



JIGJIGA UNIVERSITY
SCHOOL OF GRADUTE STUDIES

**REVISED CURRICULUM FOR THE MASTERS PROGRAM IN
DISASTER RISK MANAGEMENT AND SUSTAINABLE DEVELOPMENT
(WITH INTEGRATED RIKS MANAGEMENT MAINSTREAMED, FUNDED
BY CORDAID ETHIOPIA), 2020/21**

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1. Background and Rationale

1.1. Background

Disaster risk is a global concern. Disasters hit every part of the globe (developing and developed), causing deaths and destructions. Hurricanes, fire, earthquake, tsunami, flood, drought, volcanic eruptions, landslides, cyclones, wars, oil spills, acts of terrorism, just to name a few, are the natural and man-made disaster events that resulted in untold suffering to the millions of people worldwide. Disaster losses have shown an increasing trend globally. Apparently, most of the developing countries bear the brunt of natural disaster losses. Because of the considerably low coping capacity, physical, social and economic vulnerability developing countries are suffering more from disasters than developed ones.

In Africa, the occurrence of disasters triggered by natural and human-made hazards, the number of people affected and the associated economic losses are all rising. Most disasters affecting Africa are caused by ‘hydro-meteorological’ hazard (droughts, floods, windstorms) and human factors like war, conflict and bad governance. Climate change is likely to increase the occurrence of hydro meteorological disasters in the future. HIV/AIDS, malaria and tuberculosis are impacting seriously on households and communities and threatening sustainable development throughout sub-Saharan Africa. Conflict in many parts of Africa has led to complex emergencies. Other less common causes of disasters include pest infestations, earthquakes, landslides, wildfires and volcanic eruptions.

Ethiopia is one of the African countries most vulnerable to natural and man-made disasters. Among others, drought induced famine, flood, landslide, wildfire, crop-pests, insect infestations, epizootics (livestock disease outbreaks), earthquake and wars are the major triggering events that, over the past many years, have been causing suffering to communities and destructions to property. Drought induced famine has for many years been the worst disaster event from which millions of Ethiopians, mostly rural residents, experienced immense anguish and it still remains a national policy agenda and problem. With 85 % of the life of the population rooted in agriculture, the predominantly rural Ethiopian society has often been experiencing famine due to periodic crop failures in the highlands and losses of livestock in lowlands.

Until 1973, there was no organized disaster management institution in the country. The first formal governmental disaster management institution was the Relief and Rehabilitation Commission (RRC), established in the wake of the 1973/74 famine with a mandate of relief supplies to drought victims. The RRC responded to crisis through relief food distributions and other emergency supplies and services. Responses to crises prior to the establishment of the Relief and Rehabilitation Commission (RRC) were ad hoc. Ethiopian citizens have had a generous tradition of helping each other in times of crises. Communities have been the primary responders to crises.

The RRC was re-organized in 1978 and merged with the Settlement and Awash Valley Development Authorities with mandate of relief supplies to victims of natural and manmade problems and rehabilitating them through various programs including settlement programs. Following the ratification of the NPDPM in 1993, the government restructured and renamed the RRC and established, with significant changes in mandate to strengthen linkages between relief and development, the Disaster Prevention and Preparedness Commission (DPPC) in 1995. Policy making and oversight responsibilities regarding disaster management have been vested on the National Disaster Prevention and Preparedness Committee (NDPPC) since 1993. With roles and responsibilities defined in the 1993 NPDPM, since 2003 key line departments such as the Ministries of Agriculture and Rural Development, Health, and Water Resources became more involved in disaster management through the establishment of emergency sectoral task forces. In 2004, the DPPC was renamed by proclamation as the Disaster Prevention and Preparedness Agency (DPPA), with revised mandate to focus on emergency response.

These efforts were not, however, supported with an equivalent endeavor to produce competent professionals so as to deal with disasters in an effective manner. It is only recently that few academic institutions, such as Bahirdar University and Adama Science and Technology University, took such initiative by launching academic programs on the area of disaster risk management. Bahir Dar University's both Bachelor and Masters Degree Program in Disaster Risk Management and Sustainable Development, and Adama Science and Technology University's masters program in Environmental Disaster Risk Management are notable in this regard.

