, frequency and severity (UNISDR, 2005). These are basically resulted huge economic loss on the world state. For this, a number of harsh weather, extreme climate change experiences (EACS, 2012), widespread poverty, rapid and unplanned urbanization (UNISDR, 2013) and population growth (SCJ, 2016) contributed for the demolishing consequences of many societies to exposed to severe disasters and economic losses. The report of UNISDR (2011)

indicated that the exposure of the global community to disasters have been growing faster than the ability of the community to increase their resilience.

Similarly, disaster assessment of Africa portrayed that disasters have been increasing over the past 15 years (Dewald, *et al.*, 2016, World Bank, 2013). Throughout its history, an increasing number of disasters was experienced due to many factors like environmental degradation, poor social and economic infrastructure, poor health status, poor urban planning (ECA, 2015), temperature and rainfall variability (Ismael and Cutter, 2015), food security problems (Boyd *et al.*, 2013, Niang *et al.*, 2014), lack of sanitation and access to potable water combined with disease epidemics create a complex disaster profile for the continent. But in terms of Holloway *et al.* (2013) and Tall *et al.* (2013), advancing population growth, rising continental mobility, increasing global interconnectedness and poorly developed national and sub-national DRM capacity lead Africa to the new era of disaster model. Therefore, Africa is known by its adverse and dynamic disaster profiles in which large scale emergencies are increasingly contributed to complex circumstances (UNOCHA, 2011).

Related with these factors, drought, flood (World Bank, 2015), heat wave, increasing intensity and frequency of storms (IPCC, 2012) and cyclones (ECA, 2015) are the most prevalent and devastating hazards which challenged the food security of Africa. Particularly, drought is the most frequent challenge in the Horn of Africa that account for about 90% of all disasters in the region (UNISDR, 2012). Due to this, Chaterine and Alexandra (2013) pointed out that countries in the Horn of Africa are the most drought prone in the world. The costs and losses of each country in the region weaken their economic growth and other developmental advantages.

Ethiopia is one of the most disaster affected areas in Africa in general and in the Horn of Africa in particular because of its vulnerability to climate change impacts and most of its population is highly dependent on crop farming which is vulnerable to weather variability (Tesfa *et al.*, 2014). Depending on this, the risk assessment of the country identified the most prevalent disasters include drought, flood, human and livestock disease, crop pest, fire (Haileyesus, 2016), seismic and volcanic activities (Selamawit, 2016) and inter-communal conflict (HRD, 2018). These are increasing in frequency from time to time.

To reduce these disasters that impose huge impact on economy and livelihood of the society, at this time, each governments and concerned bodies globally took action (Shimels, 2013). For this,

Ethiopia adopted a wide range of instruments that show the mainstreaming and implementation of DRM at the national level. These instruments are aimed to address the challenges of disasters at the country. But there are non-binding frameworks, weak institutional capacities and poor coordination for its implementation (ECA, 2015). Despite the widespread DRM approaches in theory in Ethiopia, a number of institutional arrangements affected the practice of DRM. To overcome this, it is important to identify DRM focal points across government agencies and international donors for strengthening institutional collaboration mechanism (Sumedh, 2013). As a result of these visible fact, the government of Ethiopia, in collaboration with UN agencies, NGOs, donors, CSOs and other humanitarian partners, has given due attention to institutional collaboration to manage disasters from the local up to national levels.

In Ethiopia, for instance, pre-disaster, during-disaster and post-disasters require a system of holistic view in concern and decision making of sectors. So to attain a shared understanding of DRM, it is important to get the complete picture of different perceptions of the problem, to clarify the root causes, to agree on the need for a multi-sector approach to solve the problem and to review the range of strategies proposed for its solution in Ethiopia (Neely *et al.*, 2017). UNDP (2005) report on its recommendation to Ethiopia also told that DRM system can be considered successful if there is active collaboration of institutions, build up their capacities and empowering them as active participants in DM process for effective measurement. In addition to this, the report also indicated that collaboration of institutions must be viewed as a catalyst for change in the development of DRM. So the complexity of challenges that disaster pose on the society calls for collaboration, knowledge sharing and coordinated efforts of all institutions.

Therefore, to assess the practices of DRM across institutions, to solve the problems that collaborative institutions in DRM process may face, to investigate the different achievements that institutions succeeded in DRM and to indicate the possible opportunities that could be used to manage disaster risks, it needs to be collaborated in a wide variety of sectors like agriculture sector, health sector, environment sector and other sectors (NGO Voice, 2013).

1.2. Statement of the problem

At present, DRM practices in Ethiopia, in theory, follow a multi-sector approach with the major goal of reducing disaster risks and potential damages caused by disasters through a complete and collaborated disaster risk management system in the context of sustainable development. Basically, the DRM policy and strategy argues that disaster reduction through institutional collaboration, nationally and internationally, is the major motive. In addition to this, it gave due attention to the participation of collaborated national and international humanitarian and development partners with the view to reduce and in time, prevent disaster risk and vulnerability, build resilience to cope impacts of disasters through the provision of proper and timely responses and minimize potential losses from disasters (NPSDRM, 2013). This indicated that the policy targets the reduction of recurrent disasters that are increased from time to time in amount, frequency and severity in Ethiopia through institutional collaboration.

However, several documents argued that institutional collaboration in Ethiopia is weak. Instead, institutions duplicate their resources in such a way that did not solve the problem in the long run. The joint government and humanitarian partners document responses of each year, annually and semi-annually (since 2011) indicated that the collaboration of institutions in DRM in Ethiopia fail to meet the intended objective rather than giving emergency response. Some research outputs also argued that the current institutional collaboration is fragmented in actual even if it seems coordinated on paper (Birtukan, 2014; Meklit *et al.*, 2016 and Messay, 2018).

On the contrary, recent government reports indicated that the collaboration of institutions in DRM in Ethiopia is effective and generous. According to the joint government and humanitarian partners document response report, for instance, the contribution of the government of Ethiopia including lead sector agencies and humanitarian partners such as UN agencies, donors and NGOs in DRM practices in Ethiopia particularly in the El-Nino induced drought, flooding, disease and conflict was remarkable. For this, both the Ethiopian government and humanitarian partners contributed more than 735 and 985 million USD respectively which reaches to 1.72 billion USD collaboratively to address the difficult El-Nino induced disaster in 2016. But the required amount of money indicated at the HRD was 1.4 billion USD. The report assured that, because of the collaboration and kind support, the contribution surpassed in 320 million USD from the required and this showed that there is institutional collaboration in DRM in Ethiopia (HRD, 2017).

From the above research outputs and reports, there are three basic important contradicting views that the researcher want to addressed. The first is there is the spread of disasters and disaster risks in Ethiopia. Secondly, there is weak institutional collaboration in DRM in Ethiopia. Lastly, there is effective and generous support of institutions in DRM in Ethiopia. It was with this argument in mind that the issue was chosen as a focus of this study. Particularly, the research was intended to assess the practices, challenges, achievements and opportunities of collaborative institutions in DRM in Ethiopia by giving due emphasis to NDRMC. It was purposively selected for this study. This was due to the fact that NDRMC was mandated to lead DRM practices at top priority area by coordinating line ministers, national NGOS, UN agencies, donors and INGOS. In addition to this, institutional collaboration in DRM practices is critical in Ethiopia today because of the changing nature of disasters. For instance, the current drought, flooding, inter-communal conflict and diseases are changing their nature from time to time. The point of time 2015 was selected because of the fact that NDRMC became autonomous and independent to work its activities free from any ministerial intervention. Therefore, the output of this research is believed to have an important role to the ongoing disasters by assessing the practices, challenges, achievements and opportunities of institutions collaboration in DRM in Ethiopia with NDRMC since 2015.

1.3. Objectives of the study

1.3.1. General objective of the study

The overriding objective of the study was to assess and investigate the practices of institutional collaboration in disaster risk management in Ethiopia to reduce disaster risk factors.

1.3.2. Specific objectives

The specific objectives of the study were intended to:

- ❖ examine the practices of institutional collaboration at pre-disaster, during-disaster and post-disaster phases of DRM in Ethiopia.
- ❖ assess the challenges that collaborative institutions of NDRMC face in DRM in Ethiopia.
- ❖ investigate appropriate opportunities that helps collaborative institutions to foster their capacity in DRM in Ethiopia.
- ❖ assess the contribution of institutional collaboration in DRM for environmental protection and sustainable development success in Ethiopia.

1.4. Research questions

The research attempted to answer the following fundamental questions which are the derivative of the abovementioned research objectives.

- 1) What seems the practice of collaborative management of disasters corresponding with the concerned institutions in pre-disaster, during-disaster and post-disaster in Ethiopia?
- 2) What are the challenges that faced collaborative institutions in Ethiopia while DRM practices were implemented?
- 3) What opportunities have been existed to collaborative institutions to implement DRM practices in Ethiopia in an effective and intended way?
- 4) What are the significances that institutional collaboration in DRM give for environmental protection and sustainable development in Ethiopia?

1.5. Significance of the study

The current institutional collaboration, combined with adverse political, economic and policy factors, did not reduced the problem of disasters that impose huge impact on the life of Ethiopian people. As the current government report indicates that 23 million people are found below poverty line, 3 million people are displaced because of inter-communal conflict and 8.3 million people are in acute food shortage (FDRE, 2019). For this, releasing annual and semi-annual HRD remained a key appeal to alleviate the problem of disasters immediately in Ethiopia. But such a study have a vital significance in identifying the effective strategies of institutional collaboration for improved DRM practices in Ethiopia and it have a real benefit for reducing disasters through well-organized institutional support. It help lead-sector institutions to appropriately design their development plans which are related with environment and sustainable development by reducing disasters, rehabilitating the environment and mainstreaming DRM in development planning processes. In addition to this, it is essential to collaborative institutions to improve their performance in DRM in Ethiopia.

Finally, the outcome of the study is expected to make a modest contribution to research methodologies and concepts, policy formulation and collaboration strategies. Researchers, policy makers, government bodies, NGOs (fund providers, development agents and humanitarian partners) can learn crucial lessons from this research regarding to the strategy of institutional collaboration, resource allocation, DRM and conflict avoidance or mitigation. It give insightful

empirical, social, political and economic evidences on institutional collaboration towards DRM by showing the way that solve the existing problems and by designing appropriate collaboration strategy to support DRM in Ethiopia.

1.6. Scope and limitation of the study

Regarding to the delimitation of the study, institutions in DRM policy and strategy of Ethiopia is broader by incorporating all governmental, humanitarian, developmental and NGOs. This was impossible to asses each of them in detail in this thesis. Therefore, the study was purposefully marked out lead-sector and humanitarian institutions collaboration with NDRMC in DRM in Ethiopia since 2015. As the core concern of the study was to assess the practices of institutions in DRM in Ethiopia, their achievements, challenges and opportunities were examined. Also, the contribution of humanitarian partners and line sectors for people in need was analyzed briefly.

The main limitation of the study was the refusal of some officials to respond to some questions especially those related to deaths, displaced and economic damage by disasters. Secondly, lack of continual data that clearly showed the trend of disasters, institutional collaboration and their contribution in DRM because of the absence of central data base. Due to individuals own data, the numerical data that gained from them clashed each other with HRD and humanitarian response reports. This tried to mislead the analysis in a wrong way. But the researcher tried to cross-check as much as possible. Time constraint to cover all the institutions, limited financial resources, lack of similar works done (inefficient information), and unwillingness of few staffs to cooperate for interview, provision of inaccurate information and reluctant to provide interview without fee were some of the limitations that the researcher faced during this particular work.

1.7. Ethical considerations

From the starting up to the end of this particular work, ethical considerations was seriously taken in to account to ensure the protection, integrity, anonymity, consent and other human elements of the respondents. For instance, when the researcher collected the data from the respondents, the following research ethics took in to consideration. First, the researcher written a letter of support from the Center for Environment and Development, College of Development studies, AAU. Second, the researcher took the letter and went to the deputy commissioner of NDRMC to get permission and command to directors and all the concerned. Thirdly, the researcher recruited samples from the institution and talk to them with their willingness. Fourth, the study purpose

was explained to the study participants in the way that it is only used for academic purpose and also aware about the confidentiality of their response and their name to external body. Fifth, oral, record and written informed consent was secured from the study subjects before data collection process took place. Finally, the respondents' right not to respond for any specific question, to stop the interview at any time, the right not to involve in the research at all levels were ensured by the researcher. Depending on this, the researcher collected and analyzed the data by maintaining the anonymity, consent and confidentiality of the respondents.

1.8. Organization of the study

The thesis was organized in five chapters. The first chapter was concerned on the introduction part of the thesis that incorporated background of the study, statement of the problem, questions, objectives, significances, scope, limitations and ethical considerations. Chapter two was focused on literature review that consisted the conceptual and theoretical explanations about institutional collaboration, DRM and DRM policy in Ethiopia. The third chapter was emphasized on the methodology of the study which comprised the research design, the sampling technique, the data sources, the data collection instruments and the method of data analysis. Presentation, analysis and interpretation of the collected data were discussed under chapter four. The last chapter of the study was highlighted on conclusion and recommendations to improve the collaboration of institutions in DRM in Ethiopia. References and appendices were attached at the end.

CHAPTER TWO: REVIEW OF RELATED LITERATURES

2.1. The concept of institutional collaboration

The diverse nature of problems in the world can't be effectively respond by a single institution. Rather collaboration has a vital importance to adequately respond to the multiple pressures of exacerbated threats of disaster risks. So collaboration came as a strategy to address the diverse nature of natural and environmental problems (Chrislip, 2002).

The term collaboration is commonly substituted with cooperation and coordination. For instance, a dictionary meaning of collaboration is cooperating, coordinating and working in fusion with others. Formally, collaboration is the most proper institutional link that involves shared authority and responsibility for planning, implementing and evaluating the joint efforts (Hord, 1986). In their literature on successful collaboration, Mattessich *et al.* (2001) defined collaboration as a mutual link that come into practice by two or more organizations to achieve a common goal. It brings independent organizations together to fulfill common task that requires broad planning and communication on many levels.

Gray (1989), on the other hand, defined collaboration as a process that occurs when a group of autonomous stakeholders engage in an interactive process using rules, norms and structures to act or decide on issues. It is recognized that collaboration should not mean sub-contracting but a real partnership between organizations based on mutual respect and acceptance of the autonomy of the collaborating organizations about their vision and approaches. So its main purpose is to create a shared vision and joint strategies to address concerns that go beyond the purview of any particular sector.

By and large, collaboration is not happened by chance rather it is a designed policy that brings governments, NGOs, humanitarian and development partners together. In this platform, institutions that entered to relationship should sign a memorandum of understanding to be clear in their mandate, roles and expectations. Memorandum of Understanding is a key device of collaboration and a process in which institutions reach an understanding of objectives of the program, define the roles and responsibilities of each and clarify their accountability. Therefore, forming collaboration is not a sufficient condition rather the activities done by the institutions must be measurable depending on their agreement (Piu B. *et al.*, 2016).

On the other hand, institutional collaboration is a form of governance in which different parts of organizations attempt to work together by undertaking collective decisions and apply collective actions that can have an impact on them. It consists of a mix of representatives from government, civil society, private sector and NGOs with the intention of transcending power differentials, shared ownership and increase chance of positive change (FAO, 2004). Corresponding with this, successful institutional collaboration depends on political, economic and social factors that entail commitment from all parties working together.

Mattessich *et al.* (2001) identified six categories that are used as a framework for measuring successful institutional collaboration. These are; trust and partner compatibility; common and unique purpose; shared governance and joint decision making; clear understanding of roles and responsibilities; open and frequent communication and adequate financial and human resources. These six collaboration success factors fall into three stages of collaboration identified in Gray's (1989) seminal work including precondition stage where collaborators come together to form the relationship, process stage where collaborators interact and make decision and outcome stage where collaborators assess the effectiveness of their efforts and adapt to change.

2.1.1. Functions of institutional collaboration

Institutional collaboration is now increasingly both necessary and desirable as a strategy for addressing many of society's most complex public challenges. As Zadik and Sasha (2006) expressed it is essential organizational building block that support a growing array of activities seeking to mobilize and impact on diverse stakeholders in achieving a mix of public and private goals. Basically, one of the purposes of institutional collaboration is to appeal a wide range of sectors from different areas. Badibanga *et al.* (2013) expressed that institutional collaboration is a subset of participatory instruments dealing with social, economic, political and environmental dilemma. Obviously, one of the benefits of such collaborations is to increase the participation of sectors that are directly and indirectly related to the issue (Djalante, 2012).

Institutional collaboration is central to bring valuable outcomes through the participation of stakeholders in the decision-making process. It is a form of communication, decision-making, dialogues on policy, consensus-building and implementation process (Hemmati, 2002). It is also an important vehicle of communication and dialogue among various sectors. Zadik and Sasha

(2006) expressed it as a good way to carry out advanced and high level economic and policy making discourses that give birth to the breed of a solution for a complex set of problems.

The collaboration of various sectors creates an option to contribute and collectively use resources which cannot be accessed by a single actor. Perhaps the most straight forward claim of what is included in collaboration is pooling of resources by sectors or parties to tackle shared problems (Plummer and Fitzgibbon, 2004).

2.1.2. Themes in institutional collaboration

Much of the literature on collaboration identifies typical themes in institutional collaboration such as diversity, coordination and decision making, information flow and exchange, shared understanding and trust and support which are directly interrelated to the functions listed above (Rodriguez *et al.*, 2003; Engestrom *et al.*, 1995).

A) Diversity

Diversity is vital to collaboration among institutions. This is because participants in institutional collaboration are often from different histories, experiences, practices and perspectives. There are contradictory views on the impact that diversity has on the effectiveness of the collaboration.

On the one hand, differences among institutions is said to increase difficulties in the interaction between them. For example, conflict may face in addressing different organizational practices and the interpretation and response to strategic problems (Rodriguez *et al.*, 2003). Others pointed that, differences across institutions is considered valuable as experience in organizations expose the actor to a range of prepared methods, values and cultures (Guimera *et al.*, 2005). Experience in working with others enlarge skills in working with diversity such as developing civic responsibility, listening to diverse perspectives and participating effectively. This provides skills of cooperation as well as a sense of shared responsibility for collective endeavors with diverse goals and members (Engestrom *et al.*, 1995).

B) Coordination and decision making

Coordination is necessary for decision making in collaborative arrangements. As stated in Engestrom *et al.* (1995), it is more than networks of common interest in collaborative activities. It also involves multiple subjects from different institutions/ activity systems; that collaboration meets a need or motive and that subjects or individuals from different activity systems come

together to coordinate care across different institutions within a system. O'Neil Chung and Brown (1997) stated that the more coordinated a group or team is, the better the decision-making processes and vice versa.

C) Information flow and knowledge creation

It is already identified that coordination is critical to enable information exchange and sharing. It is one aspect of information flow and knowledge creation. i.e. the meaning and interpretation given to information influence what information is passed on, how it is passed on and what knowledge may be created (Gulati, 1999). Therefore, information flow and knowledge creation are important features of collaborative activity, influenced among other things by the distribution of power and the goals of each organization taking part. Knowledge creation is a dynamic process of interpretation, a discourse, a tool of power and control. Factors that assist information flow and knowledge creation in an area include the number of institutions and the extent of interaction between them.

D) Shared understandings

Common or shared understandings can include shared mental models as conception of a system, common language and concepts, common problem-posing and problem solving approaches, a group's culture in which there are commonly held values, beliefs and goals (Lorenz, 1992). A range of strategies required to develop shared understanding include behaviors such as: asking relevant and thought-provoking questions, sharing observations, seeking alternative perspectives, strongly challenging a particular opinion, seeking clarification and sharing information through processes of consulting and collaborating (Owen, 2001).

The common concept across different literatures is that collaboration involves shared purposes. For example, firms work together in order to meet their need, to be innovative, competitive and profitable (Lorenz, 1992). Through collaboration, they reduce fears, increase opportunities for internationalization, expand their range of expertise, and develop specialist products and achieving a range of corporate objectives.

E) Trust and support

Trust assists good information flow, open dialogue, facilitating collaboration and innovation and quick decision making. In discussing trust within industrial districts, Lorenz (1992) suggests that

the beliefs of those involved are important. He argues that although norms of tradeoff may develop and are evident within many industrial districts, the maintenance of mutuality is dependent on the beliefs of factors. For instance, the belief that there is a gain to be made for the actors. Over time common bonds and social identities are shared and there is a developing trust and an exchange of reciprocal services. Trust, good information flow and open dialogue, assist collaboration and potentially innovative outcomes. Trust is important in enabling members of a network to make quick decisions and process more complex information.

In the social capital literature trust is typically described as the lubricant for diverse groups to work together (Flora, 1998). Actors need to trust each other to offer exchanges of information, to develop norms of reciprocity and an ability to listen to different perspectives in order to involve effectively. As a result, trust is a personal commitment that permits to engage in healthy debate to establish a mechanism of inclusivity of ideas.

To summarize up on all the features, collaborative activity involves working across different practices and histories. It is a process of working at the boundary which is a site of tension and potential learning. Shared understanding in this site is achieved through the development of boundary tools through which dialogue, story-telling, knowledge construction, argumentation and differentiation takes place. Experience in diverse collaborative activity increases skills of collaboration, the diversity of networks, access to resources and perspectives not otherwise available. Coordination and decision making requires good communication skills, interpreting and exchanging of information. These processes are assisted by trust and informal arrangements for exchange. Interpretation of information is influenced by the goals of each participant or organization taking part in the collaboration and by the asymmetrical distribution of power. Information exchange is core to the development of shared understandings and the development of mental models, just as shared purpose is intrinsic to collective activity. These in turn require trust and support. All these themes of institutional collaboration are the driving factors of good institutional collaboration.

2.1.3. Factors contributing to institutional collaboration

It has been distinguished in Guimera *et al.* (2005) that there are two sets of factors that contribute to institutions' collaborative efforts to address societal problems through an integrated approach.

A) Strategic factors

The first set of factor is related to conditions that create an enabling environment and promotes an interest to work collaboratively. They are generally external to partner institutions which tend to support the strategic interests of partners. These include international policy statements, donor interests and national governments' decisions.

International conventions and policy statements on issues that are cross-cutting in nature, such as DRM, are highly powerful in creating institutional collaboration. National governments' participation in international conferences and their commitment to those conventions and policies create a chance for institutions to give their own resources to realizing commitments on institutional collaborations. Governments can also be motivated by the commitments they make as signatories of international conventions. Thus, policy statements create an environment in which institutions are driven to cooperate to ensure conformity with policies and conventions.

Similarly, donor agencies can have significant influence on institutions' interests and motivations to address development issues collaboratively. Decentralized government, further, creates the opportunity to bring stakeholders together as it brought decision making to the administrative level closest to local communities and the partners that work with them. It may encourage decisions that are responsive to community articulated input and needs and promote integrated multi-sector actions.

B) Practical factors

The second factors are driven by practical needs which make collaborations work. These factors tend to be internally driven and respond to practical needs. They are critically important as partners will rarely join with others if they do perceive some net gain or benefit for themselves. Benefits may be practical in nature, such as access to resources that enable them to be more effective, efficient, build on their successes. They may yield real benefits such as new materials and equipment or improved staff performance resulting from the transfer of knowledge or skills. Other partnerships are driven by the desire to build on successful lessons by scaling up or replication. Partnerships that yield successes on a small scale, that is, within a limited number of communities might want to expand the range of those successes by adding new communities. Successful achievement of expected objectives might also inspire partners to add on new activities to address other constraints or issues. Partnerships also can be formed based on

institutions' assessment of the tangible goods they may derive from the relationship. For instance, building institutions' human capacity through training and on-job experience to the expertise of others is tangible benefit. Institutions benefit from collaboration with others, particularly, if those collaborations strengthen an institution's credibility or raise its visibility. An illustration of this gain is the partnerships between NGOs and other institutions.

2.1.4. Challenges of institutional collaboration

Different institutions' collaboration for the joint management of disaster risks is forced by a host of underlying contexts that range across various perspectives. One of the factors that affect the process of institutional collaboration is the engagement of representatives of sectors. This is related to advocacy experience, knowledge and skill of asking and reacting to various concerns in collaborative dialogues. This indicated that some sectors may not have the skill and ability to take in highly contextualized collaborative agendas (Ansell and Gash, 2007).

Institutional collaboration could also be influenced by leaders' level of commitment to commence collaborative processes with other institutions, sense of value towards collaborative frameworks and willingness to offer resources and technologies (Emerson *et al.*, 2011). The other challenge of institutional collaboration is related to the pre-history collaboration. When sectors have the history of working together on many common public agendas with each considering the other as an important ally, then approaches of addressing common problems are addressed in a mutual manner and the processes of combining their unique resources are easy (Ansell and Gash, 2007). Therefore, prehistory of working together establishes the foundation to continuously deal with common problems in an integrated manner.

On the other hand, Steven *et al.* (1997) recognized four factors that hold back institutional collaboration. These are situation-specific factors, process-related factors, societal context and institutional context. The issues are discussed based on his assumptions as follows.

A) Situation-specific factors

A number of factors that are specific to particular situations may hinder effective collaboration. These factors include: power imbalance; lack of communication; technical and scientific issues; public opposition and fundamental differences that separate the institutions. As far as power imbalance is concerned, institutions will be understandably reluctant to collaborate

if they are at disadvantage to adequately represent their interest or if they believe that their interest will be deemed secondary to more powerful ones. On the other hand, the stronger one often sees little need to compromise or otherwise involve the weaker party which lacks the power to influence the course of events on its own. Kanter (1994) further noted that to make collaboration work, more communication than anyone anticipation is necessary and difficulties with communication/ lack of trust can make successful collaboration hard to achieve.

Technical factors inherent in collecting and sharing data can have obstructed multi-party efforts; meaning that, differences in data collection methods and analytical techniques can make it difficult for groups to combine information in useful way. Oppositions by public to goals or methods of a collaborative project can pose barriers that make it difficult for a collaborative effort to succeed. Fundamental differences between institutions is presented in Steven *et al.* (1997) as major barrier to collaborative problem solving as they might have basic ideological differences and historical antagonisms.

B) Process-related factors

Given the importance of collaboration, ineffectively running or structuring collaborative process greatly reduces its chances for success. The process-related factors which impede collaboration include: lack of focus on process; lack of process management or interpersonal skills; resistance to collaborative management styles and difficulty in securing the involvement of all relevant stakeholders.

A failure to appreciate the importance of process-related questions and to spend enough time on process-related discussions is an important barrier to collaboration, as Gray (1989) noted negotiators frequently underestimate the critical role of technical planning process in ensuring successful collaboration. The complexity of collaborative effort further suggests the need for effective process management and interpersonal skill where its lack seriously hampered it. Many leaders may also be resistant to adopt a new roles and skills required to manage a collaborative process successfully as it may threaten the leaders' traditional views of their previous roles. Difficulties in identifying and involving all relevant stakeholders can lead to opposition from parties who feel barred from the process and this often prevents mutual efforts from succeeding.

C) Social context

The societal context within which policy decisions are made can prevent significant barriers to collaboration. These include attitudes held by individuals, groups and agencies that often push institutions apart rather than foster collaboration. Societal barriers to collaboration include: cultural norms; stereotypes and intergroup attitudes; polarization arising from traditional decision-making processes; opposition by public interest groups and politics. For instance, individualistic cultural norm can be an obstacle to collaborative process; exaggerated or false intergroup attitudes can also constrain effective communication that is a starting point for building the game. Traditional forms of decision-making reinforce group differences and make it more difficult for them to work collaboratively. Adversarial decision-making processes promote strategic polarization in the way that groups define themselves by emphasizing their differences.

D) Institutional context

Institutional barriers to collaboration identified include: conflicting agency goals and missions; problematic organizational norms and culture; lack of top-level support for collaboration; resource constraints; problematic government policies and procedures. Institutions do have real differences between their goals and missions as defined by statute, tradition and political realities and collaborative efforts stress conflicts between these goals. These conflicting missions might lead to differences in assessing priorities for various activities. Informal norms, values and traditions might make it difficult for groups to collaborate. In some cases, even if local institutions pushed cooperative approaches forward, lack of support for such efforts from upper level of management hampered their efforts. Resource constraints such as lack of time, money and skilled personnel have been noted as obstacles to collaboration.

2.2. The concept of DRM

With the spread of disaster and disaster risks throughout the world, it is important to take measures that help to manage them in the short as well as in the long run. For the sake of its implementation, disaster risk reduction and disaster risk management are the best components that are used to reduce and manage disasters. Disaster is a severe disruption of the functioning of a community that happened as a result of high level of community vulnerability to hazard and low level of capacity to cope with the potential negative consequences. Death, injuries, disease and adverse effects on humans' physical, mental and social well-being are some of the negative

impacts of disasters. Disasters can be small or large-scale, frequent or infrequent and rapid onset (earthquake, volcanic eruption, flash flood and chemical explosion) or slow-onset (drought, desertification, epidemic disease, sea-level rise). But, being exposed to potentially damaging events does not necessarily mean being affected unless it hits vulnerable community with the low capacity to withstand the negative impacts of the harmful phenomena (UNISDR, 2009).

On the other hand, disaster risks are future disasters anticipated through generating risk information and imagination of the nature of hazards together with vulnerability and capacity conditions of elements at risk. It is the potential disaster loss in lives, health status, livelihoods, assets and services which could occur to a particular community or society over some specified future time period. It reflects the concept of disasters as the outcome of continuously present conditions of risk. It comprises different types of potential losses which are often difficult to quantify. Nevertheless, with knowledge of the prevailing hazards and the patterns of population and socio-economic development, disaster risks can be assessed and mapped. Therefore, risk information is the base for disaster risk reduction (HFA, 2005).

Disaster risk reduction is a tool that verifies the degree of risk and describes and measures to increase capacities and reduce hazard impact on the elements at risk so that disaster will be avoided. It is also a practice of reducing disaster risks through systematic efforts to analyze and manage the causal factors of disasters including reduced exposure to hazards, lessened vulnerability of people and property, wise management of land and the environment and improved preparedness for adverse events. It provides a better recognition of the ongoing nature of disaster risks and the ongoing potential to reduce these risks through prevention, mitigation and preparedness. Recently, the risk reduction concept is an accepted trend and supported by literatures and reports that accelerated shift from emergency response to disaster risk reduction in different countries in a way to build a resilient nation (HFA, 2005 and Shaw *et al.*, 2013).

UNISDR (2009) defined DRM as an organized process of using administrative decisions, organizations, operational skills and capacities to implement policies, strategies and coping capacities of the society and communities to lessen the impacts of natural hazards and related environmental and technological disasters. This comprises all forms of activities including structural and non-structural measures to prevent and mitigate the adverse effects of hazards. It is the application of DRR. It is a systematic process that integrates risk identification, mitigation

and transfer as well as disaster preparedness, emergency response and rehabilitation/reconstruction to lessen the impacts of hazards within the broad context of sustainable development. It is widely practiced by organizations to minimize risks in investment decisions and to address operational risks such as those of business disruption, production failure, environmental damage, social impacts and damage from fire and natural hazards. It is a core issue for sectors such as water supply, energy and agriculture whose production is directly affected by extremes of weather and climate (Magunda, 2010).

On the other hand, disaster risk management is a public policy issue involving administrative decisions, programs and strategies oriented towards curtailing the impact of hazards and preventing their occurrences by controlling vulnerability, ensuring the readiness of a community to take precautionary measures and establish organizational apparatus that can effectively react to disasters as they occur with the required speed of response. Different nations used different styles of institutional setup and organizations geared to their needs for the management of disasters (Kim and Lee, 1998).

Generally, DRM is a plan, an action or policy that incorporates emergency response measures, preparation for extreme events and early warning systems. It also includes those actions taken to assess risks, prepare for, respond to and recover shocks as well as those longer-term measures to reduce exposure and vulnerability. It aims to avoid, lessen or transfer the adverse effects of hazards through activities and measures for prevention, mitigation and preparedness. Therefore, DRM is the application of the plans, policies and programs through the collaborated effort of institutions in to practice.

2.2.1. Components of DRM

Different scholars recognized six major pillars of DRM. These are: prevention, mitigation, preparedness, response recovery and rehabilitation. These pillars are also categorized under three phases. These include pre-disaster phase, disaster phase and post-disaster phase (Zimmerman, 1985; Abraham, 2001; Sims and Vogelmann, 2002 and Kim and Lee, 1998). Some documents have also approved the existence of the above scholarly mentioned components (NPSDRM, 2013; DRM-SPIF, 2014 and HDRP, 2018).

A) Pre-disaster phase

Pre-disaster phase of DRM means a period before the occurrence of a disaster. DRM activities implemented during this period include: prevention, mitigation and preparedness activities in order to eliminate or lessen the adverse impacts of hazards and related disasters. On the other hand, this phase is called the key steps DRR (DRM-SPIF, 2014).

Prevention is the total avoidance of adverse impacts of hazards and related disasters. It expresses the concept and intention to completely avoid potential adverse impacts through action taken in advance. Examples include dams/embankments that eliminate flood risks, land-use regulations that do not permit any settlement in high risk zones, safety standards for industries and seismic engineering designs that ensure the survival and function of a critical building in any likely earthquake. Poverty alleviation and assets redistribution schemes such as land reform, provision of basic needs and services such as preventive health care, education are some non-structural measures. The complete avoidance of losses is not always feasible and the task transforms to that of mitigation. Partly for this reason, the terms prevention and mitigation are sometimes used interchangeably in casual use (Abrahams, 2001).

On the other hand, mitigation is the action of lessening/ limitation of the adverse impacts of hazards and potential disasters. The adverse impacts of hazards often cannot be prevented fully but their scale and severity can be substantially minimized by various strategies and actions. Mitigation measures encompass engineering techniques and hazard-resistant construction as well as improved environmental policies and public awareness. The action is normally done before the event and can involve structural activities like building a resistant infrastructure and nonstructural activities like community training in DRM, sensitization session at school, etc. Its measures can also range from physical measures such as flood defenses or safe building design, to legislation and non-structural measures such as training, organizing disaster volunteers, public awareness, food security programs and advocacy on development issues (Zimmerman, 1985).

Finally, preparedness is the knowledge and capacities developed by governments, professional response and recovery organizations, communities and individuals to effectively anticipate respond and recover the impacts of current hazard events or conditions. It is aimed to build the capacities needed to efficiently manage all types of emergencies and achieve orderly transitions from response through to sustained recovery. It entails measures such as establishing emergency

relief center, formulation of emergency plans in advance of disasters, training persons and vulnerable communities to be able to undertake rescue and recovery when disasters eventuate. For this, It is based on a sound analysis of disaster risks and good linkages with early warning systems and includes such activities as contingency planning, stockpiling of equipment and supplies, the development of arrangements for coordination, evacuation and public information, and associated field exercises. These must be supported by formal institutional, legal and budgetary capacities. It assumed that community and property are vulnerable to hazards and that preparedness will always be necessary to address the occurrence of hazardous events. Therefore, managerial and technical steps taken to minimize losses just before, during and after disaster come within the envelope of preparedness. Most often its action is taken before a disaster happens to anticipate, forecast, and warn against hazards and to put in place contingency planning and means to allow a community to respond to hazards (Sims and Vongelman, 2002).

B) Disaster phase

Emergency response is preparedness in action whereby actions are taken during and immediately after the impact of disaster that ensure the affected communities are evacuated from disaster zone. DRM activities implemented during this period include disseminating early warning, evacuation of at risk people, conducting search and rescue operation, providing emergency relief supplies, conducting damage and loss assessment. It is the period that emergency response is given to the affected communities in the form of emergency medical assistance, food, shelter, clothing, provision and allocation of crucial food and non-food items, goods and services aimed at saving lives, reducing health impacts, ensuring public safety and protecting livelihoods of the affected population in the event of a disaster. It is sometimes called “disaster relief”. The division between this response stage and the subsequent recovery stage is not clear-cut. Some response actions, such as the supply of temporary housing and water supplies may extend well into the recovery stage (Abrahams, 2001).

C) Post disaster phase

Post disaster phase means a period after the occurrence of a disaster. DRM activities during this period focus on provision of recovery and rehabilitation support to the affected communities and areas in order not only to restore social services, infrastructure and economic activities but also

to enable them to reduce future exposure to similar hazards and related disasters by applying “building back better” principle in recovery, rehabilitation and reconstruction interventions.

Recovery is the restoration and improvement of facilities, livelihoods and living conditions of disaster-affected communities including efforts to reduce disaster risk factors. Recovery spans from activities pertaining to damage assessment and debris clearance to actions assumed to support victims to get back to normal life and reintegrate them to regular community functions. Attempts to restore includes provision of temporary service and regaining of lost livelihoods, psychosocial rehabilitation of disturbed community, replacement of buildings and infrastructure and lifeline facilities. The recovery task of rehabilitation and reconstruction begins soon after the emergency phase has ended and should be based on pre-existing strategies and policies that facilitate clear institutional responsibilities for recovery action and enable public participation. Recovery programs, coupled with the heightened public awareness and engagement after a disaster, afford a valuable opportunity to develop and implement disaster risk reduction measures and to apply the “build back better” principle. In a similar path, rehabilitation means measures applied after a disaster which are necessary to restore normal activities and build resilience to future shock in affected areas, communities & economic sectors (Kim and Lee, 1998).

Generally, Disaster risk management approach entails multi-hazard and multi sector approach (with lead agency for management of each hazard); risk/vulnerability profile-based system; proactive ex-ante preparedness and disaster risk reduction and a full disaster risk management cycle (prevention, mitigation, preparedness, emergency response, recovery and rehabilitation).

2.3. Brief historical description of DRM institutional arrangements in Ethiopia

It was obvious that the history of Ethiopia is full of drought& famine which go back to 250 BC. From 250 BC onwards, it has passed through the 1888, 1892, 1921, 1940s, 1956/57, 1961, 1964/65, 1969 and 1973/74 worst famines and droughts. Those disasters were coupled with epidemic disease, loss of human life and livelihoods, displacement and psychological disturbances (NMSA, 1996 and Sue *et al.*, 2009). During this times, Ethiopia did not have any disaster management policy, structure and institution to prevent/ reduce the impacts of the disasters. The humanitarian assistances that were received from the national as well as the international community were little/ no at all because the government hidden the problem from media not to announce to them. The only way the government did during the then time was post

disaster protection and construction of new villages for the victims. In a little bit, the International Red Cross Committee provided assistance to the victims of Ethiopia affected by Italian mustard gas in 1936. On a national scale, the Ethiopian Red Cross gave vaccination campaign for the victims affected by the Kara Kore earth quick in 1961. During the 1957/58 and 1964/65 drought induced famine in Northern Ethiopia, the international TV program played an important role in exposing “The Hidden Famine” to the international community and contributed greatly in attracting humanitarian relief supplies (USAID, 1989). At this time, the government also hurried to establish some initiatives such as the Drought Relief Operation Coordination Office under the Ministry of National Community Development and Social Affairs and Nomad Aid under the Awash Valley Authority to supply relief to famine victims and to assist Afar Pastoralists affected by the famine respectively. On the other hand, the institution of Haile Selassie worked towards the recovery of the affected children at Wollo (Sue et al., 2009). This indicated that there was no coordinated and proactive DRM approaches during the then time.

Generally, even though there were a prevalence of numerous and serious disasters in Ethiopia, there were no organized disaster management institution existed prior to the 1973 famine which severely impacted the northern part of the country. But following this devastating occurrence, the government established a government agency called Relief and Rehabilitation Commission for the first time in Ethiopian history on August 29 under Order No. 93/1974 for reaching out the affected people.

2.3.1. Relief and Rehabilitation Commission (RRC) of Ethiopia

When RRC was established in 1974, during the Imperial regime, it was aimed to provide relief assistance and response to the affected society by requesting resources from domestic and international agencies. National Early Warning System was also established under RRC to predict the impending disasters. But it was not succeeded in preventing and mitigating disasters due to, even many challenges have been exist, lack of coordinated and integrated disaster prevention, preparedness and response effort between local government institutions and the then ministers (Mulugeta, 2010).

The RRC which was established during the imperial regime continued to give function during Derg regime. The Derg regime made some modifications. For instance, it merged the RRC with the Settlement and Awash Valley Development Authorities to coordinate and mobilize resources

for relief and rehabilitation purpose including settlement programs. The regime also established Emergency Food Security Reserve. The Ethiopian Early Warning System was also continued to give function and eight government agencies were assigned to be involved under it having their own responsibilities.

Table 1.1. The government agencies of Derg assigned under EWS and their major roles

Government Agencies	Their major roles
Central Statistics Authority	Gathering crop and market information
National Meteorological Service Agency	Issue seasonal forecast to top decision makers and prepare daily, weekly, ten-days and monthly meteorological reports
Ministry of Agriculture	Monitor crop condition & weekly report on area plough, main crops grow, planted area by crop type, total area affected by rainfall pattern, area affected by pest disease and measures taken to solve
Ethiopian Nutrition Institute	Gather nutrition and consumption data
Ministry of Education	Collects rainfall data
Agricultural Marketing Cooperation	Collect prices on market
Ministry of State Farm Development	Collects data on state farm production and its rainfall
Food Information System	Assess the food situation by monitoring crop production, livestock situation, food stock, flow of food aid imports and prices

Source: USAID Report (1989)

But it did not succeed in putting in place the preparedness plan to protect the country from the other fresh memory of 1984/85 famine in Ethiopia in which eight million people affected and around one million people died in the country. This was due to government official's negligence to reach the information on time, lack of empowerment among local government and local institutions to take part in the management process and weakness of collaborative institutions. Amazingly, during this time, even the famine lost many lives; the government did not allow it to

be official to journalists and humanitarian organizations for the sake of celebrating his 10th anniversary of seizing power (Birtukan, 2014).

In 1986/87, the famine became official and various international institutions took part in the collection of information and in response processes even though they did not prevent the death of that one million people. For example, SAVE-UK maintained nutritional observation program in Wollo. The Christian Relief and Development Agency also produced monthly reports about the nutritional status of households. UN Emergency Prevention and Preparedness Group was also another main input for the enrichment of Early Warning information (USAID, 1989). However, the relationship and coordination between these international institutions was also weak like that of the government designed institutions. Finally, the Derg regime became failed and a new regime came in to power in 1991 and re-organized RRC to design new policies and programs. In 1993, the Transitional Government of Ethiopia enacted the National Policy on Disaster Prevention and Management, a second phenomenal event that added substantial value to the reformation of disaster management towards prevention, mitigation and preparedness. After twenty years, RRC was replaced by Disaster Prevention and Preparedness Commission in 1995 (Mulugeta, 2010).

2.3.2. Disaster Prevention and Preparedness Commission (DPPC) of Ethiopia

The 1993 National Policy on Disaster Prevention and Management (NPDPM) sets the stage for establishment of a network of relationships with relevant regional institutions, international organizations and relevant UN agencies. It also underscored the importance of integrated actions to mitigate and prevent the root causes of drought disaster to which Ethiopians have repeatedly been vulnerable. Depending on these, the policy resulted in to a fundamental shift that took place with significant changes in the mandate of DPPC. So it aimed at preventing disasters by reducing their root causes, building the capacity necessary to reduce the impact of disasters and making check whether the required assistance to victims of disasters reached on time or not (TGE, 1993).

The policy established National Disaster Prevention & Preparedness Committee as a Secretariat to DPPC to implement DRM policies and decisions. Key sector offices such as the Ministry of Agriculture and Rural Development, Ministry of Health, Ministry of Water Resource, Central Statistical Agency, Ethiopian Mapping Authority, MoFED and National Meteorological Agency were involved in disaster management through the establishment of emergency sector task

forces. The organizational establishments created at the national level were also paralleled by similar entities at regional and local levels in the entire country. The policy and legal framework coupled with the institutional mechanisms were created at all levels in the country. It also established an Early Warning System (EWS), Early Warning and Emergency Response Directorate (EWERD) and Early Warning Working Group (EWWG). Mainly, the EWWG aimed at coordinating Early Warning activities related to food-insecurity among government agencies, national and international donors (Sue, *et al.*, 2009). According to the evaluation of the FDRE (2009), however, there were some challenges in performing their objectives. Some of these were:

- ❖ The decision makers on the collected data were the government, international relief and donor agencies, not the people. There existed weak information flow to local people.
- ❖ There were mobilization of international humanitarian assistance that mainly focused on mobilizing external food aid for emergency needs rather than the implementation of EWS
- ❖ There were less cooperation between the media and the National Metrological Agency in which the collected information was not easily available and allowed to the media.

Due to these, the DPPC was updated in to Disaster Prevention and Preparedness Agency in 2004.

2.3.3. Disaster Prevention and Preparedness Agency (DPPA) of Ethiopia

The DPPA established two sectors by splitting itself in to DPPA and Food Security Coordination Bureau (FSCB) aimed at focusing only on acute cases of emergency response and chronic food insecurity response. DPPA was no longer responsible for addressing the underlying causes of disasters and was responsible only to respond to rapid onset hazards or unpredictable events whereas FSCB addressed national food security through PSNP, other food security-related projects that attempted to enhance assets and livelihoods and a voluntary resettlement program (Birtukan, 2014).

DPPA established Early Warning Department which has been conducting regular monitoring of exposure by using various signs of climate, crop, livestock and market situations. It invited representatives from international humanitarian organizations, international development agencies, national and international journalists to detect the state of the country in the affected areas. It also established Early Warning Working Group. This group made an assessment and requested international assistance for the country. Due to this, different international organizations gave fund to Ethiopia to buy short-cycle crops that could be grown during the long

rainy season. But the second assessment of this group announced 14.3 million people were in need of food aid. In any manner, the DPPA come up with many changes; but three years of existence, it changed to DRMFSS in 2008 (Mulugeta, 2010).

2.3.4. Disaster Risk Management and Food Security Sector (DRMFSS) of Ethiopia

Following a series of institutional changes that have begun in 2007, as part of a government-wide Business Process Re-engineering, the government transferred the responsibilities of the DPPA to the Ministry of Agriculture and Rural Development to lead Disaster Risk Management and Food Security Sector. It was aimed to coordinate DRM activities across line ministries involved in and integrating DRM activities at the sector level. It was composed of Early Warning and Response Directorate and Food Security Coordination Directorate. The institution established different task forces that brought together all of the Ministries that deal with DRM at the sector level; forums and different working groups. The EWRD was supported by the Early Warning Working Group with members from line ministries, UN agencies and NGOs that have various assessment mechanisms and methodologies. The system was so arranged to involve all stakeholders, local communities, Federal and Regional governments, NGOs and donors to participate in seasonal assessments and in the production of food supply prospects and monthly Early Warning reports (MoA, 2013).