Jigjiga University as one of the higher education institutions in the country, located in the highly disaster vulnerable Somali Region, gave a priority for opening a Masters Program in Disaster Risk Management and developed this curriculum with the aim of producing professionals who will contribute to the disaster risk management efforts in the country and elsewhere.

1.2. Rationale

Ethiopia has registered steady economic growth in the recent past, but it is also one of the most disaster prone countries in Africa. Without careful management, disaster impacts can undermine socio-economic gains. Numerous barriers stood in the way of Ethiopia's ability to deal with disasters. These included low levels of information on the vulnerabilities, historical impacts, and coping mechanisms used dealing with disasters; the management of disasters on a reactive basis once hazards turned into disasters; low levels of coordination (inter-sector, inter-NGO, inter-ministry) and consequently poor planning capacities; an inability of local government to pursue different approaches or to make decentralized planning a reality; the weakness of local planning and budgeting mechanisms and the inability to integrate disaster risk management adequately in spite of high vulnerability to climate variability and disasters.

Tackling the aforementioned barriers and dealing with disasters effectively requires skilled, competent, and qualified actors. This task did not get proper attention by the academic institutions in the country except a recent attempt by a few. As a result, the issue of disaster risk management is not adequately incorporated in the curriculum of higher education institutions. Due to this fact, there is an evident lack of professionals in the field of disaster risk management.

Cognizant of these facts, Jigjiga University has come up with a Masters Program in Disaster Risk Management and Sustainable Development. The program will equip students with both theoretical knowledge and practical skills which would enable them to analyze and effectively deal with disasters using a blend of theory and application. The program will be effective, up on approval by the Senate of JJU, as of the next (2015/2016) academic calendar.

2. Goal and Objectives of the Program

2.1. General Goal

The overall goal of the program in '*Disaster Risk Management and Sustainable Development*' is to train and produce competent professionals who will be able to conduct research in disasters risk management and contribute to country's endeavor of sustainable development. The program is also meant to extend students theoretical knowledge of disaster risk management and sustainable development. Furthermore, the program equips student with the practical intervention skills so as to help them contribute significantly to both disaster risk research and disaster risk management in the country in general and in pastoral areas in particular.

2.2. Specific objectives

The objectives of the M.A in *Disaster Risk Management and Sustainable Development* program are to enable the students:

- ✓ Apply advanced concepts of DRM and Research methodologies with a view to identifying, formulating and solving complex disaster risk issues
- ✓ Apply critical thinking in both theoretical and applied aspects of disaster risk science, management and sustainable development.
- ✓ Apply different models of DRM to analyze various kinds of disasters
- ✓ Demonstrate disaster risk assessment, monitoring, evaluation and management processes
- ✓ Develop and make use of effective DRM and sustainable development strategies and systems
- ✓ Identify enabling environment that would scale up the DRM initiatives

3. Graduate Profile

Graduates in Disaster Risk Management and Sustainable Development will possess theoretical and methodological competences of a highest standard. After completing the program, graduates will acquire knowledge, skill, and attitude in the areas of disaster risk management and sustainable development. Graduates are expected to acquire an advanced intervention skills that will help them manage and mitigate disaster risks of all kind. They are expected to acquire necessary information required for research and development in their future career. Thus,

graduates would be disaster prevention experts, project managers, disaster risk managers, and development practitioners, consultants/advisers in the various humanitarian organizations, researchers, community workers, and teachers/trainers, social and environmental advocates among others.

4. Academic Requirements

4.1. Admission Requirements

The requirement for admission to the Master's program in Disaster Risk Management and Sustainable Development must fulfill the following criteria:

- Applicants are required to have a B.A., BSc., or BEd degree in the social sciences (Sociology, Geography, Psychology, Economics, Development Management, Demography, etc...), agricultural sciences (Rural Development, Agro Forestry, Natural Resource Management, Water Resource Management, Meteorology, Agricultural Extension, Plant Science, Animal Science, etc), health sciences (Environmental Health Science, Health Officer, Public Health), or natural sciences (Biology, Geology, etc)
- Applicants should have a CGPA of at least 2. 0 and above in an undergraduate program from any recognized university/college or faculty.
- The candidate must pass entrance examination in the field of study.
- The candidates should be supported by recommendation letter(s) preferably from their under-graduate instructors, employers and/or professional associations.
- The candidate must meet all other admission requirements of the School of Graduate Studies (SGS) of Jigjiga University.
- Selection for admission into the MA Program in Disaster Risk Management and Sustainable Development Specialization is made on the basis of the candidate's performance in the entrance examination and the undergraduate performance measured in terms of Cumulative Grade Point Average (CGPA) equivalent to 2.00 and above. The applicants are expected to have basic knowledge of computer applications, introductory GIS and statistical techniques.

4.2.Duration of Study and Graduation Requirements

Duration of Study

The Masters program in Disaster Risk Management and Sustainable Development shall normally take two academic years for completion, including both coursework and thesis writing. Extending the duration beyond two years requires the permission of the DGC and School of Graduate Studies.

Graduation Requirements

In order to graduate with Masters Degree in Disaster Risk Management and Sustainable Development, a candidate must fulfill the following essential requirements:

- Complete 31 credit hours of course work and 6 credit hours in MA thesis related works
- Score a cumulative GPA of 3.00 and above
- A maximum of one “C” grade in all courses
- No ‘D’ or ‘F’ grade in any of the required courses
- Successfully defend his/her thesis in public and score a minimum of ‘**satisfactory**’ grade
- Most of all, the graduation requirements will be bound by the Harmonized Academic Policy and the Senate Legislation of Jigjiga University

4.3.Medium of Instruction

The medium of instruction for the program will be ENGLISH.

5. Degree Nomenclature

Upon the successful completion of the program, students will be awarded “Master of Arts Degree in Disaster Risk Management and Sustainable Development”

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6. Methods of Teaching, Assessment, and Evaluation

6.1. Teaching Methods

Teaching methods include lectures, report writing, presentation, seminars, *group work and discussion*, independent readings, laboratory works, field-based studies and guest speech. Students will be required to write term-papers, fieldwork reports and essays, as necessary. Experienced practitioners/experts in the field of Disaster Risk Management, reputable guest lecturers and/or professors (both from abroad and home universities) will be invited for experience sharing and scientific speeches.

6.2. Methods of Assessment and Evaluation

The methods of assessment and evaluation will include:

- Homework and Assignments
- Term/Reaction Paper Submission and Presentation
- Seminar Submission and presentation
- Final Examination

6.3 . Grading System

Grading will be carried out by a fixed scale grading system based on the Harmonized Academic Policy of higher education institutions.

7. Quality Assurance Mechanisms

The Masters Program in Disaster Risk Management and Sustainable Development is one of the postgraduate programs that demand high level theoretical and practical knowledge, the quality of the program should be assured to the highest possible level. One of the quality assurance aspects of the program will be assigning quality university instructors to handle the courses in this program. Therefore, all the course instructors, advisors and thesis examiners (both internal and external) must be at least PhD holders or assistant professors. In case of serious scarcity of qualified instructors, only PhD candidates who effectively completed their course works and successfully defended their dissertation proposal will be considered to handle the courses upon

approval by the DGC. Qualified instructors will also be invited to handle the courses on part-time basis in case of shortage of related qualified instructors in the department.

Moreover, the Program of Disaster Risk Management and Sustainable Development will have Department Graduate Council (DGC) which follows up and evaluates the training quality at program and course levels. To control the quality of post-graduate studies undertakings per se, DGC of Disaster Risk Management and Sustainable Development will set evaluation approaches such as open discussion about the courses, their relevance and betterment, evaluation of instructors by students after each course completion and their considerations, and finally evaluation of the whole program by DGC every year for possible actions of improvement. Feedback will be collected when part-time staffs deliver courses. Moreover, alumni and employer feedback survey, and external evaluation and auditing of the program will be performed.

8. Resources

8.1. Staff profile

Disaster Risk Management and Sustainable Development Masters Program is staffed with qualified teachers. The full profile of the staff members in the program is presented in table 1 below.