The government of Ethiopia revised the 1993 NPDPM which focused on drought preparedness and ratified an inclusive DRM policy and strategy in 2013. It recently developed DRM-SPIF and NDRMC in 2014 and 2015 respectively. The policy includes the necessity of a multi-hazard approach in relation to an integrated multi-sector approach grounded in a deep understanding of specific disaster risks and its link to sustainable development efforts and vulnerability; emphasis on prevention, mitigation, preparedness and post-disaster modalities and capacities; decentralization of resources and structures. It also clearly determine DRM responsibilities supported by the capacity for legal enforcement and a high degree of accountability; provides the direction for the kind of DRM system Ethiopia is envisioning to have in the future; relying on organizational structures with appropriate and harmonized roles and responsibilities at federal, regional and *Woreda* levels and ensuring horizontal and vertical coordination among decision-making bodies and effective DRM systems and processes. It aims to enhance Ethiopia's capacity to withstand the impact of natural hazards at the national, local, community and household level

and to significantly reduce the damages associated with disasters by 2023 (NPSDRM, 2013; DRM-SPIF, 2014 and Birtukan, 2014). Finally, corresponding with the change in policy, the DRMFSS change in to NDRMC in 2015 as an autonomous and independent institution.

2.3.5. National Disaster Risk Management Commission of Ethiopia

NDRMC was established in 2015 by transforming the DRMFSS to a full-fledged Commission. This has significantly strengthened its legal and operational framework for a comprehensive and integrated National DRM system at national and local levels. It is guided by the 2013 National Policy and Strategy on Disaster Risk Management and the 2014 Strategic Program and Investment Framework. It changed the institutional landscape for DRM in Ethiopia and created as an autonomous federal government office which is accountable to the Minister of Peace.

The Commission is responsible for coordinating disaster response, risk management, preventive measures and recovery programs in the country. It functions through a well-established structure, duties and responsibilities as clearly listed in its establishment council of minister’s regulation No. 363/2015. Overall, it has a vision of reducing disaster risks and potential damages caused by a disaster through establishing a comprehensive and coordinated DRM system in the context of sustainable development (Proclamation No. 363/2015).

Generally, the historical development of DRM institutional set up passed through a long account that indicated a complex task. Through time, the institutions became changed in their mandate.

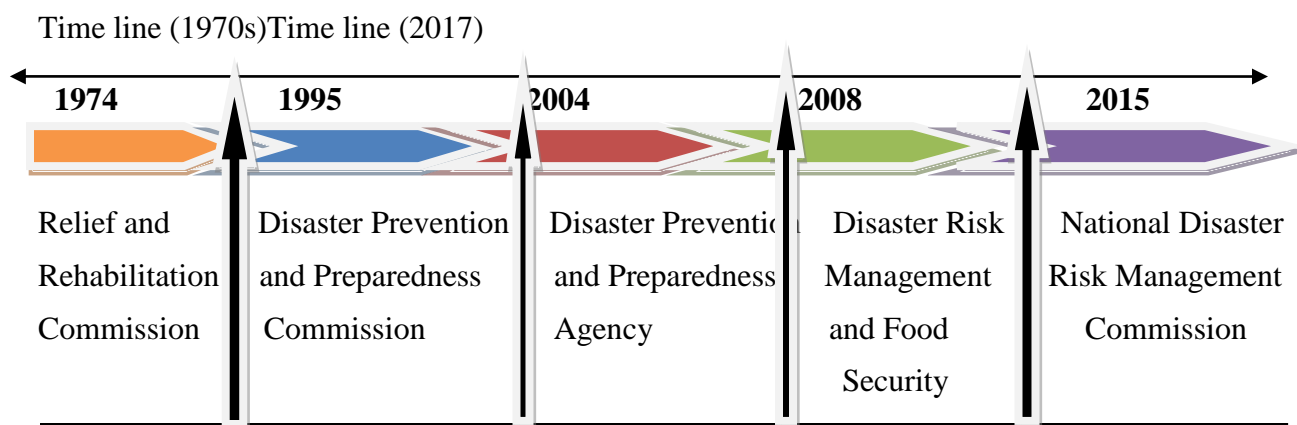


Figure 1.1. Timeline that shows historical development of DRM institutional arrangement in Ethiopia (Source: NDRMC, 2017)

2.4. The policy framework of DRM in Ethiopia

Ethiopian constitution requires government to take long-term preventive measures to avert natural and man-made disasters and effective response measures to alleviate the suffering of communities affected by disasters. Because of this, Relief and Rehabilitation Commission (RRC) were renamed as Disaster Prevention and Preparedness Commission (DPPC) by Proclamation No. 10/1995. The latter lays the legal framework for modern disaster management that places premium on formulating strategies towards prevention and risk reduction measures while at the same time laying stress on coordinated and concerted effort for relief and revival (FDRE, 1995).

Drawing from ministers of key government ministries (Agriculture, Finance, Health, Defense, Economic Development and Cooperation, Public and Urban Development and the Commissioner of DPPC), the legislation also established a National Disaster Prevention and Preparedness Committee (NDPPC). Among others, the Proclamation empowers NDPPC to ensure that disaster prevention programs are dovetailed into the country's long term development policies to authorize expenditures for disaster prevention, preparedness, response and recovery as situations demanding them arise and to declare state of emergency during disaster. The organizational establishments, created at the national level, were also paralleled by similar entities at regional and local levels in the entire country. The policy and legal framework coupled with the institutional mechanisms created at all levels in the country with a lot more investment in prevention and preparedness than ever before, attest to the fact that remarkable transformation has been introduced into the system of disaster management in Ethiopia (Proclam no. 10/1995).

Following this, the Ethiopian government has put in place a Disaster Management policy in 2009 that is highly decentralized (The DRR activities are moved towards local levels through the delegation of authority and resources) and emphasized on the importance of mainstreaming and building capacity for disaster risk management at all levels (from federal to local community). But taking into account the volume, the area coverage of the emergency and the number of actors involved in the country, DPPC requires further improving its capacity to lead and coordinate the response and preparedness activities of various actors more effectively. Therefore, the government wasted little time in reorganizing and renaming DPPC as DPPA that corroborates with the momentous actions, designed new programs and projects to implement the national policy on Disaster Prevention and Preparedness (FDRE, 1995).

Regardless of the attempts made by the government to decentralize and reorganized the system, most of the activities were subjected to centralization. As it is stated in the policy, the DPPC's Early Warning System symbolizes a bottom-up approach but in practice it is a top-down approach. Much of the data collected at the *woreda* level is processed at the federal level and the results are transmitted to the government and relief agencies rather than to the *woreda* officials. The decision makers on the data are the government, international relief and donor agencies, not the people (Burg, 2008).

The system had been practically relief oriented and therefore was quite effective in saving lives, but its contribution to reduce vulnerability to disaster risks as well as poverty reduction efforts became low. Because of this, reengineering the way the country manages its disaster risks and related vulnerabilities was needed. This structure which is based on BPR has brought Early Warning and Response Directorate and Food Security Coordination Directorate under one roof that is called Disaster Risk Management Food Security Sector (DRMFSS) in 2008. The same structures are replicated in all regions of the country for better coordination and implementation (Muluneh, 2013).

The DRMFSS is a new institutional structure which adopted the full cycle of the DRM for the first time in Ethiopia. But 1993 National Policy on Disaster Prevention and Management was revised by the July 2013 National Policy and Strategy on Disaster Risk Management. It marks a paradigm shift in doing business differently- moving away from a system focused on drought and emergency assistance to a comprehensive disaster risk management approach. Finally, The government developed DRM-SPIF and NDRMC in 2014 and 2015 respectively.

The SPIF is based on an understanding of disaster risks; on effective and targeted information flows for decision making and for community DRM; on resources preparedness, ensuring appropriate and timely availability of key resources; on effective implementation capacity, including resource delivery; and on mechanisms for learning lessons and feeding into planning and decision-making (DRM-SPIF, 2014).

2.5. Empirical literature review

Most of the literatures on collaboration underlined the need, role and importance of collaboration for social and economic well-being. White (2001) pointed that institutions will and do experience difference, tension and conflict. Collaboration across different institutions with different practices and histories often referred as boundary crossing (Engestrom *et al.*, 1995), raises issues concerning priorities, identities and operational methods as well as questions about relative authority and influence. Hence, collaboration can be understood as a tension loaded process as a result of the bringing of diverse organizations together with different purposes and cultures. Boundary crossing is to refer the areas of overlap, connections and possibilities for participation. It is a space for shared practice and experiences, processes, procedures and tools (Engestrom, 2000). Luff *et al.* (2000) suggest a sense of collective image can be achieved through the use of tools in collaborative activity and in the process of cognitive activities are distributed, that is, people appear to think in partnership with others with the help of culturally provided tools and implements. The tools that may assist in overcoming such barriers include different types of shared external representation of a problem or domain (Engestriim *et al.*, 1995). Optimistically, he described this tension and uncertainty as a good potential for new learning. However, it does not mean that learning for collaborative activity will automatically follow. Barriers include limited motivation to consider alternative courses of actions (Janis, 1983). A lack of shared mental models can also be a barrier to boundary crossing. Fragmentation of viewpoints makes it impossible for institutions from different contexts to speak the same language and exchange ideas about a problem (Engestriim *et al.*, 1995).

For empirical or practical learning about institutional collaboration, further attempts have been made to look for evidences of success stories. Indeed, though it is not explicitly on disaster risk management and it do not deeply assess how the institutions operationalize their collaboration, a review of literature yields certain success stories that resulted from institutional collaboration. As described in Welch *et al.*, (2000) in Malawi, institutions such as Self Help Development International and Irish nongovernmental organization, worked collaboratively with community members and counterparts from the Ministries of Agriculture and Irrigation, Health and Population, Forestry, Fisheries and Environmental Affairs, Women, Youth and Community Service and Education and Culture to develop community action plans. The partnership brought

together expertise in different technical areas and different social structures (households, communities and institutions) by using a highly participatory, gender-sensitive approach.

In relation to institutional collaboration in DRM practices in Ethiopia, there are no as such plenty empirical literatures. But different documents indicated that DRM in Ethiopia is not practiced in terms of its intended way because of weak institutional collaboration. Meklitet *al.* (2016) emphasized that even though different sectors are responsible for DRM, there is a serious weak institutional collaboration in development agenda and DRM in Ethiopia. In addition to this, considering DRM as a single sector task is another weakness of institutional collaboration. Corresponding with these, there are some constraints of institutional collaboration in joint management of disaster risks in Ethiopia. These are financial constraints, lack of capacity for making informed decisions, technical constraints (skill and knowledge of working together), lack of facilitator and clear regulation on collaboration (the need to bring all relevant cross-sector institutions round a table, communicate more effectively and reach in mutually agreeable solutions) and rapid staff turnover (missing of experienced, skillful and knowledgeable staffs).

But it is not deniable that there are some improvements in institutional collaboration in DRM in Ethiopian sectors. Some made adoption of new legislations while others adopt new institutions (Dewald and Ben, 2014). Corresponding with this, Ethiopia has also established government units and departments to lead the management of disaster risks for reducing risk factors. But the problem is how these sub-groups coordinate activities both during and outside of disasters to achieve jointly agreed objectives. So for this, it requires multi-sector approach that will facilitate the necessary coordination for managing disasters at all levels and in any institution.

CHAPTER THREE: RESEARCH METHODS

This research was aimed to understand the practices, challenges, achievements and opportunities of institutional collaboration in DRM in Ethiopia particularly lead sector institutions identified by the Ethiopian NDRMC policy and strategy and international humanitarian partners to reduce risk factors. For the sake of achieving the objective of the study, the methodology part of the research was organized in the following ways by incorporating research design and approach, data type and source, sampling technique, data collection tools and method of data analysis.

3.1. Research design and approach

Research design is a map of how the researcher going to conduct the research. It focuses on the end product of the research, formulate the research problem and a point of departure and focuses on the logic of the research Whereas research approach is a situated activity that locates the issue under study in one or above position from the three basic strategies of research (Creswell, 2007).

For the purpose of completing the objective of this research, the researcher principally employed qualitative research approach and descriptive case study design since it described the working conditions of institutions. Besides, this is because of the fact that qualitative research approach helped the researcher to seek out detailed practices of the institutions and to get the deep view of participants (Creswell, 2009) whereas descriptive case study design was adopted to carry out an in-depth examination, inquiry and review by describing the nature of a group situation (Yin, 2003) on the collaborative efforts of institutions in DRM in Ethiopia to reduce risk factors. In relation to case study, it was appropriate to investigate more than one institution if the problem under study is similar (Creswell, 2007) in all institutions. Therefore, depending on this design and approach, the researcher was aimed to assess the practices, challenges, achievements and opportunities of institutional collaboration in DRM in Ethiopia.

3.2. Data types and sources

For the purpose of this research, both primary and secondary data sources were employed. The primary data sources were used to answer the particular questions that the researcher posed under the study while secondary data sources were attempted to interpret, explain and analyze primary data sources. Comprehensive and realistic data, ideas, viewpoints, concepts, arguments and suggestions was collected so as to come up with profound research outputs and thoughtful recommendations. While collecting the data, ethical considerations was seriously taken in to

account to ensure the concern, integrity, anonymity, consent and other human elements of the informants. The most important data sources for this study were accessed from NDRMC. In addition to this, the policies, strategies, programs, reports, plans and relevant documents of line ministries and humanitarian partners were reviewed. The reason behind is that lead sector institutions are the basic institutions in which NDRMC give high mandate to the issue under the study whereas humanitarian partners are actors that involve in the DRM practices of Ethiopia in a voluntary basis.

3.3. Sampling technique

The study used non-probability sampling technique which is used to identify the most relevant targets to select some group of samples that represent the whole population and to spot the most constructive and likely sources of information (Kothari, 2004) to the study. From the types of this technique, purposive sampling technique was employed.

Purposive sampling technique is a deliberate choice of informants who are willing to give deep information due to their knowledge and experience with the issue understudy (Tongco, 2007). Corresponding with this, NDRMC, as a study site, was selected purposefully based on the mandate given by the Council of ministers regulation number 363/2015 to conduct appropriate activities for the comprehensive implementation and realization of the objectives of the National Disaster Risk Management Policy and Strategy and coordinate, monitor and provide appropriate support with respect to activities carried out by the lead sector institution. The directors, consultants and experts of this institution were purposively selected because they were the appropriate bodies to exactly respond the research questions. Even if sample size is not fixed prior to data collection due to theoretical saturation, the number of samples for directors, consultants and experts after the interview were seventeen. Interviewing these informants that were found at different tasks and positions helped the researcher to get detail point of views and to cross-check the data that is gained from one to the other.

Since the researcher selected purposive sampling, the validity and reliability of the sample was kept by following a maximum variation sample. This involves the selection of key informants that have the skill and experience on the issue in question because of their sheer involvement in and knowledge of the situation under the study. This was determined by the purpose of the research to reduce bias. On the other hand, the researcher tried to select the samples thoroughly

based on their particular knowledge, experience and skill on the phenomenon. Due to this, the researcher believed that relevant NDRMC members were purposively selected for the interview.

3.4. Data collection instruments

Even though there are many tools that are used to collect data in qualitative research, to serve such a purpose, key informant interview and document review were used. In this research, primary data was collected from directors, consultants and experts of the institution who are knowledgeable and proximate to the issue under study by using interview. This helped to take detail information by preparing well-thoughtful pre-designed semi-structured interview guide which was used to explore the views of the respondents. While to maintain the relevance and consistency of the primary data, secondary data was collected from systematic documents like policies, strategies, programs, proclamations, reports, minutes, published and unpublished materials, manuals, web pages, institutions publication and magazines. The offices that the researcher used for collecting secondary data were lead sector institutions and humanitarian partners basically UN agencies (OCHA, FAO, WHO, UNICEF, WFP), donors and NGOs. So, in order to examine the practices, achievements, challenges and opportunities of these institutions in DRM in Ethiopia, the researcher conducted a series of key informant interviews with the purposively selected directors, consultants and experts working in NDRMC and documents review of these collaborative institutions.

3.4.1. Key informant interview

According to Russell and Hershberger (2003), key informant interview were carried out with the intention of capturing more firsthand data. It was aimed to facilitate open interaction between the key informants that can yield vital, broad and detailed information and the researcher through inviting key figures in the institution relevant for the issue under discussion to participate in open dialogue. It was done through face-to-face interview. In line with this, the informants were selected based on their experience, responsibility, expertise, involvement and knowledge of the study area for a long period of time. This was supplemented the quality and reliability of the data in one way. All interviews was carried out by the researcher with leaders, consultants and experts of the institution with the aim of making further investigation on the basis of the information received from the respondents. The key informants were seventeen including three directors,

three consultants and eleven experts from DRR Directorate, EWER Directorate and Disaster Response and Rehabilitation Directorate.

The interview took place in the form of semi-structured questions using recorder. Twenty nine semi-structured questions was conducted to key informant interview by using open ended type of questions in Amharic as a guide for the interview and the interview schedule to effectively and timely complete the interview. According to Kothari (2004), semi-structured interview questions helps to dig out detail information about certain underlying phenomenon. It enabled the researcher to flexibly ask questions that are pertinent to understand the issue from different perspectives. Questions that is not predetermined was raised and brought deeper and detail explanations of ideas from different perspectives. Until the point of saturation did reach, the researcher was interviewed each leaders, consultants and experts of the institution. But when the point of saturation did reach at seventeen interviewees, the researcher decided to stop it and cross-check the respondents view with the documents.

3.4.2. Document review

Besides the afro-mentioned data collection techniques, intensive desk review of published and unpublished literatures was carried out. These literatures were both from public and private. For instance, the available public documents were agreement letters, plans, implementation reports, manuals, task force discussion minutes and reports of institutions. Whereas private documents such as books and journal articles were assessed. All in all, to make this research more valid, credible and appropriate, secondary sources were employed in a comprehensive manner.

In particular occasions, the researcher attended two meetings at the time of data collection. The first meeting was organized by the NDRMC with lead sector institutions and UNOCHA representatives on the issue of “Mainstreaming disaster risks in to the development planning process and future investment decisions of Ethiopia.” The second meeting that the researcher attended was organized by UNOCHA with DRMTWG representatives that focused on the semi-monthly disaster assessment. In such official meetings, the researcher’s role was simply to observe what was going on. In both cases, the researcher asked to attend the meeting and obtained oral consent from the Deputy Commissioner of NDRMC. This was the time that the researcher, informally, contacted with the coordinator of UN agencies and the secretary of DRMTWG, which is UNOCHA Director, to give some information about the humanitarian

institutions that involve in DRM practices in Ethiopia. He gave more significant information about the working conditions of institutions.

3.5. Methods of data analysis

The data analysis took the form of content and interpretive analysis. The content analysis took place to analyze the data that was collected from different sources. This method of analysis helps to categorize the collected data for the purpose of classifying, summarizing and tabulation. It can be done through interpretive analysis. Depending on this, the existing institutional collaboration practices, achievements, challenges and opportunities were explained by interpretive data analysis which focused on providing meanings and explains the experiences and insights of the key informants in the context of institutional collaboration in DRM in Ethiopia. Basically, key informant interview was analyzed and discussed through opinion interpretation after sorted out, grouped and organized. This was also aimed to dig out the issues under investigation.

In fact, some respondents were found to be reluctant to be recorded because of some personal reasons. Due to this, the researcher simply recorded the opinions and views of the respondents. But most respondents were willing to be phone-recorded. Because of this, the ideas of some key informants were directly quoted and interpreted. The data obtained through interviews was also paraphrased, described and interpreted based on the nature of the data. Eventually, all the refined ideas obtained from the respondents were carefully translated into English and interpreted by using multiple qualitative methods.

The themes of interviewees, document reviews and observations were coded into different categories on the basis of pre-identified concepts in the literature part of the study.

CHAPTER FOUR: RESULTS AND DISCUSSION

The data analysis and interpretation section of this thesis contained four major components. In the first place, the report contained the historical account of DRM institutional set up of Ethiopia since 1970s. Secondly, it showed the collaborative institutions institutional set-up and their role in DRM in Ethiopia. Thirdly, the analysis clarified the practices of institutions in DRM in Ethiopia in the last five years and how institutions collaborate to encourage the DRM. Recognizing the culture of collaboration among institutions, the last section has told the achievements, challenges, opportunities and contributions of institutional collaboration in DRM in Ethiopia for Environmental Management and Sustainable Development success.

4.1. Collaborative institutions institutional set-up and their role in DRM in Ethiopia

Disaster risk management is an organized method of using institutional directives, operational skills and capacities to implement strategies, policies and improved coping capacities in order to reduce the adverse impacts of hazards and disasters (UNISDR, 2012). This indicates that institutions have a great role in the management of DRM cycle phases. They are also important to mediate the relationship between disaster risk management with development and humanitarian actions. Therefore, it is unthinkable without the active position of institutions.

In Ethiopia, DRM is a collaborate effort of different institutions that play a pivotal role mainly from prevention up to rehabilitation. They organize actions, organize technical capacities, ensure short and long term development goals and implement locally relevant DRM strategies. These institutional actors are governmental and international organizations, CSOs, donors, UN agencies and diverse national and international NGOs (DRM-SPIF, 2014).

4.1.1. National governmental institutions

National Disaster Risk Management institutions are driving forces that help to plan, implement, monitor and evaluate process and product of DRM within a country and to ensure coordination among all stakeholders involved in any phase of DRM. In addition, they play a crucial role in integrating DRM efforts into development policies and programs in order to lessen the exposure of community livelihoods to hazards. These institutions also develop policy frameworks, disaster management plans, codes of conduct in relief and development, guide and assist in developing early warning systems and declaring states of emergency during disasters. They lead the channel of communication with the general public and sector agencies at different levels. From the policy

document, it can be realized that national DRM institutions are incorporated under governmental lead sector institutions and faith and community based institutions. Even though it is not sufficient to ensure the DRM system to be functional and operational, the coordinating role of DRM institutions are essential (NPSDRM, 2013; DRM-SPIF, 2014). Depending on this, the NPSDRM of Ethiopia identified eleven lead sector institutions that are responsible for DRM and risk prevention tasks. Accordingly, it identified parallel hazard types that the institutions must consider in their day-to-day activities. This type of incorporating risk is sector-specific hazards.

Table 4.1. Lead sector institutions and their major responsibilities towards DRM

Lead sector institutions	Their major responsibilities/hazard types
Ministry of Agriculture	Responsible to livestock disease, crop pest and address disaster-induced lack of animal feed and crop seed supply
Ministry of Environment, Forestry & Climate Change*	Responsible to forest and bush fire as well as climate change and environmental and pollution related hazards
Ministry of Health	Responsible to food shortage induced-malnutrition affecting children and mothers and other human epidemics disasters
Ministry of Water, Irrigation and Energy/Electricity	Responsible to floods and other water supply and water dam related hazards and associated disasters
Ministry of Federal Affairs*	Responsible to conflict related hazards and disasters
Ministry of Transport	Responsible to transport service related hazard and disasters
Ministry of Mines	Responsible to geological hazard and related disasters like seismic, volcanism, earthquake, landslides and slope failure
Ministry of National Defense	Responsible for search rescue, maintain order and provide support to crisis intervention in times of disasters as required
Ministry of Urban Development & Construction	Responsible to urban infrastructure, building & construction related hazards and other urban disasters including fire
Ministry of Education	Responsible to mainstream DRM into school curricula and add into studies conducted by higher learning institutions
Region, Zone, <i>Woreda</i> , Addis Ababa and Dire Dawa City Administration	Responsible to activities that range from monitor to response with respect to hazards and related disasters that are not under the responsibility of the Federal government

Source: The NPSDRM of Ethiopia (2013)

N.B. (*) indicates that the line ministers are not active in the present context and they are replaced, merged and changed by/or with other line ministers. For instance, the ministry of Environment, Forest and Climate change has been changed to Commission.

From the table, it can be understood that, since its establishment, the NDRMC has played a major role in providing coherent framework and policy for DRM at national, regional and local level; coordinating DRM activities undertaken by line ministries and developing common baselines and methodologies for risk profiling and coordinating more unified, transparent and objective of Early Warning System.

Generally, these national lead sector institutions are assigned for every hazard at Federal, Regional, Zonal, and District as well as at Addis Ababa and Dire Dawa City Administration levels for the implementation of DRM policy. These are also responsible for undertaking activities ranging from monitoring to response and evaluation. They play a leading role with respect to hazards and related disasters relevant to their respective sectors, disasters that occur and affect more than one region when the response operation becomes beyond the capacity of the affected region and provide and coordinate response operation when a disaster occurring is likely to spread quickly and cover vast areas (NPSDRM, 2013).

On the other hand, the current mainstreaming guideline identified eight key sectors for mainstreaming DRM. These are: Agricultural and rural transformation sector, Environment and climate resilient green economy, Health sector development, Potable water supply and irrigation development sector, Integrated transport and logistics services, Urban development and housing, Education and training and Social welfare and security. The Ministry of Finance and Economic Corporation is also considered as the key agency for mainstreaming DRM with particular consideration of budget and resource allocation for mainstreaming activities (NPC, 2016).

For each sector, lead sector agencies are identified. While doing DRM mainstreaming, the sector lead agencies may utilize data and resources available with NDRMC, such as, Woreda Disaster Risk Profile (WDRP). Where the data is not efficient, the NDRMC and lead sector agencies may work together for enhancing the data/sources for DRM mainstreaming for the selected sectors. The relevant data for DRM mainstreaming is supposed to be provided by the relevant lead sector agencies are subject for assessment in collaboration with NDRMC and respective lead sectors.

Table 4.2. Selected sectors and lead sector institutions for DRM mainstreaming

Sector for DRM mainstreaming	Lead sector institutions
Agricultural and rural transformation sector	Ministry of Agriculture and Natural Resources
	Ministry of Livestock and Fishery*
	Ministry of Environment, Forest and Climate change*
Environment and climate resilient green economy	Ministry of Environment, Forest and Climate change*
	Ministry of Finance and Economic Cooperation
Health sector development	Ministry of Health
Potable water supply and irrigation development sector	Ministry of Water, Irrigation & Electricity
	Ministry of Health
Integrated transport and logistics services	Ministry of Transport
	Ethiopian Rail Ways Corporation
	Ethiopian Civil Aviation Authority
	Ethiopian Road Authority
	Ethiopian Shipping Agency
Urban development and housing	Ministry of Urban development & House
Education and training	Ministry of Education
Social welfare and security (safety net)	Ministry of Labor and Social Affairs

Source: NDRMC (2017)

N.B.(*) indicates that the line ministers are not active in the present context and they are replaced, merged and changed by/or with other line ministers. For instance, the ministry of Environment, Forest and Climate change has been changed to Commission whereas Ministry of Livestock and Fishery has now been merged with Ministry of Agriculture.

4.1.2. NDRMC administration structure

With the systems of administrative structure, there is DRM council and DRM Coordination. Under this framework, the Federal Government has the task of preventing disasters and providing timely response when it strikes and establish disaster response preparedness and response system. Each Regions, Zones and Districts has undertake activities ranging from prevention to rehabilitation using their own capacities. Response operations that exceed the capacity available levels of government must be assumed by the next level of government (NPSDRM, 2013).

Disaster Risk Management Council

DRM Council is the highest policy body in the country's administrative framework in terms of risk management that is chaired by the Minister of Peace and has members including from the above identified lead sector institutions. It is mandated to oversee the implementation of NDRM Policy and Strategy; monitor and evaluate its implementation and amend this policy and Strategy as required, make a decision on policy issues regarding disaster risk management, provide general direction regarding issues related to DRM, ensure that appropriate law, directive, framework, plan and proper organizational structure are in place to support disaster risk management undertakings, declare disaster officially in accordance with article 93 of the constitution, allocate additional resource from government and mobilize resources from domestic and international sources through DRMC Structure for disaster response purposes and ensure that disaster response fund, food and non-food stocks as well as additional resources allocated by the government and mobilized from domestic and international sources are properly utilized for disaster response purpose (DRM-SPIF, 2014 and NDRMC, 2017).

Disaster Risk Management Coordination

DRM coordination committee runs DRM activities at all levels of the government. For instance, the federal DRM coordination structure under take activities such as ensuring the proper and implementation DRM policy across all institutions; consolidate plans and implementation reports prepared by DRM structures at federal, regional and city administrations levels; coordinate response operation in the event of disasters that either not included in the duty of anyone of the designated lead sector institution or exceeding their capacities; oversee disaster response fund and non-food stocks to be used for disaster response; establish a mechanism for collaboration and mutual assistance around DRM activities among neighboring regions. (NPSDRM, 2013).

It coordinates the activity of development and disaster risk profile based on the profile and concerned bodies; serve as repository for DRM information at national level; arrange EWS; establish and manage coordination platforms to ensure effectiveness and achievement among actors that have roles in DRM; mobilize resources from domestic and foreign sources and manage and utilize it through lead sector institutions with concerned bodies (Ibid).

It also develops legislations, directives, strategic programs and investment frameworks and implementation plans required for putting the National DRM Policy and Strategy into practice; facilitate and follow up implementation; facilitate conditions for continued progress in participation and role of the private sector and media as far as the implementation of DRM Policy and Strategy is concerned; promote research and studies in the area of DRM and provide the necessary support; in cooperation with concerned bodies, facilitate conditions for DRM activities to be implemented in a coordinated and integrated manner with climate change related risk reduction and social protection activities; provide technical and capacity development support in the area of DRM to regions and other concerned bodies; establish relationship with international organizations and states to seek support towards strengthening the DRM system and to make it effective (DRM-SPIF, 2014).

Duties of DRM coordination structures to be established at Regional, Zonal, District and Addis Ababa and Dire Dawa City Administration levels must be consistent with those duties given to the Federal Coordination structure and they must be prepared by Regional States. However, mobilizing resources from international sources and establishing relationship with international organizations and states to seek support are the sole task of the coordination structure that is established at the Federal level and this task is not included in duties of coordination structures established at Regional, Zonal, District (DRM-SPIF, 2014).

In a particular manner, one of the interviewee indicated that the following institutions are present for their respective preparedness and response for hazards at the zonal level. These are Zonal Administration Office, Zonal Water Office, Zonal Capacity Building Office, Zonal Pastoral and Rural Development Office and Zonal Planning and Economic Office. In line with this, at the regional, zonal and *woreda* levels, the Food Security and Disaster Prevention and Preparedness Bureaus are the authorities responsible for coordination.

Humanitarian Coordination Architecture in Ethiopia

Ethiopia has complex coordination structure even though the humanitarian community has tried to merge clusters with government-led sector task forces. Several interviewees felt that the coordination structure is too heavy with a plethora of meetings. As the excess of meetings, the practices of the humanitarian institutions are not as such tremendous.

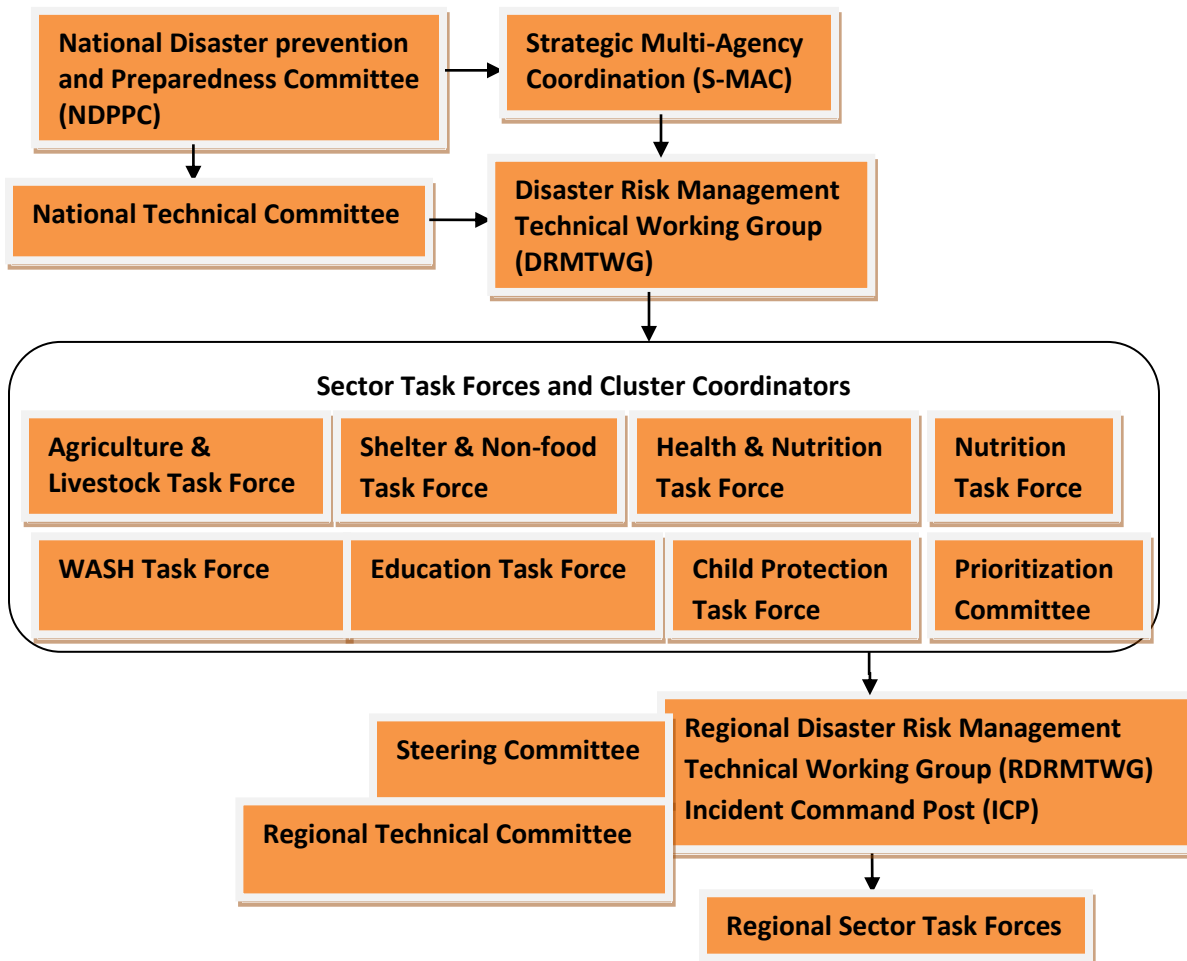


Figure 4.1. Government institutional collaboration structure (Source: NDRMC, 2017)

According to the diagram, the National Disaster Prevention and Preparedness Committee provide policy guidance on strategic DRM related issues. Government at federal, regional, zonal and *woreda* is responsible for the overall coordination of the humanitarian response, facilitate for the participation of partners including donors, UN agencies, national and international NGOs, CSOs and affected communities (UNOCHA, 2013). It is chaired by deputy prime minister, membership comprising minister of various line ministers and NDRMC. It is the highest level of national emergency coordination forum. It also reviews and approves annual HRD.

At a higher level, NDRMC Commissioner and the humanitarian coordinator co-chair a Strategic Multi-Agency Coordination (S-MAC) forum to deliberate on humanitarian response operations and address challenges. In relation to S-MAC, one of the interviewee replied that it is activated at the times of crisis. The coordination structured in terms of Strategic Multi-Agency Coordination and Technical Multi-Agency Coordination. S-MAC group within the framework of National Incident Management System (NIMS) facilitates the establishment of an Emergency Operation Center (EOC) to collect and monitor information from all parts of the country on a regular basis to enable early and smooth emergency response. S-MAC helps improve inter-sector responses. That is it is open to sector task forces only. It manages federal response at the government side.

One interviewee who has worked in NDRMC for 38 years expressed her view in relation to S-MAC from the past perspective in such a way:

As I know MAC group was established at the time when DRM process was under the MoA, DRMFSS. During that time MAC was composed of representatives from those lead sector institutions identified by the Minister. These representatives were the leaders of the respective task force. It also comprised members from humanitarian partner directors. All, under the MAC group, coordinate and provide strategic guidance to facilitate effective response measures at all levels.

From the interviewees, it can be understood that S-MAC was established during the time that DRM practices were performed under MoA. Mostly, it becomes active at the time of emergency. Since it is active at the time of emergency, it is chaired by the NDRMC commissioner. The Humanitarian coordinators (HC) play a co-chair role. The reason behind that HC co-chair is because CERF funding reaches to it and reach the UN system to the broad humanitarian communities. It is also composed of heads of the collaborative institutions, UN agencies representatives, NGOs representatives and line ministers' representatives. It has a vital role in informing early warning and emergency response information to the concerned bodies to make decision on it. Basically the Multi-Agency Early Warning Working Group helped for the development of Vulnerability map. Also, it is a group that became active at the time of disasters.

During the time that DRM was under DRMFSS, there was also the so called Incident Command System. This helped the group by exchanging information regarding to response and the realities on the ground. With these tasks, the MAC group, with the permission of DRMFSS, established

another group that we call it Early Warning and Emergency Coordination Centre, administered under DRMFSS. This center helped the MAC through implementing its decisions (MoA, 2013).

In relation to the responsibility of coordinating and monitoring the progress of DRM Strategic Program, it lies with the DRM Technical Working Group (DRMTWG). DRMTWG supports the implementation of multi sector and multi hazard DRM approach in Ethiopia. It also provides a place for the joint meeting and support of humanitarian and development partners. It is chaired by NDRMC and co-chaired by UNOCHA. Membership is open to sector task force chair, cluster coordinators, UN agencies, NGOs and donors at the technical level. Frequently, they meet twice a month or monthly as the problem become necessary and urgent.

One DRM consultant responded that DRMTWG brings all actors of DRM together and coordinates their inter-sector response towards the disasters. It also offers early warning information with triangulated inputs in joint with the EWRD. Finally, the group links the early warning information and assessment outputs with timely and proper response measures. So it is used as a link for DRM coordination structure and sector working groups. From this point, it can understand that DRMTWG has been working as a focal group in coordinating all the phases of DRM. In relation to it, different literatures indicated that DRMTWG is comprised of methodology sub-working group, DRR sub-working group and emergency task forces. The methodology sub-working group comprises of logistics and HRD editorial committees. As a sub group, each works on a technical aspect of preparation of the bi-annual national need assessment related to HRDs. The emergent task force, on the other hand, is established for key crisis that call for a multi-sector response for disasters like drought and flood.

Generally, DRMTWG is chaired by the NDRMC which is primarily responsible for coordinating DRM strategic program in the country. It supports the implementation of multi-sector and multi-hazard DRM approach in Ethiopia in addition to providing a platform for the mutual engagement and support of humanitarian organizations and development partners. Still the group continues to work as the joint coordination forum on all DRM phases: pre-disaster (prevention, mitigation, and preparedness); during disaster (response); and post-disaster (recovery and rehabilitation).

In addition, each sector taskforces are chaired by the leader of relevant line ministers and supported by a cluster coordinator from the international community. Membership is open to all agencies working in the sector at the technical level. It is also responsible for formulating sector

strategies and response plans; coordinating sector response at federal and regional levels; and performing the exact review of HRF projects in the sectors through the relevant cluster leaders.

Particularly, one interviewee responded the working condition of DRMTWG as:

We are performing our work in the support of series of Technical and Sector Task Forces such as agriculture, WASH, health, nutrition and education. These Task Forces are primarily responsible for coordinating their respective sector and they are headed by respective relevant government line ministries. The sectors are supported by organizations from other line ministries, UN agencies and civil society organizations. Cross-cutting to all these is the Working Group on Mainstreaming DRM that work with DRMTWG and all other sector Task Forces to mainstream discussions on vulnerabilities associated with vulnerable groups.

From the interview, it can be grasped that DRMTWG is a multi-agency national DRM platform that function from federal to regional level in collaboration with clusters. It is the umbrella forum that takes all actors jointly at the technical level with government and donor representatives. With the development of the crisis, the government and humanitarian partners are working together to strengthen regional DRMTWG. The natural home for a national platform on early warning early action in Ethiopia is the DRMTWG which is led by NDRMC. A number of Task Forces report to this group including agriculture, health and nutrition, water and food.

On the other hand, NDRMC forms thematic groups that are composed of relevant government ministries corresponding with cluster coordinator, UN bodies and NGOs to coordinate responses. These sector task forces facilitate coordination between institutions both at federal and Regional levels. These are Agriculture, shelter and non-food item, Health and Nutrition, WASH and Education that are led by Ministry of Agriculture, Ministry of Health, Ministry of Water and Energy and Ministry of Education respectively. These Taskforce leaders are responsible for coordinating, monitoring and reporting on emergency and recovery interventions in their respective sectors in partnership with the relevant partners which include UN agencies.

At regional and lower levels, there are similar government coordination bodies. Depending on the severity of the problem, donors and NGOs also create coordination bodies at Regional or *Woreda* levels. Coordination at lower level remains weak due to lack of capacity and

information. These various task forces, most of them, meet on weekly, bi-monthly basis, monthly and fortnightly to coordinate sector measures under the umbrella of the NDRMC.

In relation to the sector task forces, one NDRMC higher official responded in the following way:

The Government is working with sector actors to shift to sustainable interventions. For example, in a chronically water insecure areas where water trucking interventions are yearly undertaken, the government and partners introduced a joint action plan to reduce water trucking by a means of investing more on construction of sustainable water source. The sector taskforces are developing DRM strategy focusing on better integration of resilience into sector response planning; there has also been some shift from donors towards funding resilience projects. More efforts are being placed towards linking emergency lifesaving interventions to long term development interventions to address the root causes of vulnerability to shocks. For example, in the nutrition sector, five years National Nutrition Program has been developed to strategically address the nutrition crisis in the country taking a multi-sector and multi-dimensional nature.

This speech indicated that the NDRMC works in collaboration with different stakeholders to reduce disasters and to intervene to achieve the sustainability of the community in the affected areas. Institutional collaboration, in this way, helped the sectors themselves to have sustainable development and reduce disaster risks. For this purpose, the sector task forces are in the way of developing DRM mainstreaming plan in their development planning process.

Obviously, DRM mainstreaming means to consider and address risks emanating from natural and anthropogenic hazards in medium-term strategic development frameworks, in legislation and institutional structures, in sector strategies and policies, in budgetary processes, in the design and implementation of individual projects and in monitoring and evaluating them. It includes both risk assessment and risk treatment elements. It can be defined as any actions, processes and practices that take into consideration and integrate risk factors and the possible effects of disasters and that identify and promote DRM as a key social, economic, environmental and developmental agenda priority. It seeks to integrate DRM into strategic frameworks as well as institutional thinking. Furthermore, it seeks to translate these into programs and activities from the national to local levels and across various development interventions (NDRMC, 2017).

4.1.3. International governmental and non-governmental institutions in DRM

In addition to government coordination efforts, there are also networks and coordination bodies in Ethiopia with the donors, UN agencies and NGOs. Thus, NDRMC not only forms thematic groups in Ethiopia but also coordinates task forces by using different UN agencies, donors, INGOs, humanitarian and development partners. In this way, international governmental and NGOs, bilateral and multilateral organizations played a vital role in DRM process in Ethiopia. The existence of effective coordination among international institutions is crucial to ensure timely and inclusive humanitarian response through proper implementation of strategies to tackle humanitarian needs and effectively avert risks of disasters (DRM-SPIF, 2014; NPSDRM, 2013).

As an indicator, the EHCT, which is led by the HC, provided a coordination mechanism for the government, UN agencies, NGOs and Donors. It composed from the heads of UN Agencies including FAO, OCHA, UNDP, UNFPA, UNICEF, WFP and WHO. It is working with the Government of Ethiopia on all aspects of humanitarian response. UN agencies, NGOs and donors provided substantial support to capacity building of government agencies, particularly at local-levels and in the remote parts of the county. Such support has contributed to effective leadership, improved responsiveness and positive orientations to the poor, the rights of children, women and other affected groups (UNOCHA, 2016).

Table 4.3. Some UN agencies and their major activities related to DRM in Ethiopia

UN agencies	Their major activities in DRM in Ethiopia
OCHA	<ul style="list-style-type: none"> ✚ Take strong livelihood approach to regional coordination in relation to crisis ✚ Work closely with pastoralist initiative communication on regional initiatives ✚ Follow up the humanitarian coordination activities ✚ Convey inter-cluster coordination mechanism which meets every two weeks ✚ Provide a forum for respective cluster leaders to discuss issues of mutuality ✚ Administer humanitarian response fund to support response measures ✚ Mobilize effective humanitarian action in partnership with actors.
WFP	<ul style="list-style-type: none"> ➤ Capacity development with national and regional institutions. ➤ Build resilience and protect the vulnerable community. ➤ Analyze and monitor food security and early warning
FAO	<ul style="list-style-type: none"> ❖ Provide vital support to livestock-dependent communities ❖ Mobilize large recorded emergency seed distribution to affected farmers. ❖ Improved livelihood recovery by promoting good practices and monitor threat ❖ Provide technical and capacity building support ❖ Promote climate smart agriculture techniques ❖ Enhance resilience by promoting conservation and rehabilitation of resources ❖ Work with national, regional, zonal partners to ensure humanitarian response ❖ Enhance information access through coordinating and contributing support to various assessments to inform timely and effective decision making
UNICEF	<ul style="list-style-type: none"> ○ Support the health, nutrition, WASH, education and protection of children ○ Signify key path to end poverty and intergenerational disadvantage ○ Strength resilience and advance longer-term development of societies ○ Respond to emergencies using its in-country capacity developed through long-standing collaboration between the UNICEF country office key partners ○ Deliver emergency life-saving assistance, rebuild and revitalize systems so that humanitarian response contributes to long-term development ○ Enhance community capacity to protect and address the needs of vulnerable children in humanitarian crises and progress towards achieving 2030 Agenda

Source: Own illustration from different literatures

In addition to the above UN agencies, there are other agencies that are involved in DRM in Ethiopia. In a broad way, UNOCHA is involved in the coordination of all activities related to humanitarian responses when disasters occur. It also coordinates the DRMTWG. UNICEF, on the other hand, involves in the nutrition guideline development; co-chairs malnutrition taskforce; participate in the hotspot classification; participate in emergency need assessment and bi-annual seasonal assessment. It also coordinates water, sanitation and hygiene.

FAO is also involved in the maintenance of Food security, coordinate and co-chair the agricultural task force, provide emergency seed, emergency livestock feed when disasters happen and emergency animal drug and vaccine. It also participates in the flood task force and in the *meher* and *belg* seasonal assessments which are conducted to determine short term food insecurities due to emergencies. Lastly, it coordinates and facilitates the integrated food security phase classification (IPC) i.e. a food security tool.

In collaboration with others, WFP facilitates Livelihood Early Assessment and Protection (LEAP) software to be used as source of early warning information; coordinate bi-annual seasonal assessment; involved in capacity building, early warning tool development, early warning monitoring, emergency response (emergency logistics tool and item provision) and Nutrition-Targeted Supplementary Feeding. On the other hand, International NGOs, in general are involved in community based capacity building, participate in DRR, mitigation and involved in WDRP Development. All are the members of DRMTWG.

Many interviewees expressed the practices of UNDP in the DRM practices in Ethiopia in terms of that it aims to strengthen the program of National Capacity for Disaster Risk Reduction and Livelihood Recovery which aims to strengthen the application of DRR practices throughout Ethiopia. It supports the government in its efforts to systematically reduce disaster risks and impacts of disasters and to improve food security by developing capacity of national, regional and district level institutions as well as communities. At the upstream level, it supports the government in creating the building blocks for the national DRM architecture. It had supported in designing the DRM-SPIF, National Emergency Coordination Center and African center for DRM. On the other hand, at the grass root level, UNDP provides support to communities to enhance resilience building by promoting the “build-back-better” approach and addressing the

underlying causes of disasters. This is done through enhancing livelihood recovery initiatives designed in the drought or flood prone areas such as cash-for-work schemes and restocking.

On the other hand, the Office of UN Resident Humanitarian Coordinator in Ethiopia organizes regular meetings with the UN Strategic Disaster Management Team to ensure the effective coordination of humanitarian assistance and disaster reduction efforts. It plays an imperative role in following up the humanitarian coordination activities. On the NGO side, there are also thematic groups and forums under the umbrella organization called CRDA. There are also small coordination groups based on geographic and sector areas and other alliances like Save the Children alliance and Oxfam International that work on agreed action plans.

In addition, the Ethiopia Humanitarian Country Team is the principal humanitarian policy and decision making body. Its role is to provide guidance on major strategic issues related to humanitarian action in country including developing strategic vision, setting strategic objectives and priorities and developing strategic plans. EHCT is chaired by the Humanitarian Coordinator and is composed of UN agencies working in the humanitarian sphere, other international humanitarian organizations, four international NGO representatives nominated by the Humanitarian INGO group, one national NGO coordinator and three donors nominated by the Development Assistance Group; Department for International Development of the UK, European Commission Directorate General for Humanitarian Aid and Civil Protection and the United States Agency for International Development.

One interviewee explained some information on HC in such a way:-

The institution is mainly working on information dissemination to the rest institutions. Because of this task, it is called an information sharing platform. It meets on a monthly basis. This meeting creates an opportunity not only to the government of Ethiopia but also to all humanitarian actors to share information on the current situation. Previously, under the NDRMC, this institution sought to strengthen support for the government led coordination structure.

The Office for Coordination of Humanitarian Affairs convenes the inter-cluster coordination mechanism which meets every two weeks and is intended to provide a forum for the respective cluster leaders to discuss issues of mutual concern and ensure that cross-cutting issues are

followed up. The inter-cluster coordination mechanism has a role in making recommendations of key issues for EHCT consideration and of carrying out activities requested by the EHCT.

OCHA in its report (2018) expressed that their work from the then time was changed basically to creating strong livelihood approach to regional coordination in their areas particularly in relation to drought crisis. In addition to this, the institution assured to work quite closely with Pastoralist Communication Initiative on some regions.

UNHCR has the overall coordination role in the refugee response which further enhanced through the established Refugee Task Forces, co-chaired by the Government and UNHCR, both in Addis Ababa and in the field. This forum continued to serve as key information platforms for updating refugee situations, active interaction and exchange among various key players including UN agencies, NGOs and the Government as well as the diplomatic and donor community. Sector coordination continued through functional technical group like Child Protection Working Group.

Regionally, IGAD has worked with the Government of Ethiopia to draft a Country Programming Paper entitled “To End Drought Emergencies in the Horn of Africa”. IGAD aims to achieve regional food security and encourage and assist efforts of Member States to collectively combat drought and other natural and man-made disasters and their natural consequences. Corresponding with this, Ethiopia also participates actively in DRM related AU initiatives such as AU summits and AU Technical Committee on DRR (IGAD, 2016).

Different international institutions play an active role at federal, regional and sub-regional levels. They are a group of multilateral and bilateral organizations based in Ethiopia that are formed for the purpose of better coordination and harmonization of donor assistance and engagement with the government of Ethiopia. They conduct joint assessment to evaluate humanitarian situation and recommended humanitarian organizations to continue their support. They also mobilize resources up to the community and carry humanitarian operations according to the HRD. So, effective collaboration among institutions is vital to ensure timely and inclusive humanitarian response through proper implementation of the strategies developed by the government to address humanitarian needs and effectively avert the risks of disasters. They also foster the exchange of data, knowledge, advocacy information and technical assistance (EWD, 2019).

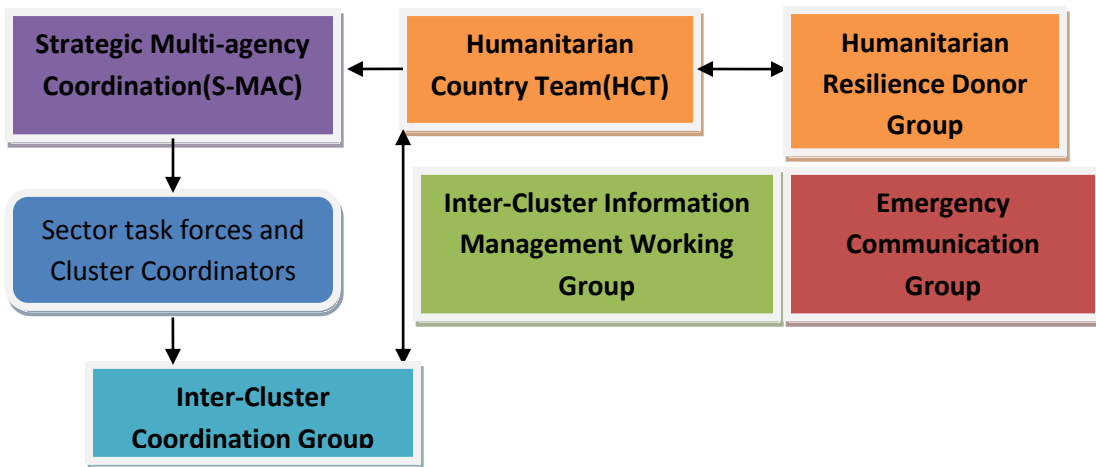


Figure 4.2. National and international institutions collaboration structure in DRM (Source: Documented from the Literature and HRD)

As above discussed, the national and international collaboration structure in Ethiopia are the main humanitarian coordination architecture that gives the way to assist financial, technical and material supports. The main coordinator of the federal government i.e. the S-MAC is chaired the HCT. Previously, as mentioned by one interviewee, there was a so called Humanitarian Policy Dialogue which was chaired by the NDRMC and HC in secretariat support of OCHA. This forum brings together representatives of HCT, NDRMC Commissioner and line ministers to discuss key strategic issues. This is presently the S-MAC.

Humanitarian Country Team is chaired by the HC and composed of UN agencies, NGOs and donors representatives. It sets humanitarian strategy, policy and advocacy priorities. On the other hand, inter-cluster coordination group is convened and chaired by OCHA comprising of working level representatives from each cluster lead agency. It includes representatives from clusters/ working groups that have national sector task force counterparts. It should be set complement to HCT but information sharing and accountability mechanism should be strengthen (OCHA, 2013). It is within this that the Humanitarian Response Fund is found and managed by OCHA on behalf of the HC. HRF is a pooled fund accessible by UN and INGOs. It is the largest source of humanitarian financing. In addition to these, there is a Humanitarian international NGO group that comprised of national and international NGOs. It is inter-NGO coordination mechanism in which elected steering committee represents the NGO communities in Ethiopian HCT.

4.2. Practices undertaken by institutions collaboration in DRM in Ethiopia

The DRM system in Ethiopia is divided along six pillars. The first three pillars, prevention, mitigation and preparedness, constitute the core of disaster risk reduction, and are essential to ensure an early warning, and effective response which is the fourth pillar. This mitigates the overall impact of the disaster and speeds up recovery and rehabilitation. The foundation for the DRM pillars in Ethiopia is basically monitoring, evaluation and resource mobilization. These six pillars of the DRM Framework interact within a continuous process that guides a transparent and integrated system through three major DRM phases. These are pre-disaster phase, during disaster and post-disaster. The six pillars of DRM have a vicious cyclic nature in which one links with the other. For instance, natural resource conservation can be a method of preventing disasters, mitigating disasters and rehabilitating the affected by disasters. So each pillar is continuous. DRM without the pillars is absurd and the pillars are vital for managing disaster risks.

The first phase, pre-disaster, includes prevention, mitigation and preparedness activities with a focus on incorporating DRM elements into development strategies, policies, programs, building the capacity for all actors to discharge their roles, building adequate physical and financial reserves and ensuring the tools for response in place including contingency planning and a holistic information that includes EWS, risk assessment, livelihood analysis and monitoring.

The second phase is related to the occurrence of the disaster which exercises infrastructure and system of response with a focus on communities and *Woredas* as the first line of detection and response. Prior to the disaster, capacity to detect and respond to disasters are built from the community level. Protocols and procedures of response are based on a thorough understanding of household vulnerabilities, risks and innovative tools of response like risk financing.

The third and the last phase is the post-disaster phase which manages the transition into development programs and begins with a damage assessment as the basis of joint early recovery programming. These activities aim to quickly move to stabilization and promotion of resilience building activities that helps withstand threats or adapt new strategies in the face of shocks and crises in ways that preserve the integrity of individuals, households and communities with a focus on merging humanitarian and development program to better address overlapping risks.

Generally, Ethiopia's DRM landscape is composed of a large number of programs and initiatives related to various phases of the DRM cycle: prevention, mitigation, preparedness, response,

recovery and rehabilitation. These have made considerable improvement in terms of reforming and integrating the entire DRM cycle (DRM-SPIF, 2014).

4.2.1. Activities of institutions at the pre-disaster phase of DRM

As discussed above, pre-disaster phase of DRM is the key to DRR. In this way, DRR is an action plan taken to reduce the risks of disasters and the adverse impacts of natural hazards through systematic efforts to analyze and manage the causes of disasters including through avoidance of hazards and improved preparedness for adverse events. It has two essential planning processes. These are risk mitigation and adaptation planning which aims to reduce/ avoid the risks of disasters and to adapt to climate change managing the causes of disasters and facing the problems at *woreda* level and the second is contingency planning which aims to get an efficient preparedness system that helps to anticipate, respond and recover from the impact of disasters.

Most of the interviewees explained *Woreda* DRR Profiling as a project undertaken by NDRMC in collaboration with partners to provide baseline information for DRM activities in Ethiopia. It marked a paradigm shift in approach towards DRM from reactive crisis management to proactive risk management. It is the representation of information regarding a population, place or system exposure, sensitivity and resilience to a given hazard that can be applied to DRM strategies. These helped decision makers to be better informed about the nature, extent and key factors that cause people, livelihood, environment and infrastructure vulnerable to disaster (UNISDR, 2009).

One interviewee expressed WDRP as a program that focuses the process of preparing risk profile for every district in the country. It looks disaster risk from hazard, vulnerability and capacity base. It also intended to inform development, contingency planning and EWS. These profiles form the basis of all DRM activities. Besides, WDRP (2013), described it as it provide all basic information on disaster risk elements at *Woreda* and *kebele* levels. The information for WDRP has been collected at community and household levels. Any program of the DRM cycle developed based on WDRP helps to address the problem faced at the community level. That is WDRP creates an extensive database at community level and provide all crucial information on disaster risk elements. This information system forms the basis for designing DRM strategies.

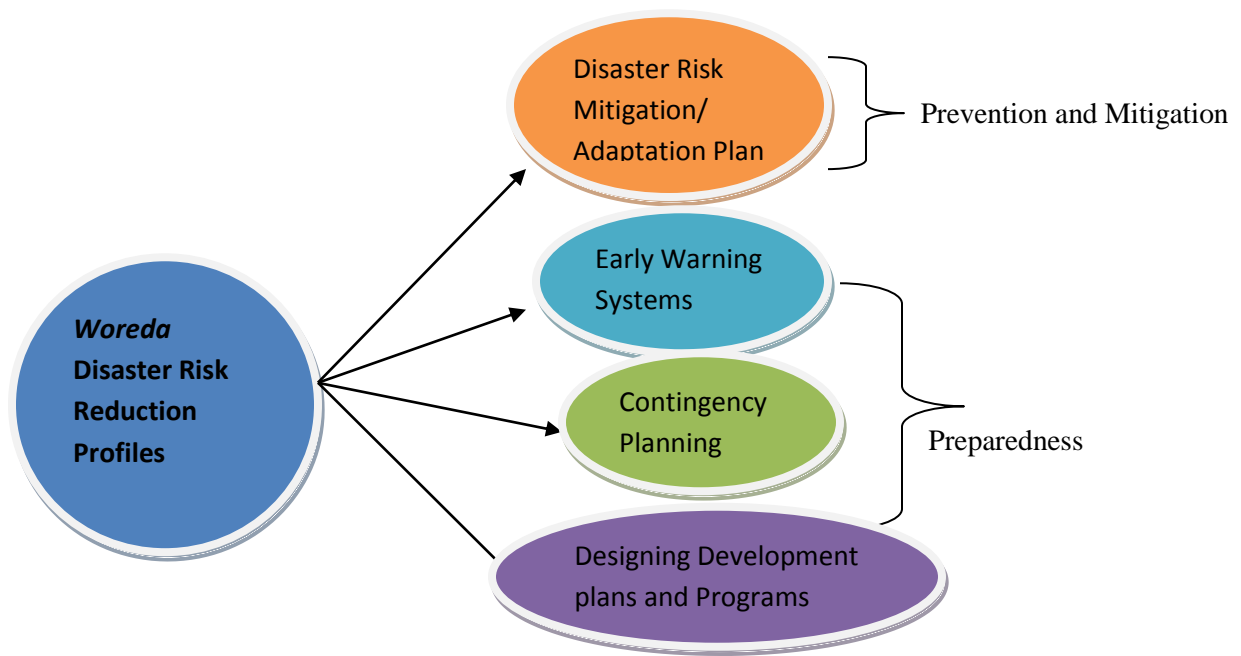


Figure 4.3. DRR profile that can be used by both government and humanitarian partners (Source: *Woreda Disaster Risk Profiling Document*, 2013)

As the diagram showed that WDRP, for achieving its objective, prepare *Woreda* Risk Mitigation and Adaptation Plan to build resilience on the community. In this process of planning and collecting information starting from the community, both the Government of Ethiopia, and different international humanitarian and development partners participate in it. Thus, the involvement in the planning of mitigation and adaptation and the assessment of the vulnerability of the community by the concerned agencies from national up to international formed the pre-disaster phase of DRM particularly, the prevention and mitigation phases of DRR. So, it is the process that works as an informed *Woreda* Development Plan and all sectors and stakeholders are involved in the planning and implementation.

Prevention and Mitigation pillars of the DRM cycle helps to reduce the large psychological and social costs of disasters and economic demands for response and recovery. For the achievement of this, since disaster management is a multi-sector responsibility and a coordinated effort by various institutions rather than one agency responsibility, the prevention and mitigation of disaster in Ethiopia is supported by clear humanitarian and development basis. Thus, disaster risk mitigation and adaptation plan is one mechanism of preventing disasters from occurrence.

From the interviewees, it can be strongly argued that even though collaborative institutions are generous to support the emergency response and recovery phases of DRM, they do not give

much emphasis on the disaster risk prevention and mitigation activities. There are also some collaborative institutions that have no as such heartfelt motivation to prevent disaster in the country. These are not active unless disaster outbreaks. They only give their support when that warned disaster by themselves damages the lives and livelihoods of the society.

On the other side, there are institutions that make assessment twice a year around the belg and meher season to quantify acute food insecurities due to fast onset disasters. In these assessments, hundreds of members from governmental institutions, UN agencies, donors and NGOs participate and prepare the HRD in cordial with the government, even again the NDRMC present to them when the HRD is launched. During this time, they collect and know which area is more vulnerable to disasters; even they give warning to NDRMC that this place is vulnerable to disaster. In addition, these collaborative institutions met frequently through the coordination of OCHA at least in a month. From both arguments, conclusion can be drawn that the support from the humanitarian partners in the pre-disaster phase of DRM is not as such adequate.

On the contrary, one interviewee confronted the above view point in terms of:

I think that collaborative institutions participate in the prevention and mitigation processes of DRM. I agreed that most of the time, they participate in the emergency response and recovery phase. But it is not deniable that the involvement of health sectors and their partners in preventing the outbreak of diseases, the involvement of water sectors and their partners in constructing dams on the identified flood hotspot areas, the involvement of different sectors in giving and collecting early warning information, preparing alerts and contingency plans, the involvement of NMA in forecasting the weather and climate condition to the concerned bodies and the involvement of environmental sectors and their partners in rehabilitating the affected areas through reforestation. Therefore, even though their role is not as such huge as the response and recovery; they play a significant contribution in preventing and mitigating disasters.

Most of the interviewees agreed in one basic important practice. Out of 17 interviewees, 13 of them agreed that starting from their institution up to the international UN agencies, Donors and NGOs, they assured that they focus on response and recovery measures rather than preventing and mitigating the occurrence of devastating disasters even though some processes have been

done. Most of the HRD (up to 2017) of the NDRMC revealed that the national government, UN agencies, donors and NGOs have shown limited prevention and mitigation activities. In different reports, the government also focused on the response and recovery measures that were taken by both it and the humanitarian partners.

In a little bit, the following activities are outlined in the HRD in the form of prevention and mitigation measures. These are preventing disease outbreaks in the health and nutrition sector, improving the daily sanitation and hygiene practices to the families in the WASH sector and collecting and disseminating the climate condition to the concerned bodies. Specially, the 2016 and the 2018 HRD asserted that Humanitarian partners are committed to do on “no harm approach” and the government’s planning shift towards the three pillars basically, the first measure of prevention and mitigation are the main exemplary that there exists the principles, even though the practice was null.

Currently, as one NDRMC top official interviewee informed that the government and partners are committed to shift the measure of giving response to preventing and mitigating disasters. For these, nationally, as he informed, we have already prepared the “Mainstreaming Guideline” which aims to integrate the DRM practices basically the preventing, mitigating and preparedness approaches in to their development plans of each line ministers, development and humanitarian partners. In addition to this, if the government put the DRM-SPIF in to practice, it also plays a great role in the prevention-mitigation measure because it is strategic and focuses on investment.

In relation to preparedness to disasters, it starts from an effective early warning system that provides timely information about the risk disaster situation in the *woredas*. The information is used to prevent, mitigate or respond to risks of forecasted hazards; to trigger early action and to update possible scenarios of likely disaster. An efficient preparedness system helps the government, professional response and recovery organizations, communities and individuals to effectively anticipate, respond to and start to recover from the impacts of likely, imminent or current hazard events. The Hyogo Framework for Action (2005-2015) also asserted that disasters, impacts and losses can be substantially reduced if authorities, individuals and communities in hazard-prone areas are well prepared and ready to act and equipped with the knowledge and capacities for effective disaster management. In view of this value, the NDRMC established the Early Warning and Emergency Response Directorate (EWARD).

One of the consultants on EWERD mentioned the tasks of the directorate in such a way:

As pointed out in the policy, DR principle gave greater emphasis on preparedness and early response. Depending on this, the NDRMC established an early warning system that is coordinated by EWERD. This EWS is structured in terms of Central EWS Coordination Unit staffed with multi-sector experts and National EW Technical Committee which contains representatives from the NDRMC, Line Ministries, UN agencies and NGOs. This structure disseminates early warning information on weekly, fortnightly and monthly basis in Amharic and English.

The other interviewee gave statements in relation to EWS of NDRMC that the EWERD gives weekly, fifteen days, monthly and seasonal early warning information based on the data received from Regional Disaster Prevention and Preparedness Bureaus, NMA and satellite images. Mostly, EW information is received from satellite information through software called LEAP software. On the other hand, a program called “Woreda net” also has been installed which is supposed to transfer early warning information from the grass root level at real time to the central server at NDRMC and vice versa. Besides, a variety of livelihood and disaster risk information has been collected.

From the above discussions, it can recognize that EWERD uses various tools to collect different early warning data, prepares and distributes bulletins to regions, principal line ministries, UN agencies and NGOs. For the sake of this, EWS uses regular monitoring, seasonal assessment, emergency nutrition assessment, LEAP and HEA. This periodical as well as technological information is disseminated for international humanitarian as well as development partners to give support to the vulnerable communities using the appeal (HRD), periodical bulletins and regular meetings. Depending on this, most of the time, line ministers, UN agencies, donors and NGOs take their own seasonal assessment basically for the input of HRD.

In relation to the preparedness situation, collaboration institutions established different activities to give early response. Some of the notable measures are: Some NGOs have been promoting community-based disaster risk reduction/early warning system, training activities by considering the indigenous knowledge and traditional practices of the community. Awareness raising and trainings have been also going to deliver for governmental, nongovernmental and communities.

Generally, different researches, documents, reports and viewpoints indicated that prevention and mitigation pillars of the DRM practices are not as such practical. For this, both less commitment of the government and humanitarian partners to apply at the pre-disaster phase has its own contribution. On the side of preparedness, there are some practices that surpass from being notional in the form of EWS, contingency plan and designing various developmental activities.

4.2.2. Activities of institutions at the disaster phase of DRM

The humanitarian actors also heavily focus on relief response rather than investing on DRR initiatives. In conjunction with this, disaster preparedness plans and contingency plans are in place at all administrative levels and regular training tool and practices are held to test and develop disaster response programs.

The Government has efficient and comprehensive risk transfer program i.e. Risk Financing Mechanism (RFM). The RFM is backed by early warning systems, contingency plans and funds. The contingency plans are based on various scenarios that are used to scale-up operations based on the severity of droughts. The Government also prepared local multi-hazard contingency plans at all levels of the government based on risk assessments. These plans are based on anticipated scenarios while simulation models are being made to exercise and update the plans.

The government has a few strong mechanisms to fund preparedness measures. For instance, the RFM has a contingent fund of multi-million dollars that is used at the time of major droughts to scale up public works program. The government also has an emergency food reserve that is used at the time of disasters. i.e. HRF. It is administered by OCHA to fund response measures in an expedited way. Currently, the emergency food reserve in the country is not adequate to address acute food shortages in the country, forcing the country to resort to food imports. Also the government has prepared a inclusive plan to raise the reserve in future. Humanitarian response to acute food insecurity remains a vital part of the overall DRM strategy of the government.

The government has a system of conducting rapid assessment in the case of fast onset disasters. It is done besides the regular seasonal assessment to estimate the number of beneficiaries that need relief food assistance. All these assessments are conducted jointly with humanitarian partners. The government conducted an intensive training and established the National Incident Management System in the country under which an Emergency Coordination Centre is being established while Incident Command Posts are established as and when required.

During emergency, sector task forces (Agricultural Task Force, Food aid Task Force, Water and Sanitation Task Force, Health and Nutrition Task Force and Logistics Task Force) have contributed to avert lives and livelihoods. Linkages between sector development and DRR measures through implementing EGS and food/cash-for-work has shown some successes. Some of the sector policies like Agricultural Policy, Health Policy, Environmental Policy, and Water Resource Policy have elements of DRR.

EWS are used to feed into Ethiopia's well-established emergency response mechanisms notably the PSNP and humanitarian requirement appeals by means of which assistance is provided to the affected populations. For instance, the PSNP has provided an assistance to almost 8 million chronically food insecure households in 2015. But due to the high rate of drought along with large number of food insecure households in Ethiopia, emergency response relies on the issuance of humanitarian appeal to cover those needs that are not met through the PSNP. The government regularly issues emergency appeals requesting emergency assistance to secure the consumption needs of vulnerable people due to the continued negative effects of the failure of *Meher* and *Belg* rains in its HRD. For instance, Ethiopia's 2016 US\$ 1.4 billion appeal has received from the Ethiopian government and the international community leading to coverage of the appeal by 54% from the international partners. Obviously, the main fundraising method for humanitarian response is the HRD and it is a joint government-partners' document which reflects the funding of the seasonal assessment teams. During this time, the humanitarian institutions also take different measures in addition to the financial support.

Table 4.4. The disasters occurred and interventions done by institutions.

Year	Disasters occurred	Interventions by institutions
2015	-Drought -Flooding -Conflicts -Crop pest and diseases	-EOC coordinated the joint government and humanitarian partners flood response -Regional level incident command posts reactivated
2016	-The worst El-Nino induced drought -Flooding in some regions	-Timely food assistance -Seed support -Treatment of dysfunctional water schemes
2017	-Deep Indian ocean dipole induced drought in south and southeastern Ethiopia -Flooding -Disease outbreaks -Conflict induced displacement	-Timely food assistance -Trainings on community based DRM -Mass vaccination -Establishing EOC
2018	-Conflict induced displacement -Food insecurity, nutrition crisis-malnutrition -Water shortage and Epidemics (disease)	-Timely food assistance -Return the displaced -Establishment of EOC for response

Source: HRD Reports

Depending on the table, for instance, the HCT worked with the government of Ethiopia to develop and share regular updates for donors and partners throughout the year on evolving operational and funding priorities taking in to account the dynamics of the crisis, the funding allocations, the gaps in fund and response of the government beyond the HRD in 2015. Due to this, 305,860, 432 from the donor and 424,571, 499 USD were allocated to solve the problem.

In relation to emergency response, one interviewee responded that not only the EWERD but also Humanitarian partners, Donors and NGOs collaboratively identified the affected areas. Following the identification of the affected areas, those collaborative institutions from the national as well as the international partners mobilized to respond to the emergency in different ways. They held different meetings for the sake of timely and early initiation of comprehensive response. Then after, they identified the priority area that needs intervention. In all contexts, timely response was key to save the lives and livelihoods of the community. This is

accomplished through providing food, shelter and medical services to the victims of disaster and every effort is made to prevent depletion of key assets.

The other interviewee responded an interesting point in such a way:

I believe that disasters are natural and inevitable. We cannot avoid them even all concerned bodies at all the time working on it without working another thing. Even man-made disasters cannot be avoided hundred percent. But I strongly believe that If all concerned bodies deserve their potential on the pre-disaster stage, we can ensure an early and effective response without the imposition of devastating impact on humans and materials. Emergency response and humanitarian response could not reach to the affected community after the disasters impose a huge impact. Therefore, it is essential to deserve both our effort and the effort of humanitarian partners on mitigation and preparedness. This helps to ensure the tools for response. If this can be done, the recovery and rehabilitation as well as reconstruction process can't be as such difficult and paid this kind of huge amount of millions and billions of dollars from the government as well as the humanitarian partners.

Where the resources available are inadequate for the needs, the 'Hotspot' classification is currently used to prioritize the areas which most urgently need assistance. This uses a range of indicators and a consensus based decision making process to identify the hotspot District. The Prioritization Committee led by NDRMC is multi-agency forum responsible to review the national relief food pipelines against the total requirement of relief beneficiaries to allocate food resources. The Food Management Task Force, a forum which coordinates all food management activities, has also been one of the effective all-partners forums which is in place at federal level. Information is shared, problems and challenges are identified and actions are taken among partners. Further coordination and essential guidance on response is provided by the sector task forces. The Agricultural task force and the Emergency Nutrition Coordination Unit's effort to improve monitoring and evaluation of nutrition, to develop guidance for Moderate Acute Malnutrition and to align the implementation of future nutrition intervention with food security and livelihood intervention as part of the DRM approach are examples of good practice. Such initiatives need to be strengthened across the sector task forces.

Even if humanitarian partners’ support in DRM practices in Ethiopia has been increasing from time to time, the numbers of people that require humanitarian food and non-food relief have been also increasing alarmingly. For instance, as the 2015 HRD showed that 2.9 million people were identified to support in emergency relief food assistance, after the mid-year assessment, the number of people that require relief food assistance have been increased to 4.5 million. At the same time, the number of humanitarian partners and their part is also increased. But it did not lessen the problem that disasters impose on human lives. The reason is that their support is not focused on prevention and it is not as such recover and rehabilitate them from disasters.

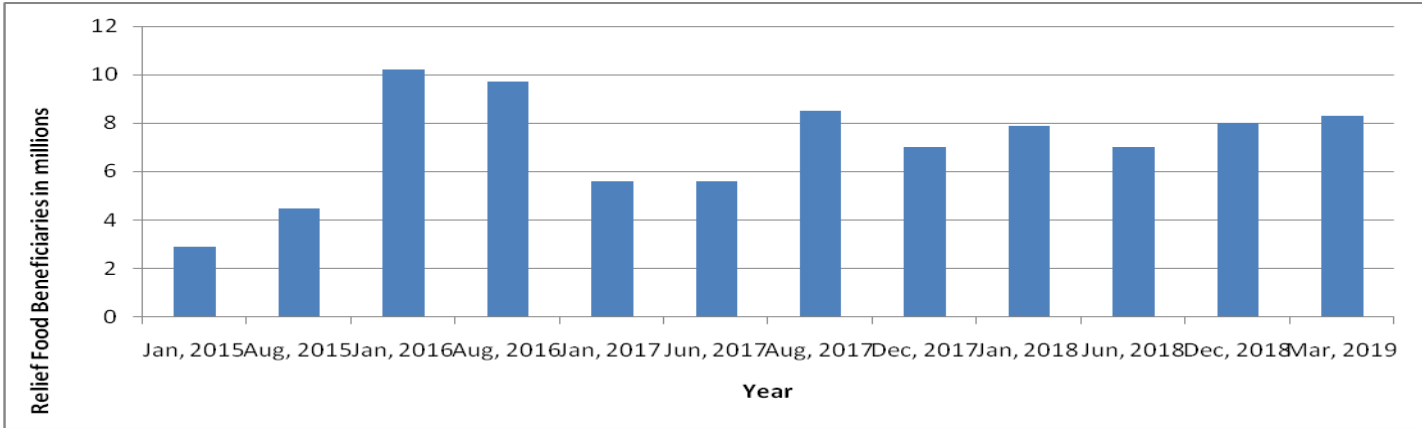


Figure 4.4. Trends that show People in need in Ethiopia (Source: HRD Reports)

From the diagram, we can understand that the nature of disasters in Ethiopia is increasing at an alarming rate. Basically, after the Jan, 2016 assessment, the number of people that need relief food assistance has been increased. It is obvious that in 2016, there were El-Nino induced drought in Ethiopia. After this period, there is no as such reduction in disaster risks. At the same time, 718,000 people were displaced due to this drought. To ensure the appropriate live saving activities, more than sixty six humanitarian partners were involved in protecting and restoring the livelihoods of the community (HRD, 2016)

Similarly, in addition to climate induced droughts, inter-communal induced conflicts have been also increasing in Ethiopia. This creates another impact in the DRM practices of Ethiopia. As the crisis time line indicates that in 2017, 834,367 people were displaced in Ethiopia. Out of these, 46% of them were displaced because of conflict. The rest 46% were displaced by drought while the remaining 8% were because of other factors (HRD, 2017). Amazingly, after a year, these

number has been increasing to 3 million in which the vast majority has been displaced by inter-communal conflict (HDRP, 2019).

Due to this case, the government of Ethiopia and the humanitarian partners deserve a lot effort in assisting the needy in food and non-food items. For instance, in 2018, an estimated 7-8 million people receive humanitarian food assistance by leveraging various response modalities such as cash board intervention, strengthening humanitarian partners and coordinating capacities on it. The government is also working with the humanitarian partners to develop a vision and strategy for resilience and recovery in recurrently drought-impacted areas. So humanitarian institutions have increased in number and support to decrease reliance on short-term humanitarian response patterns and increase long term impact (HDRP, 2018 and HDRP, 2019). The following table shows the number of humanitarian partners that participate in DRM in Ethiopia and their part.

Table 4.5. Number of humanitarian partners involved in DRM in Ethiopia and their contribution

Year	Number of Humanitarian partners	Their contribution in USD (in Millions)
2015	23	305,860,432
2016	66	913,000,000
2017	90	1,138,000,000
2018	80	938,000,000

Source: HRD and Different reports

From this table, we can conclude that the number of the humanitarian partners that involve in the DRM practices became increased with their contribution. In other words, the number of collaborative institutions in DRM in Ethiopia increased from time-to-time since 2015 with their increased support. For instance, the Ethiopian Humanitarian Response Fund (HRF) allocated US\$28.3 million to 58 projects comprising multi-sector activities in 2015. Due to low funding levels in the first half of the year, the HRF focused on critically under-funded needs-based priority sectors. Complementing government-led resource mobilization efforts in the second half of the year, the HRF supported two Central Emergency Relief Fund allocations. These included an under-funded allocation of \$10 million and a rapid response allocation of \$17 million to address major gaps in relief and therapeutic foods identified as the highest response priorities following a government-led rapid assessment.

The Governments of Ireland, Netherland, Norway, Sweden, Switzerland and United Kingdom generously provided \$57 million for 2015. This year, the number of contributing donors to the HRF increased by six in 2015. In mid-2015, the HRF approached the UK's Department for International Development to activate \$4.6 million of the HRF's contingency budget to scale up response efforts following results of the mid-year HRD review (HRD, 2015).

The HRF supported two health response projects implemented by UNICEF for a total of \$1,042,503. Support was provided to UNICEF as a response to measles outbreak with over 6,890 confirmed cases in July 2015. The funding contributed to the procurement for 3,115,270 doses of measles vaccine required for the vaccination of 5,309,347 children under age 5 in priorities one and two nutrition hot spot *woredas*'. The fund also supported projects for establishment of three mobile health clinics and for treatment of scabies-affected children in settlers' people in Oromia.

The HRF-funded WFP run inter-agency passenger air services the United Nations Humanitarian Air Service in Ethiopia to provide safe and reliable passenger air transport to humanitarian workers. The HRF allocated \$738,357 to facilitate efficient air services to humanitarian agencies reaching vulnerable people in remote and inaccessible locations. This and all others indicated that even the disaster rate and impact was increased in Ethiopia, their contribution was also increased. But, it is not forgotten that this institutions that increased from time-to-time was involved in emergency response and recovery.

4.2.3. Activities of institutions at the post-disaster phase of DRM

One of the characteristics features of Ethiopian disaster management system was its due emphasis on post-disaster activities. Despite the prevalence of those worst disasters, the Ethiopian government devoted its time and resource on relief and response. In the present time, Ethiopian Early Warning System transformed itself from reactionary to anticipatory. However, in practice, the Ethiopian early warning system was not free from challenges (DRM-SPIF, 2014).

The Ethiopian governments have not been remained silent in reducing the impacts of disasters. However, their main disaster management activities were mainly pre-occupied with providing relief to the victims rather than prevention and preparedness activities. In other words, a lot more would still remain to be done to transform the DM towards proactive, integrated and coordinated preparedness and prevention institutional apparatus (NDRMC, 2017).

Most interviewees agreed in that Ethiopian government as well as humanitarian partners mainly made due emphasis on recovery. But the work of reconstruction has its own challenges. This is due to the fact that after giving immediate response and recovery, both the international donors and national government left the community without durable reconstruction. After response and recovery, there is no anybody that made an assessment on the livelihood of the community. The following interview also elaborates this idea.

...International humanitarian partners have been increased from time to time to help Ethiopia in DRM. In the present time, there are hundreds of Humanitarian partners that involve in DRM practices in Ethiopia. They invest huge amounts of capital in the area. But I always ask why these huge amounts of millions and billions of dollars change the situation...This is because of the fact that they always deserved at emergency response and early recovery. They do not give much emphasis at prevention and reconstruction.

From this response, we can understand that collaborative institutions were playing a significant role in emergency response and early recovery practices. They give food, non-food, cloth, shelter and money to the affected communities. They participate greatly in the process of getting back of the displaced communities to their original place. But the monitoring and assistance on the community lives and livelihoods after this is not given much emphasis both by the government and humanitarian partners. They have already left them and transfer to another issue.

4.2.4. Achievements of collaborative institutions in DRM in Ethiopia

The Government of Ethiopia, with the support of humanitarian partners, continues to address the challenges of drought, flood and inter-communal conflict. It has been evolving rapidly in recent years with substantial progress made in building the overall system in the country. This indicates not only the success achieved by the institutions but also provides a dynamic base to develop more improvements to the system (DRM-SPIF, 2014).

Depending on some documents, there are some achievements that come in to exist based on the collaborative efforts of both the government and the international humanitarian and development partners. Some of these are:

Saving the lives and livelihoods of the communities: This indicates that, the disaster of Ethiopia in the recent time changed its nature and affected millions of people every year in the country. For instance, in 2016, as the annual and the mid-year HRD, indicated that 10.2 million and 9.7 million people are affected by the El-Nino induced drought. But with the collaborative efforts of both the government (investing US\$ 735 million) and humanitarian partners (investing US\$ 985 million), the lives and livelihoods of the affected community became secured.

Corresponding with this, the 2016 HRD stipulated three pillars to ensure an appropriate inter-sector coordination. From these pillars, the first one is saving lives and restoring livelihoods of communities. The rest are reducing morbidity that are related to drought and prepare for and respond to other humanitarian shocks such as natural disasters, conflicts and displacements. In addition to this, the 2018 HRD introduced a three pillared models that covers the six pillars of DRM. These pillars are set up to save the lives and livelihoods of the society before risk happen.

Established EOC in different parts of Ethiopia: The collaborative institutions basically the US-Forest established a system of NIMS in Ethiopia. For this system, the institution gave different trainings and capacity development activities for the workers of the institution. The technology helps to give information and immediate emergency response measures. By using this experience, the government of Ethiopia with the help of partners established Emergency Operation Centers in Oromia, Somali, *Amhara* and SNNP.

The preparation of WDRP and CP. In order to know the vulnerability and coping capacity of the community, it obliged to collect information from the grass root level. For the sake of this, the NDRMC corresponding with its partners made an assessment and develop WDRP. This program has a lot of importance in giving information about each *Woreda* (DRMFSS, 2013).

The *Woreda* Disaster Risk Profiles provide all necessary information on disaster risk elements at *woreda* and sub-*woreda* (*kebele*) levels. Given that information for WDRP has been collected at community and household level in which any program of the DRM cycle developed based on WDRP address the problems faced at the community levels. It also provide with the most extensive database made at community level existing in the country. The information system forms the basis for designing long-term risk reduction programs at *woreda* and sub-*woreda* level.

The WDRP database provides extensive and comprehensive information about the nature, magnitude and key factors that render people, livelihoods, environment, political systems and

infrastructure vulnerable to disasters. Most of this information is used during the planning process, however, for the risk analysis which shows in the document; it presents only that information that is indispensable to ensure better disaster risk mitigation/ adaptation to a likely disaster. For that purpose, the more important aspect of the risk information was organized in the right format that can be usable by the planning team to identify the most adequate interventions.

The preparation of mainstreaming guideline. It is clear that the management of disasters is not left to one sector. It needs the involvement of many sectors and partners. Considering this, the NDRMC prepared the Mainstreaming Guideline in 2017 to integrate DRM in to sector institution development plans and humanitarian development plans.

Development has the potential to create new forms of vulnerability and exacerbate existing ones resulting in the hampering of efforts to reduce poverty and promote positive development. For instance, the frequency and severity of disasters resulting from natural hazards are increasing. Therefore, it is essential that the process of development planning is able to identify and analyze the underlying causes of risk and their potential impacts as well as understand how to develop measures to reduce potential risk and overall losses (NDRMC, 2017)

One way of protecting development gains and reducing disaster risk is to mainstream DRM into the development planning from public policy making to socioeconomic and physical planning at all levels and across all sectors including the allocation of public resources and staff dedicated for implementation of all development projects in hazard prone locations. In theory, according to Trobe and Davies (2005), there are three key objectives of mainstreaming DRM. These are:

- ✚ To make certain that all national, sector and local development programs and projects are designed with evident consideration for potential disaster risk and to resist hazard impact.
- ✚ To make certain that all national, sector and local development programs and projects do not by accident add exposure to disaster in all sectors: social, economic and environment.
- ✚ To make certain that all national, sector and local development programs and projects are designed to contribute to developmental aims and to reduce future disaster risk.

In addition, mainstreaming is important because DRM is not a sector in itself but a process to protect development, lessen loss and hold growth. It cuts across sectors and governance sphere.

On the contrary, from the interview, there were some responses that indicated the inexistence of as such drastic success by the institution as well as the humanitarian partners. But all of the interviewees agreed in one success of the institutions collaboration. i.e. they save the lives of the affected community in the short run even though it have its weakness. Because the process of giving relief to the affected communities are done for the disaster time. After this relief aid, they do not create as such changed way of life project for the long run. But it is not deniable the process of saving the lives and livelihoods of the community for the time being.

One interviewee expressed his idea in the following way clearly.

...There are activities of recovering the displaced society towards their original place. There is an assistance of food and non-food items to the displaced communities. But there is no any radical change in the DRM practices of Ethiopia..... we have invested a huge amount of money at the time of response and recovery. Today, we save many lives but tomorrow the same disaster outbreak in that area....Therefore, to be a success, it must change the lives and livelihoods of the affected community for the long run and it must be work on the source of the problem not on the occurred problem.

From the response, we can understand that we cannot denied the decisive achievements of the government of Ethiopia, UN agencies, donors and NGOs that have deserved in a DRM practices in Ethiopia. They save millions of lives and millions of material destruction. They involve in emergency response and recovery practices on their potential. They are trying to invest in the affected areas to have sustainable livelihood. But the measures taken at a short term and the redundant nature of the problem at the same area hide the achievement of the collaborative institutions. On the other hand, the futility of the institutions in pre-disaster and reconstruction practices lag its effort that was deserved during the time of emergency response and recovery.

4.3. Challenges that hinder institutional collaboration in DRM in Ethiopia

As mentioned above, the Ethiopian government, UN agencies, Donors and NGOs have deserved their effort to reduce the impacts of disasters for many decades. They allocated millions and billions of dollars for the sake of lessening disasters after recent times. They adopted policies and strategies to manage disasters collaboratively and separately. But there are many challenges that hinder their efforts (Humanitarian Crisis Analysis, 2016). In order to achieve the unreserved

effort, the existing challenges must be identified. Therefore, the following are some of the challenges of institutional collaboration that hinder the practice of DRM in Ethiopia.

The DRM-SPIF (2014) and DRM Mainstreaming guideline (2017) categorized the challenges of DRM in Ethiopia under three categories. These are system level challenges, institutional level challenges and DRM component level challenges.

1. System level challenges

In the past, DRM has been implemented in a fragmented manner using separate instruments, processes and institutions without the integration required to effectively manage disasters. With the new approach comes, the challenge of defining the DRM cycle and the establishment of its interrelationship with the more developed disaster response mechanisms rises. The need for a strategic framework becomes vital as the uncoordinated implementation of DRM initiative risks not only duplication of efforts and resources but could render Ethiopia DRM system confusing.

The lack of sector-wide linkages and synergies is evident in the emerging overlap between DRM, climate change adaptation and social protection. Both DRM and CRGE have a cross-cutting mandate that requires integration with other ministries. But If DRM and CRGE units are created independently in key line ministries and at regional or *woreda* level (as is outlined in both the DRM policy and the CRGE Vision statement), there is a risk of significant duplication in developing strategies and investment plans for DRM and Climate Resilience. The key is to avoid duplication whilst simultaneously maximizing the benefits of the information and technical skills available within both the DRMFSS and the EPA. Cooperation between the DRMFSS and EPA is required in outlining joint requirements for DRM and CRGE investment plans.

System wide resourcing has traditionally been skewed towards emergency assistance and food aid in particular with not enough investment in building resilient households including protection from shocks. In the existing system, much of the DRM finance is mobilized for response and through the regular HRDs which are informed by retrospective assessment of the agricultural season's performance. In the future, it is envisaged that needs and required prevention and mitigation measures can be effectively identified through a joint process of early warning and contingency planning and that resources can be readily available to implement such measures ahead of forecasted disasters. A DRM approach aims to balance resources more evenly across the full spectrum of the DRM cycle.

2. Institutional level gap analysis

DRM responsibility is spread over many institutions using a multiplicity of instruments that are lead to fragmentation and lost opportunities. The organizational structures themselves do not have harmonized roles and responsibilities at federal, regional and *woreda* levels which can lead to duplication of effort in key functional areas. However, in practice, disaster management has been seen as the responsibility of one institution.

There are systemic capacity limitations (number and quality of staff) and high staff turnover exist at all levels across the DRM spectrum. This is particularly severe at the *woreda* level. Quality human resources are scarce which means that duplication of function is particularly wasteful. Capacity limitations include physical office space, equipment, communications including appropriate technology and other facilities like lack of adequate communication facilities to transmit EW and Risk and Vulnerability Assessment information. With the implementation of the SPIF, it is anticipated that further re-structuring of the EWRD may be needed to ensure that enough staff are available and properly organized to meet the execution of the DRM approach.

3. DRM component gap analysis

In relation to the DRM components (prevention, mitigation, preparedness, response, recovery and rehabilitation), the main challenges are; the existing contingency plans are limited in scope and overall DRM planning are not yet fully aligned to targeted development plans; risk assessment, monitoring and EWS tools (WDRP, LIAS and EWS) are not fully coordinated within one system which reduces efficiency and slowing response and development sectors are fully involved in the contingency planning process at the *woreda* level, but the processes are not fully adopted by sectors for implementation as a result of low diffusion of knowledge about agreed preparedness measures; the existence of gaps in preparedness in terms of contingency planning, early warning and the linkages to response; task force structure is currently being decentralized to the regional level and is only formally present in a handful of regions; EWS is not yet a truly multi-hazard information collection and dissemination tool, as the majority of data gathered relates only to food security and drought issues.

Furthermore, the ‘backflow’ of information is weak; knowledge base on DRM in Ethiopia remains low and requires enhancement; work of sector task forces has been mostly response-focused and gaps in recovery and rehabilitations in the form of no standard methodologies in

practice to assess recovery needs or to implement recovery activities and widespread and fragmented responsibility for recovery and rehabilitation across multiple agencies. Generally, Disaster Risk Reduction and contingency planning were not integrated with development priority activities of respected line ministries and agencies.

There are other challenges that are raised from the interview. For instance;

As I believe, the main challenge for institutions collaboration is the change of the structure of the institution every time.... The DRM structure was changed three times and we are found at the fourth structure.... At this time, regional and lower DRM sectors are not go along with this change. For instance, still, most regional DRM sectors are under the Agricultural and Rural Development Bureau. In addition, their name is not still changed. Most regional DRM sectors are called by the name Disaster Prevention and Food Security Sector. This creates a gap of being independently work, communicate and job describe with them directly.

The interview indicated that almost all regional DRM offices are structured as Disaster Prevention and Food Security Program Coordinating Office. They have the mandate of coordinating the program under the regional Agricultural and Rural Development Bureau. This created an indirect relationship between NDRMC and them. The regional humanitarian partners have limited contact with the coordinating office rather they contact with the bureau. After contacting the bureau, they reached to the coordinating office. This delayed the humanitarian emergency response. Due to this, regional humanitarian partners became more sector-specific.

The other basic challenge that gets from the interview is the problem of security. In the present time, it is obvious that there are many inter-communal induced-conflict displaced communities in different parts of Ethiopia. As the respondents believe when the problem have been raised, giving different assistances to the affected become difficult because of the security. They also close roads in which any transport services are not move. Humanitarian partners also fear to assess the situation of the disaster during this time. In addition, the process of recovering them towards their original place became elongated because of the security. Besides this, even if there are disasters behind the displaced communities, it creates difficult to the institutions to pass through that area and assist the affected one.

As a respondents aware that there is also problem of infrastructural development. The problem of transport, basically, road transport imposes a huge impact to transport the food and non-food items towards the affected communities. Even if there was a different material which helps to take action to the problem, there are many pocket areas that have not road access to transport them. So road transport inaccessibility is the challenge of institutions to reach their assistance.

From the different regional and zonal weekly and monthly reports, we have seen some problems in relation to the institutions themselves. For instance, reports from Afar and Tigray (2019) point out that there are Humanitarian partners that are sector-specific. That means even if the disasters have been arise, there are NGOs that are not participated to help the communities unless the problem have been arise in their sector that identified to help. In addition to this, the existing task forces are not practical in the day-to-day activities of the sector in these two regions.

The other interviewee reacted the problem of national sector partners and NDRMC in this way.

Within NDRM, there are two kinds of staff: New graduates who have no clear practical knowledge on DRM and the retired consultants who are not willing to give their experience to the new graduates. The leaders have no intention to use the new graduates which are the most productive force rather they believed everything cannot be done without retired consultants. Across institutions, even if every government ministers are assigned to perform the activities of DRM in collaboration with others but there is no binding legal framework that impose penalty on them if they do not perform their tasks.

From this response, the government is not, still, committed to perform the DRM practices as a nationwide development agenda. The different infrastructural problems indicated this briefly. Many HRD response documents, alerts, bulletins and reports use the term “pocket areas” many times. This term have been used to refer areas that have no any access to infrastructure development. Depending on this, it indicates not only the areas are prone to disasters but also the inaccessibility of infrastructure created the disasters in those areas.

Generally, there were many problems that are listed out by the interviewees in addition to the above. Some of these are: collaborative institutions contribution is not increased even if the problems become complex; some collaborative institutions are not willing to support in any time and some wanted to do their support in the area they select; the existence of miscommunication

between the government and humanitarian partners in which some institutions are not willing to support in emergency response rather they need to participate in development activities and the occurrence of similar problems occurred in different parts of the country bored humanitarian partners to support in all areas.

4.4. Opportunities that exist to foster institutional collaboration in DRM in Ethiopia

Disaster Risk Management practices in Ethiopia entail a multi-sector approach in which different national lead agencies, international UN agencies, donors and NGOs participate in the reduction of disasters through planning up to implementation. It also involves a multi-hazard approach in which different disasters have been under consideration by using the six pillars of management processes. Even if multi-sector and multi-hazard approaches are the guiding principles of DRM in Ethiopia, the occurrence of disasters has been increased from time to time. Therefore, For the sake of reducing disasters in the future, there are many opportunities that exist in the present time but not put into practice comprehensively. Some of these are:

A) The national policy and strategy on DRM (2013) of Ethiopia

The Government of Ethiopia has endorsed a comprehensive DRM policy that includes a multi-hazard approach grounded in a deep understanding of specific disaster risk and its link to development; The overall objective of the Policy is to reduce disaster risks and potential damage caused by a disaster through establishing a comprehensive and coordinated DRM system in the context of sustainable development. The policy is composed of the following directions and implementation strategies. These are early warning and disaster assessment information informed response, official disaster declaration system, decentralized disaster risk management system, mainstreaming of disaster risk management into sector institutions, source of resources and resource mobilization procedures, information management and communication systems, international cooperation, implementation capacity and cross cutting issues (NPSDRM, 2013). Basically, the policy emphasis on the full DRM cycle; multi-hazard and multi-sector approach; decentralized and community-based DRM System; informed decision making based on strong risk assessment and EWS; wide participation of stakeholders and all relevant ministries and DRR provide the direction for DRM system visualized for Ethiopia in the future.

Most interviewees agreed on the current national policy and strategy on DRM in Ethiopia. If it is implemented in the intended way, it fosters the institutions to collaborate in the issue of DRM

not in response and recovery but in the prevention and mitigation process of DRR. The only thing in the future is the implementation of the currently existing policy. The policy is very smart having a multi-sector and multi-hazard approach. These issues have paramount importance in DRM if the policy is directly implemented.

Table 4.6. Components of DRM and their intervention opportunities

Components of DRM	Intervention opportunity
Prevention	-Enhance the culture of integrating DRR into development plans -Productive Safety Net program with infrastructural building
Mitigation	-Managing Environmental Resources -Community based DRM practices
Preparedness	-Pre-positioning relief supplies -Contingency planning, enlarge early warning information distribution -Apply community development intervention with right fund execution -Build adequate physical and financial reserves -Food and non-food management
Response	- Relief food assistance on a timely manner -Emergency service and public assistance immediately after a disaster
Recovery	-Bring attitudinal change and build resilience of vulnerable people -Risk financing and recovery plan
Rehabilitation	-Improve poor people access to food and other essential services -natural resource management, agricultural extension services, water infrastructure development and health and education services

Source: Own illustration from the policy document and the SPIF

These intervention opportunities are very significant in that they have the capacity to change the current situation. Some are practiced in the present context but most are not put into practice in a proper manner to give durable solution even if they seem practical. As the respondents assured that the policy is not put in to practice in the present situation. Even the collaborative institutions gave their generous support in the previous trend not depending on the policy platform that focuses on mainstreaming. The institutions also involved, mainly, in the emergency response and

recovery of the affected communities. If the policy will put in to practice, it is an opportunity for the future DRM practices of Ethiopia and its objective towards sustainable development.

B) The DRM-SPIF (2014) of Ethiopia

The DRM-SPIF is an apparatus that was developed to facilitate an effective implementation of DRM policy. It states that DRM shall be mainstreamed into development plans of government institutions. It relies on organizational structures with an appropriate and harmonized roles and responsibilities at federal, regional and *woreda* levels. It builds on the DRM policy commitment for strong horizontal and vertical coordination among decision-making bodies and effective DRM systems, processes and procedures. It is based on understanding of disaster risks; effective information flows for decision making and community based DRM; resource preparedness, ensuring appropriate and timely availability of key resources; effective implementation capacity including resource delivery and mechanisms for feeding into planning and decision-making.

In relation to the above main team of the DRM-SPIF, an interviewee responded that the strategic and investment framework is designed to put the DRM policy in to practice by identifying the main investment areas. It increases the collaborations of institutions by focusing on the creation of all-inclusive DRM systems. If the framework is changed in to practice, it secures the growth of the country in general and livelihoods of the community in disaster areas in particular. It helps to promote a paradigm shift from response and recovery to prevention and mitigation.

C) The preparation of DRM-mainstreaming guideline (2017) of Ethiopia

DRM mainstreaming is the condition of considering and addressing risks emanating from natural and anthropogenic hazards in medium-term strategic development frameworks, in legislation and institutional structures, in sector strategies and policies, in budgetary processes, in the design and implementation of individual projects and in monitoring and evaluation of all the above basics. It includes both risk assessment and risk treatment elements. It can be any actions, processes and practices that take into consideration and integrate risk factors and the possible effects of disasters and that identify and promote DRM as a key social, economic, environmental and developmental agenda priority. Thus, it seeks to integrate DRM into conceptual and strategic frameworks as well as institutional thinking. Furthermore, it seeks to translate these into programs and activities from the national to local levels and across development interventions. So it is important to make certain that all national, sector and local development programs and

projects are designed with evident consideration for potential disaster risk and to resist hazard impact; do not inadvertently increase vulnerability to disaster in all sectors: technical, social, financial, economic and environmental and are designed to contribute to reduce future disasters.

All interviewees agreed that there is no clear understanding as well as implementation regarding to mainstreaming DRM in to development plans of national sector agencies and international donor institutions. Particularly, one interviewee expressed his view in the following way.

The mainstreaming guideline clearly stated the responsibilities of lead sector agencies and responsibilities that should be integrated into their development plans. This document helps them to show the direction in which they work together with NDRMC in the areas of reducing disaster risks. Therefore, when the guideline put in to practice, it creates an opportunity for them distinctively to prevent and mitigate disasters.

The response expressed that effective integration of DRM into the development process results in risk sensitive development which has two fundamental outcomes: First, DRM integration gradually leads to the protection of all existing and new public assets against the impacts of hazard events. Over time, awareness of potential hazard impacts leads to investment in the protection of existing assets. Similarly, protective features gradually become part of the normal investment in any new asset. Second, integrating DRM seeks to avoid the creation of new forms of risk due to an increase in the exposure or vulnerability of populations and assets. This means, for example, that socio-economic policies will not increase the exposure of populations or assets, like an agricultural policy that encourages farming settlements in an inadequately protected flood plain. It also means that all new physical developments, like rail lines and housing developments, are undertaken with consideration not only of the potential hazard impacts on the asset itself, but also of the potential impacts on the surrounding area. As such, these developments do not worsen existing risks or create new ones for nearby communities or assets. The National Policy and Strategy on Disaster Risk Management and the DRM-SPIF also clearly provide the direction and strategies for mainstreaming DRM into sector institutions. Thus, There is a dedicate structure in those lead sector institutions to be assigned for performing such tasks.

4.5. The role of institutional collaboration in DRM for environmental management and sustainable development

Environmental protection and sustainable development activities are part of the disaster risk management activities that helps to take preventive and mitigate disasters. They are also used in post-disaster activities basically rehabilitation. For instance, if the WDRP indicated that the area is exposed to drought disaster because of environmental degradation, after giving response, the measure of rehabilitation should performed in the form of reforestation. Thus, the actions of the institutions that involve in this practice, indirectly, participate in environmental protection. It is obvious that environmental protection is an indicator of sustainable development.

On the other hand, there are institutions that involve in environmental protection. When these institutions participate in it, they involve in the prevention of disasters. For instance, it reduces the occurrence of disaster risks like land slide, forest fire, flood and drought.

One interviewee mainly expressed the link of DRM practices with sustainable development by taking his academic background as an example.

The activities of NDRMC and Sustainable development are the two sides of one coin. When you practice DRM, directly or indirectly, you contributed for Environmental Protection and Sustainable Development. If the collaborative institutions can create a disaster resilient community, indirectly, it is obvious that sustainable development have been achieved. For instance, PSNP is part of DRM practice for the rural communities. When supportive institutions give this aid, the rural community has participated in environmental protection activities such as reforestation ad terracing primarily.

The *Woreda* disaster risk profiling plan, the policy and the DRM-SPIF, all, are basically started from Environmental protection and sustainable development perspective as a means of reducing disasters. It considers the plan as a development plan. In this trend, UN agencies, humanitarian and development partners have their own part. Therefore, their role in DRR has the role in sustainable development and environmental protection.

On the other hand, the one that must be mainstreamed in development planning of institutions to reduce disaster risks is Environmental protection. For instance, Environment, Forest and Climate

Change Commission have the responsibility to implement objectives related to environment and climate resilient green economy in its development plan. The commission is accountable for monitoring, evaluating and reporting of the progress and achievements of its implementation with respect to forest development, bush forest fire management, climate change mitigation and adaptation as well as environmental pollution related hazards and disasters. It also follows rainfall and temperature situation, deforestation and reasons for environmental changes.

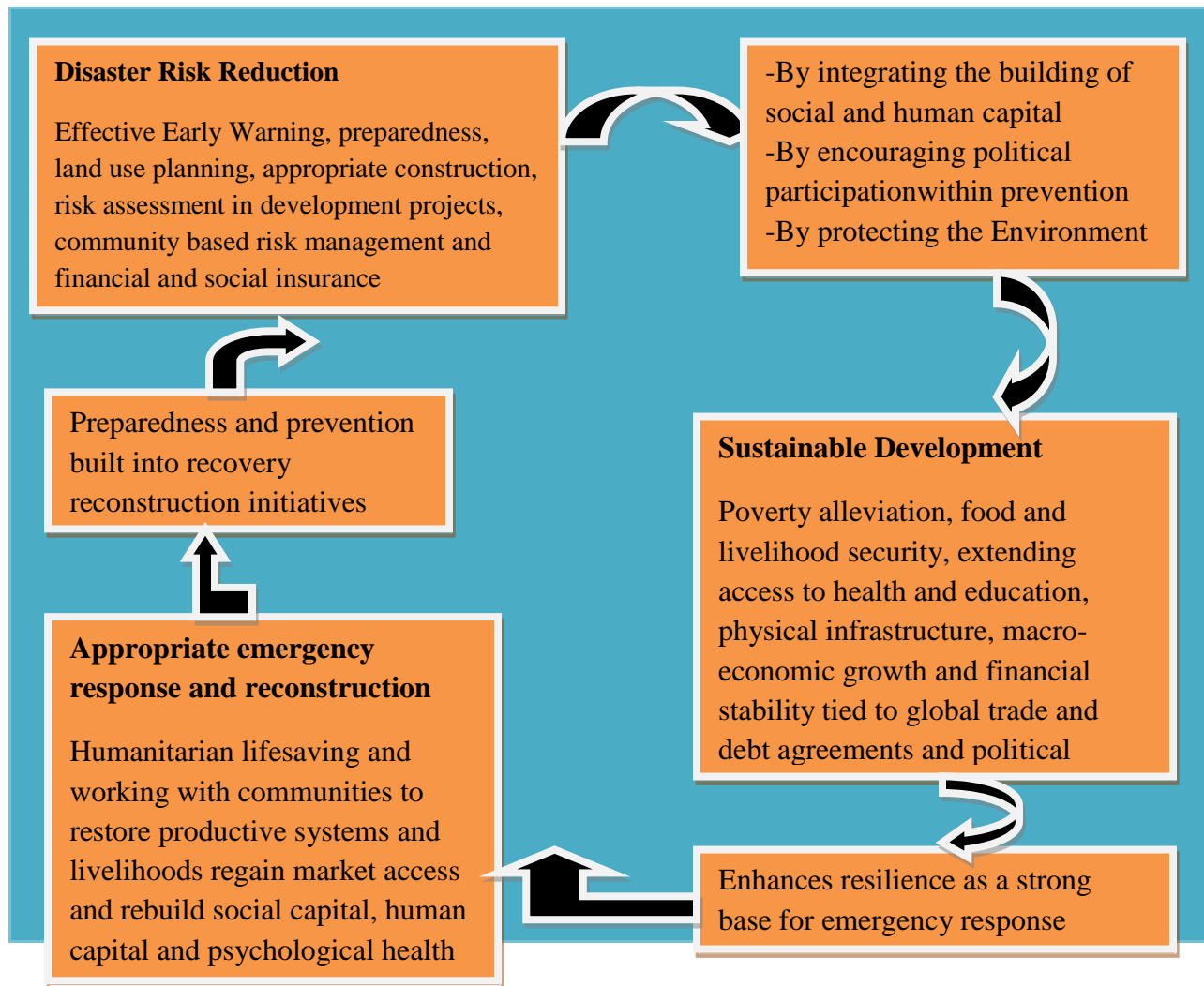


Figure 4.5. The link between DRM, EM and SD (Source: From literatures of DRM)

From the diagram, we can grasp that environment; development and disaster are closely linked. When activities of disaster risk reduction have been done, the sustainability context came in to consideration. Environmental management is one method of reducing disaster risks and this is one part of sustainable development. If there exists sustainable development, resilience of the

community to cope up disasters became enhanced. On the other hand, this resilience helps to save human lives from disasters. Even if disasters occur, they can easily recover back to their original life. So environmental protection, DRM and SD success are interrelated.

On the contrary, major environmental disasters like land degradation, desertification, ecosystem loss, diseases, pollution and climate variability act as both hazards and factors of vulnerability that expose the poor and the vulnerable. Environmental degradation in combination with natural hazards can exacerbate disasters and has direct relationship with epidemics; health related disease, climate change as well as landslides.

Inadequate and inappropriate environmental protection also damages the natural resource base and weakens the ability of people and ecosystems to withstand such hazards. A healthy environment enhances the capacity of societies to reduce the impact of natural and human-induced disasters, a fact largely underestimated. As disasters undermine both socioeconomic development and environmental management efforts, there is a compelling need to explore how environmental mismanagement changes hazard and vulnerability patterns.

As the Yokohama Strategy in its ninth principle stated, “environmental protection, as a component of sustainable development and consistent with poverty alleviation, is imperative in the prevention and mitigation of natural disasters”. Thus, integrating DRR with environmental management and can minimize the impact of natural hazards on the environment and the society.

Mainstreaming DRR strategies in environmental management requires assessment of disaster risks arising from environmental factors. Environmental impact assessment that incorporates disaster risk through risk assessment can be one of the main strategies for reducing the impacts of disasters on the vulnerable poor communities. Disaster risk based environmental impact assessment is best for environmental management and reduction of disaster risk. Hence, the mainstreaming of DRR measures in environmental protection activities has pivotal role to the success of sustainable development goals.

CHAPTER FIVE: CONCLUSION AND RECOMMENDATIONS

5.1. Conclusion

The research has attempted to assess the practices, challenges, achievements and opportunities of institutional collaboration in DRM in Ethiopia since 2015 with a special emphasis on NDRMC. In-depth key informant interview and document review were carried out by using qualitative research technique for in-depth understanding of institutional collaboration practices, challenges, achievements and opportunities in the three phases of DRM in Ethiopia.

Depending on the findings, some conclusions are drawn in line with the objectives of the study. In the first case, the output of various analyses in this research indicated that Ethiopia has experienced a serious of disasters in its history. Despite the prevalence of numerous disasters, there were no DRM policies and structures prior to the 1970s. But acting in response to disasters has been the characteristics of Ethiopian government. After the occurrence of the 1973/74 famine, the imperial regime established RRC for reaching out the affected people. In the same year, the Ethiopian National Early Warning System under the RRC was established to predict the food situation in drought affected areas. Towards the end of the Derg regime, the RRC's mandate and responsibility was modified and included activities such as building up stocks of sufficient foods so that the impacts of the threatening and impending impacts of famines could be reduced. However, despite the attempts made so far by the two regimes, the RRC was mainly engaged in post disaster activities. However, the coming of a new government in 1991 made a slight shift from reactive to proactive approach. This indicated that the existing institutional set up for DRM in Ethiopia were the result of long institutional evolution. It has also undergone through numerous changes in mandate, structure and scope over the past years.

In relation to the collaborative institutions institutional set up in Ethiopia since 2015, there are stated governmental lead sector institutions in the 2013 NPSDRM of Ethiopia including the Ministry of agriculture, environment, health, water, education, urban development, national defense and lower level administrations. These institutions are assigned different responsibilities that are related with their sector-specific disasters. Besides this, the policy and the SPIF call for international cooperation in DRM in Ethiopia. This pointed out that institutions have a great role in coordinating, ensuring and implementing DRM practices in Ethiopia.

Basically, lead sector institutions are assigned for every hazard at the federal, regional and *woreda* levels for the implementation of DRM policy. They play a great role in reducing disaster risks and lessening the exposure of the community in livelihood hazards relevant with their respective sectors. Therefore, these are sectors operated to be functional in DRM in Ethiopia.

The research also revealed that there are international humanitarian institutions that are generously involved in the DRM in Ethiopia comprised of UN agencies, donors and NGOs. These institutions are crucial to give emergency response when disasters occur. The institutions have a coordination forum towards lead sector institutions. For instance, NDPPC, DRMTWG, S-MAC, HCT and different coordination forums are established to collaboratively involve in DRM. Even as the study indicated that the international humanitarian institutions formed a coordination structure in sector task forces. For instance, in the Agricultural task force, the minister chaired it while the representative of FAO is co-chaired the task force.

In terms of practices of institutions in DRM in Ethiopia, the result of the study pointed out that, there are six pillars of DRM in Ethiopia. From these pillars, collaborative institutions deserved their time and resource at emergency response and relief recovery. But it does not mean that they did not involve at the other pillars at all. For instance, the involvement in early warning information dissemination, assessment, forecast, capacity building and other elements of preparedness. As above mentioned, they have coordination forum and task forces in doing these.

Nationally, the NDRMC performed different activities for reducing disaster risks in the country. From these, preparing WDRP, contingency planning and EWS are the main inputs that are focusing on risk mitigation and adaptation. In relation to EWS, the study identified different tools such as LEAP, LIAS, HEA, NIMS and different regular and seasonal assessments. But there is no as such modernized tool of collecting early warning information. In this context, the NMA had a paramount role in collecting, forecasting and disseminating weather information.

With regard to the contribution of those collaborative institutions in DRM in Ethiopia, they have undeniable successes that are achieved by them in terms of saving the lives and livelihoods of the community that are affected by the disaster. For instance, the study indicated that they were collaborative in the establishment of EOC, WDRP, mainstreaming guideline and other inputs that help to reduce disasters.

On the contrary, under the challenges that institutions face during collaboration, different literatures indicated the existence of system level challenge, institutional level challenge and DRM component challenges. In addition to these, most interviewees indicated the existence of lack of infrastructural development, structure dissimilarity, in-activeness of task forces basically at region and *woreda*, problem of security, shortage of fund, poor government early warning, lack of appropriate human resources and the spread of inter-communal conflicts.

As above mentioned, the study aimed to assess the opportunities of institutional collaboration in DRM in Ethiopia. Accordingly, the national policy, DRM-SPIF and the mainstreaming guideline are the basic which will help the collaborative institutions in DRM practices. These documents are the existing documents that show the method of preventing and mitigating disasters. In addition, they show the way how to build-back-better approach. But, as the result revealed, they are not put in to practice. So if implemented, it may change the present context.

Finally, the result of the study examined the role of institutional collaboration in DRM for sustainable development and environmental protection. Accordingly, the study asserted that collaborative DRM practices have a closer link with the sustainable development success and environmental protection. For instance, if institutions participated in DRR, indirectly, they are participated in the sustainable development agenda and environmental protection. As the SDGs implementation strategy revealed that sustainable development can be achieved through the collaborative effort of both the national government and international development partners. Therefore, collaborative DRM, sustainable development and environmental protection are the two sides of one coin.

5.2. Recommendations

The following recommendations have been emerged for critical consideration in light of the discussions drawn herein before and the conclusions summarized above. The recommendations are assumed to be used as a point of departure for discussion and further investigation in institutional collaboration in DRM in Ethiopia. The points are presented into categories.

1. Effective pre-disaster prevention and post-disaster reconstruction shall be in place

This research verified that collaborative institutions were deserved their time and resource in emergency response and early recovery. But this emergency food and non-food support by itself is not an adequate intervention. What has made the DRM practices futile so far in Ethiopia has been the support of institutions at this stage. This is why disaster risks have been spread from time to time in frequency and magnitude as opposed to bringing improvements. Therefore, if it is found inevitable for collaborative institutions to reduce disasters, it must base on prevention and mitigation in the first place and reconstruction after disasters in the second place. Moreover, early coordinated preparedness and successful recovery should be conducted to lessen the adverse effects of disasters and to build back to their original life respectively.

2. Collaborative institutions shall be involved in alternative development activities.

It is highly recommended that NDRMC and line ministers shall take in alternative development options for the affected communities after the disaster. These alternative development activities include: environmental protection and rehabilitation of the existing resources, rain water harvesting, improve non-farm livelihood activities, sufficient health provision, improve market networking and intensive farming techniques to foster sustainable development and sustainable livelihood in disaster affected and prone areas. It also helps to lessen disaster risks in the future.

3. Promoting indigenous knowledge

The process of capacity building and technical trainings on DRM must be delivered to both the local officials and the communities depending on their indigenous knowledge. Recognition must be given to the importance of indigenous knowledge of the community for DRM. Corresponding with this, international collaborative institutions should deserve on building the capacity of local officials based on their indigenous knowledge.

4. The affected communities shall access affordable and adequate credit services

In addition to supporting the affected people by different food and non-food reliefs, the NDRMC should form a memorandum of understanding with microfinance institutions with greater flexibility in offering loans for the targeted purposes. For instance, purchasing of commercial farm inputs and commerce that should be commanded by NRMC. Therefore, it should have suitable entrance, affordable credit rating and adequate duration to pay back liability.

5. Peace building and conflict transformation shall be taken as a way of prevention

As the research finding indicated that inter-communal induced conflict took the huge IDPs in the country. This displacement created a complex problem in the country. It became the cause for drought and outbreak of diseases. Therefore, rather than returning to their original place, the NDRMC, in collaboration with Minister of Peace, should work on the peaceful coexistence which helps to accept and respect the differences that have existed between humans. This is the most significant task that reduces the current inter-communal conflict-induced disasters.

6. Disaster Risk Management mainstreaming law shall be incorporated

Line ministers of the FDRE have the view that DRM is a task of NDRMC only. Even if the NDRMC incorporated the sector specific disasters to line ministers to take it as its mandate, they are not still handling them. Therefore, NDRMC, in collaboration with the House of People Representatives and courts, must adopted DRM mainstreaming and implementing law that guides the line ministries in the practices of DRM. In addition to clearly stipulating the roles and responsibilities of the sectors, it is necessary to put sanction on them, if not performed. It helps the institution as well as the international humanitarian partners deserve their effort collaboratively with the national lead sectors without hesitating or giving the task to the commission only.

7. Collaborative institutions shall deserve their potential in environmental protection

Obviously, environmental degradation is the most significant factor for the incidence of drought. In relation to this, local governments must work towards integrated natural resource management and inter-community resource dialogue. This paper also recommends national, international and development partners should deserve their potential in environmental protection to integrate DRM with sustainable development.

References

- Abrahams, J. (2001). *Disaster Management in Australia: The National Emergency Management System*. Emergency Medicine.
- Ansell, C. and Gash, A. (2007). *Collaborative Governance in Theory and Practice*. Journal of Public Administration Research and Theory. 18 (4).
- Badibanga, T., Ragasa, C. and Ulimwengu, J. (2013). *Assessing the Effectiveness of Multi-Stakeholder Platforms: Agricultural and Rural Management Council in the Democratic Republic of the Congo*. Discussion Paper No. 01258.
- Birtukan, A. (2014). *The Historical Development of Early Warning Practice in Ethiopia Since 1970s*. Global Advanced Research Journal of Social Science. Vol. 3(4).
- Boyd, E., Cornforth, R., Lamb, P., Tarhule, A. and Issa, L. (2013). *Building Resilience to Face Recurring Environmental Crisis in African Sahel*. Nature CC 3.
- Catherine, F. and Alexandra C. (2013). *DRM in the Dry Lands of the Horn of Africa*. Technical Consortium for Building Resilience to Drought in the Horn of Africa. Hosted by the CGIAR Consortium in Partnership with FAO Investment center. Brief 4.
- Creswell, J. (2007). *Qualitative Inquiry and Research Design: Choosing among Five Approaches*. 2nd edition. University of Nebraska, Lincoln.
- Creswell, J. (2009). *Research Design: Qualitative, Quantitative and Mixed Method Approaches*. 3rd edition. SAGE Publication.
- Dewald, V. and Ben, W. (2014). *Integrated DRM and Development Planning: Experience from Africa*. Research gate.
- Djalante, R. (2012). *Adaptive Governance and Resilience: The Role of Multi-Stakeholder Platforms in DRR*. Natural Hazards and Earth System Science. Vol. 12.
- DPPC. (1996). *Flood Risk Areas in Ethiopia* (Unpublished Document). Addis Ababa, Ethiopia.
- DPPC. (1998). *Five-Year Plan of the Federal Disaster Prevention and Preparedness Commission*. (Unpublished Government Document). (1998-2002). Addis Ababa, Ethiopia.
- DRMFSS. (2013). *Wereda Disaster Risk Mitigation/Adaptation Planning Guidelines*. Ministry of Agriculture. Disaster risk Management and Food Security Sector. Addis Ababa, Ethiopia.

- EACS. (2012). *Disaster Risk Reduction and Management strategy 2012-2016*. Final Draft. Arusia, Tanzania.
- ECA. (2015). *Assessment Report on Mainstreaming and Implementing Disaster Risk Reduction and Management in Africa*: Addis Ababa, Ethiopia.
- Emerson, K., Nabatchi, T. and Balogh, S. (2011). *An Integrative Framework for Collaborative Governance*. *Journal of Public Administration Research and Theory*. 54(4).
- Engestrom, Y., Engestrom, R., and Karkkainen, M. (1995). *Poly Conceptuality and Boundary Crossing in Expert Cognition: Learning and Problem solving in Complex Work activities*. Learning and Instruction.
- FDRE. (1995). Proclamation No. 10/1995. *Disaster Prevention and Preparedness Commission Establishment Proclamation*. *Federal Negarit Gazeta*. Addis Ababa, Ethiopia.
- FDRE. (1995). *The Constitution of Federal Democratic Republic of Ethiopia*. Addis Ababa.
- FDRE. (2004). *Disaster Prevention and Preparedness Commission Establishment/ Amendment/ Proclamation*. *Federal Negarit Gazeta*. Addis Ababa, Ethiopia.
- FDRE. (2009). *National Policy and Strategy on Disaster Risk Management*. (Drafted). A.A, Eth.
- FDRE. (2013). *National Policy and Strategy on Disaster Risk Management*. A.A, Ethiopia.
- FDRE. (2014). *Disaster Risk Management: Strategic Program and Investment Framework*. DRMFSS, MoA.
- FDRE. (2015). *Federal Negarit Gazette. National Disaster Risk Management Commission Council of Ministers Regulation No. 363/2015*. Addis Ababa, Ethiopia.
- Flora, J. (1998). *Social Capital and Communities of Place*. Rural Sociology
- Georgis, K. (2015). *Planning Responses to Climate Change*. CGIAR Research on Climate Change, Agriculture and Food Security. CCAFS outcome study. Copenhagen, Denmark.
- Gray, B. (1989). *Collaborating: Finding Common Ground for Multiparty Problem*. San Francis.
- Guimera, R., Uzzi, B., Spiro, J. and Amaral, L. (2005). *Team Assembly Mechanisms Determine Collaboration Network Structure and Team Performance*.

- Gulati, R. (1999). *Network Location and Learning: The Influence of Network Resources and Firm Capabilities on Alliance Formation*. Strategic Management Journal.
- Hagos, M. (2013). *Assessing Collaboration of Local Stakeholder Institutions in Helping Farmers to Adapt to Climate Variability Impacts: A Case Study in Mereb Leke Woreda*. MA Thesis.
- Haileeyesus, A. (2016). *Seventy Years of Ethiopian Suffering*. University of Oviedo. Department of Medicine, Unit for Research and Emergency and Disaster.
- Hemmati M. (2002). *Multi-stakeholder Processes for Governance and Sustainability. Beyond Deadlock and Conflict*. London, Earth Scan.
- Holloway, A., Chasi, V., Dewaal, J. and Drimie, S. (2013). *Humanitarian Trends in Southern Africa: Challenges and Opportunities*. Regional Inter-agency Standing Committee. Southern Africa.
- Hord, S. M. (1986). *A Synthesis of Research on Organizational Collaboration*.
- HPP. (2014). *Capacity Development Resource Guide. Multi-sector Coordination*. Health Policy Project. Futures Group. Washington DC.
- IPCC. (2012). *The Physical Science Basis. Assessment Report of the IPCC*. Summary for Policy Makers. Contribution of Working Group.
- John, B. (2009). *Designing and Managing Cross-Sector Collaboration: A Case Study in Reducing Traffic Congestion*. Washington, DC: IBM Center for Business Government.
- Kim, P. and Lee, J. (1998). *Emergency Management in Korea and Its Future Directions*. Journal of Contingencies and Crisis Management. 6(4).
- Kothari, C. (2004). *Research Methodology: Methods and Techniques*. New Age International Private Limited Publishers. ISBN (13).
- Lorenz, E. (1992). *Trust, Community and Cooperation Toward a theory of Industrial Districts*. In M. Storper & A. Scott (Eds.), *Pathways to Industrialization and Regional Development*. London, Routledge .
- Luff, P., Hindmarsh, J. and Heath, C. (2000). *Recovering Work Practices and Informing system Design*. Cambridge: Cambridge University Press .

- Mattessich, W., Murray, M. and Monsey, R. (2001). *Collaboration: What Makes It Work (2nd ed.)*. St. Paul: Amherst H. Wilder Foundation.
- Meklit, D., Mohammed, A., Nuri, M., Jemal, A., Teshome, N. and Meseret, M. (2016). *River Assessment on Akaki River Pollution and Solid and Liquid Waste* (Report to Addis Ababa Environmental Protection Authority).
- Messay, M. (2012). *Resettlement and Food Security Nexus in Ethiopia*. A Study from Nonno District, PhD Dissertation. Lumbert Publisher.
- Messay, M. (2018). *Successes and Challenges of Tackling Chronic Food Insecurity through PSNP in Ethiopia*. Consortium of Christian Relief and Development Association. Food Security and Environment Forum. For Roundtable Discussion (Unpublished).
- Mulugeta, A. (2009). *Emerging Trends in Disaster Management and the Ethiopian Experience: Genesis, Reform and Transformation*. Department of Public Administration and Development Management. AAU.Vol.1(2).
- Mulugeta, A. (2010). *Disaster Management in Ethiopia: A Review of Its Checkered History, Its Transformation and Some Implications for a Vibrant Disaster Management System 1975-2008*. Journal of Sustainable Development in Africa.12 (4). Clarion University: Clarion.
- Muluneh, W. (2013). *Policy and Institutional framework for effective DRM in Ethiopia*. Presentation Presented at China. DRMFSS, MoA.
- NDRMC. (2017). *Guideline for Mainstreaming Disaster Risks in to the Development Planning Process and Future Investment Decisions in Ethiopia*. NDRMC, Ethiopia.
- NDRMC. (2018). *Humanitarian and Disaster Resilience Plan*. Joint Government and Humanitarian Partners' Document. A.A, Ethiopia.
- NGO Voice. (2013). *DRR Working Together*. Partnerships for DRR. DRR Series.
- Niang, I., Ruppel, O., Abdrabo, M., and Essel, A. (2014). *Africa in Climate Change 2014: Impacts, Adaptation and Vulnerability*. Part B. Regional Aspects.
- O'Neil, H., Chung, G. and Brown, R. (1997). *Use of Networked Simulations as a Context to Measure Team Competencies*. In H. O'Neil (Ed.), *Workforce Readiness. Competencies and Assessment*. Mahwah, New Jersey: Lawrence Erlbaum Associates.

- Owen, C. (2001). *The Role of Organizational Context in Mediating Workplace Learning and Performance*.
- PDRE. (1987). *The Constitution of the People's Democratic Republic of Ethiopia*. Addis Ababa, Ethiopia.
- PDRE. (1989). *National Conference on Disaster Prevention and Preparedness Strategy for Ethiopia*. Addis Ababa, Ethiopia.
- PDRE. (1990). *National Disaster Prevention and Preparedness Strategy*. Addis Ababa, Ethiopia.
- Plummer, R. and Fitzgibbon, J. (2004). *Co-management of Natural Resources: Proposed Framework*. *Journal of Environmental Management*, 33 (6).
- Rodriguez, S., Petrez, J. and Pardodel, M. (2003). *An Empirical Study about the Effect of Cultural Problematic on Organizational Learning in Alliances*. The Learning Organization.
- RRC. (1984). *The History of Relief and Rehabilitation Commission (1974-1984): In the Past Ten Revolutionary Years (Amharic Version)*. (Unpublished Government Document). A.A, Ethio.
- SCJ. (2016). *Recommendation on DRR and Promotion of International Research on Disaster Prevention and Mitigation: Recommendations for Implementation of the Sendai Framework for DR and Tokyo Statement*.
- Selamawit, S. (2016). *The Status of Disaster Risk Management Education in Agriculture Universities/Colleges of Ethiopia*. UNFAO. Ghent University, Belgium.
- Shimels, H. (2013). *The Impact of DRM Intervention in Humanitarian Programs on Household Food Security: The Case of East Africa, Ethiopia, Amhara Region, North Wollo Zone*. UNOCHA Policy Development Studies Branch.
- Sims, H. and Vogelmann, K. (2002). *Popular Mobilization and Disaster Management in Cuba*. *Public Administration and Development*, 22.
- Steven, L., Julia, M., Wondolleck L. and Steven L. (1997). *Factors that Promote and Constrain Bridging*. A Research Report Submitted to US-Forest Service, Pacific Northwest Research Station.
- Sue, L., Angela, R. and Teshome, E. (2009). *Humanitarian Governance in the New Millennium: An Ethiopian Case Study*.

- Sumedh, R. (2013). *DRR at National and Sub-national Levels*. Applied Knowledge Services. Helpdesk Research Report.
- Tall, A., Patt, A. and Fritz, S. (2013). *Reducing Vulnerability to Hydro-Metrological Extremes in Africa*. A Qualitative Assessment of National Climate Disaster Management Policies.
- TGE. (1993). *Emergency Code for Ethiopia*. Addis Ababa, Ethiopia.
- Tongco, M. (2007). *Purposive Sampling as A Tool for Informant Selection*. Ethno-Botany Research and Applications.
- Trobe, L. and Davis, I. (2005). *Mainstreaming Disaster Risk Reduction: A Tool for Development Organizations*. Tear-Fund.
- UNDP. (2005). *Adaptation Policy Frameworks for Climate Change: Developing Strategies, Policies and Measures*. Lim, B., Spanger, E., Burton, I., Malone, E. and Huq, E. (eds.), Cambridge University Press, Cambridge and New York.
- UNISDR. (2005). *Hyogo Framework for Action 2005-2015: Building the Resilience of Nations and Communities to Disasters*. World Conference on Disaster Reduction. Hyogo, Japan.
- UNISDR. (2011). *Opening Statement by the Secretary General of the UN's*. Paper Presented at Proceedings of the 3rd Session of the Global Platform for DRR and World Reconstruction Conference, Geneva.
- UNISDR. (2013). *Official Statement*. A Paper Presented at Proceedings of the 4th Session of the Global Platform for DRR and World Reconstruction Conference, Geneva.
- UNISDR. (2014). *Consultation Paper on Promoting DRM through Capacity Building in the OSCE Area*. Switzerland.
- UNISDR. (2015). *UNISDR's Support for the NEPAD*. United Nation Office for DRR. May, 2015-April, 2016.
- UNISDR. (2016). *Strategic Approach to Capacity Building for Implementation of the Sendai Framework for DRR*. A Vision of Risk Informed Sustainable Development by 2030. United Nation Office for DRR.
- USAID. (1989). *Evaluation of the 1988 Ethiopian Drought Assistance Program*.

- Warner, J. (2006). *More Sustainable Participation? Multi-stakeholder Platforms for Integrated Catchment Management*. *An International Journal of Water Resources Development*, 22.
- Welch, C. Bogalech, A., Msaki, M. Sengendo, H., Kigutha, T. and Wolff, A. (2000). *Improving Household Food Security: Institutions, Gender and Integrated Approaches*. International Center for Research on Women.
- White, L. (2001). *Effective Governance through Complexity Thinking and Management Science*. Systems Research and Behavioral Science.
- World Bank. (2013). *World Development Report 2013. Risk and Opportunity. Managing Risk for Development*. Washington DC.
- World Bank. (2015). *Disaster Management in Africa*. <http://go.worldbank.org/UO0ESIRF10>
- Yin, R. (2003). *Case Study Research: Design and Methods*. (3rd Ed.). Thousand Oaks, Sage.
- Zadik, S. and Sasha, R. (2006). *Governing Collaborative Governance: Enhancing Development Outcomes by Improving Partnership Governance and Accountability. Accountability and the Corporate Social Responsibility Initiative*. Working Paper No.23. John F. Kennedy School of Government: Harvard University.
- Zimmerman, R. (1985). *The Relationship of Emergency Management to Governmental Policies on Man-Made Technological Disasters*. *Public Administration Review*, 45.

Appendices

Appendix 1: Semi-structured key informant interview guide for NDRMC staffs

Dear respondent,

The main objective of this KII Guide is to collect primary data to undertake an assessment on **‘Institutional collaboration in DRM in Ethiopia since 2015’**. Your responses to the questions are valuable and will be held in utmost confidentiality to be used only for the analysis of this research. You will not be identified by name in any case. If you accept to participate in this research, you will be doing so voluntarily and there will not be any monetary returns. You are also free to refuse to respond to any questions you do not feel comfortable answering or to withdraw from the research all together. This interview will take about an hour of your time to respond to the questions.

Thank you very much for your time and professional support!!!

A) Name of the Institution: -----

B) Position of the Interviewee: -----

C) Date of the Interview: -----

General introductory questions

1. What seems the historical development of DRM institution corresponding with its factor of establishment and institutional setup?
2. What are the key events that your institution has been involved with as its launch?
3. Does your institution undertake activities for counteracting the effects of disaster risks? How? What strategies, rules and regulations used to solve it?
4. Does your institution have a plan to collaboratively manage environmental related disaster risks with other institutions? What are the mechanisms that currently exist? In what areas? How effective they are? Some experiences?
5. What seems your institution's understanding on “institutional collaboration” with other institutions? Do you think this is an issue for the institution? Why?
6. Does your institution have collaboration with other bodies? With whom? On what areas? What fruitful outcomes have been achieved by the collaboration?

7. What are the major national issues that should be addressed through institutional collaboration in Ethiopia? Justify why these issues are most important?
8. What are the major indicators of Institutional collaboration in Ethiopia?

Objective 1: To examine the practices of institutional collaboration in pre-disaster, during-disaster and post-disaster DRM practices in Ethiopia.

1. How do you explain about the complexity and emerging nature of disaster risks in Ethiopia from historical to changing perspectives?
2. What seem the trends of environmental related disaster risks like drought and flood in Ethiopia in the last five years?
3. What activities are undertaking by stakeholder institutions to improve the management of environmental related disaster risks? By whose institutions?
4. Identify some of government offices, agencies, NGO's and others (if any) which have relevancy to environmental related disaster risk management?
5. Does your institution have adequate skill and capacity to support in the planning, responding and decision making processes of DRM in Ethiopia?
6. Which institution will be more successful in the ongoing institutional collaboration of DRM agenda in Ethiopia? Why justify?
7. What kinds of supports of adaptation options for drought and flood have been provided? By which institutions?

Objective 2: To assess the gaps that institutional collaboration faces in DRM in Ethiopia

1. What are the failures of your institution in the day-to-day activities?
2. What are the major challenges that your institution faces in the process of institutional collaboration for DRM in particular and Ethiopia in general?
3. What are the causes for the challenges? Is there any institution that have perspective differences/counteract with your objective of collaboratively manage environmental related disaster risks? With whom? Why?
4. What seems like the process of problem solving approach when challenges have been arose?
5. What solutions have been taken to solve the barriers as per your institution and to foster institutional collaboration for DRM in Ethiopia in the long run?

Objective 3: To investigate the existing opportunities for collaborative practices of institutions in DRM in Ethiopia

1. Is there conducive policy and institutional framework in Ethiopia to manage environmental related disaster risks? If yes, how to be successful? If no, how to manage it with current policy and institutional frameworks? What precondition is important to manage disasters successful and sustainable?
2. Do you think that the current reform in the country is capable to build institutional collaboration for DRM? How justify?
3. What institutional and legal frameworks are available to foster institutional collaboration in DRM in Ethiopia?
4. Do you believe that institutional collaboration practice in Ethiopia is a guarantee for DRM for the country? How? Which countries institutional collaboration experience is suitable for Ethiopian context? Why?
5. Are there a system of information sharing, equal resource allocation and formal communication channels with other institutions? How?

Objective 4: To assess the contribution of institutional collaboration in DRM in Ethiopia for environmental protection and sustainable development success?

1. To what context the current DRM and governance agenda fosters the agenda for sustainable development and environmental protection in Ethiopia?
2. What is the importance of institutional collaboration in EDRM for the achievement of SDGs in Ethiopia?
3. What is the link between institutional collaboration, DRM, sustainable development and environmental protection in Ethiopia?
4. What options are available to Ethiopia and its development partners to fortify the role of institutional cooperation in support of their overall objectives in the future?

Appendix 2: List of contacted key informant interviewees at NDRMC

Sex	Ac. level	Educational background	Experience	Position in the institution	Code
F	Bsc	Plant Science	38 years	DRR* Consultant	Interviewee-1
M	Bsc	DRM & sustainable Development	6 years	DRR* Expert	Interviewee-2
M	Bsc	DRM & sustainable Development	5 years	DRR* Expert	Interviewee-3
F	Bsc	DRM & sustainable Development	5 years	DRR* Expert	Interviewee-4
M	Msc	Economics	20 years	DRR* Director	Interviewee-5
F	Bsc	Economics	30 years	EWER Consultant	Interviewee-6
F	Bsc	DRM & sustainable Development	4 years	EWER Expert	Interviewee-7
F	Bsc	Agricultural Development	22 years	EWER Director	Interviewee-8
M	Bsc	Veterinary medicine	6 years	EWER Expert	Interviewee-9
M	Msc	DRM & sustainable Development	6 years	EWER Team leader	Interviewee-10
M	Bsc	DRM & sustainable Development	8 years	EWER Expert	Interviewee-11
M	Bsc	DRM & sustainable Development	5 years	DRR Expert	Interviewee-12
M	Bsc	DRM & sustainable Development	6 years	DRR Expert	Interviewee-13
M	Bsc	Economics	14 years	DRR Team Leader	Interviewee-14
F	Msc	-	11 years	DRR Expert	Interviewee-15
M	Msc	-	31 years	DRR Director	Interviewee-16
F	Msc	Social work	19 years	DRR Consultant	Interviewee-17

Source: From the interview procedure

Note:

DRR: Disaster Risk Reduction

DRR*: Disaster Response and Rehabilitation

EWER: Early Warning and Emergency Response

DRM: Disaster Risk Management