Table 1: Staff profile

No	Name	Qualification	Academic Rank	Area of research/Field of Study
1	Dr.Eliyas Abdulahi	PhD	Assi.prof.	Population, Resource and Environmental Economics
2	Dr. Muhamed Abdella	PhD	Assi.prof.	Sociology
3	Dr. Biniyam Bogale	PhD	Assi.prof.	Sociology
4	Dr. Getaneh Hail	PhD	Assi.prof.	Environmental Management
5	Dr. Uttman Reddey	PhD	Asso. Prof.	Climate Change
6	Dr. Satiya	PhD	Asso.Prof.	GIS and Regional Planning
7	Mr. Belay Womber	MA	Assi.prof.	Rural Livelihoods and

				Development
8	Mr. Tingirtu G/tsadi	MA	Assi.prof.	Rural Sociology and Agricultural Extension
9	Mr. jemal Kelif	MA		DRM
10	Mr. Abdurahaman Ahmed	MA		
11	Mr. Shermarke Jama	Ma		Pastoral Conflict and Conflict Management

8.2.Existing physical resources and infrastructure

Internet access: The SGS is networked with internet connection, providing internet service for both staff and students.

Class room and office: The program will have class rooms and office at SGS building.

Library: The program will share library with others graduate programs in SGS.

9. Assignment of Course Codes

The course code will have four alphabets and three digit numbers. The four alphabets code indicates the name of the program, i.e. DRMS means an abbreviation for Disaster Risk Management and Sustainable Development. The first digit indicates the years of the program at which the course will be offered where “5” for first year and “6” for second years, the middle and last numbers indicate the semester and course number (1, 2, 3...) in the program respectively.

10.List of Courses in the Program

The MA Program in **Disaster Risk Management and Sustainable Development** includes the following courses:

S/N	Course Code	Course Title	Credit Hours
1	DRM 511	Fundamentals of Disaster Risk Management	3
2	DRM 512	Sustainable Development Theories and Applications	3
3	DRM 513	Livelihoods and Food security	3

4	DRM 514	Climate Change and Disaster Risk Reduction	3
5	DRM 522	Early Warning System	3
6	DRM 521	Research Methodology in DRM	3
7	DRM 523	Polices, Strategies and Institutions in DRM	2
8	DRM 515	Pastroalism and Conflict Management in DRM	3
9	DRM 524	Gender and DRM	2
10	DRM 525	GIS and Remote sensing in DRM	3
11	DRM 516	Community Based Integrated Risk Management	3
12	DRM 611	Thesis Writing	6
Total Credit Hours			37

11. Course Breakdown (for Regular Students)

S.No.	Course Description			Cost Tuition fee
	Course Name	Course Code	Credit hrs.	
1	Fundamentals of Disaster Risk Management	DRMS 511	3	2,400
2	Sustainable Development Theories and Applications	DRMS 512	3	2,400
3	Livelihood and Food security	DRMS 513	3	2,400
4	Climate Change and Disaster Risk Reduction	DRMS 514	3	2,400
Total			12	9,600 birr

The courses in the regular program will be offered in the sequence given in the course breakdown and tuition Fee *for Regular Class Program is estimated to be 800 ETB per crhr.*

Year I Semester I

Year1 Semester II

S.No.	Course Description			Cost Tuition fee
	Course Name	Course Code	Credit hrs.	
1	Community Based and Integrated Risk Management (CBIRM)	DRMS 515	3	2,400
2	Pastoralism and Conflict Management in DRM	DRMS 516	3	2, 400
3	Research Methodology in DRM	DRMS 521	3	2,400
4	Early Warning System	DRMS 522	3	2,400
Total			12	9,600

Year II Semester I

S.No	Course Description			Cost Tuition fee
	Course Name	Course Code	Credit hrs.	
1	GIS and Remote Sensing in DRM	DRMS 525	3	2,400
2	Polices, Strategies and Institutions in DRM	DRMS 523	2	1,600
3	Gender and DRM	DRMS 524	2	1,600
Total			5	3000

Year II Semester II

S.No.	Course Description			Cost Tuition fee
	Course Name	Corse code	Credit hrs.	
1	Thesis Writing	DRMS 611	6	4,800
	Administration cost			6,600
	Total Credit Hours		6	11,400

Summary for Regular Program

	Credit hrs.	Cost Tuition fee
Course Total	31	24,800
Thesis Writing	6	11,400
Total	37	36,200

12. Course Breakdown for Extension (Weekend Program)

The courses in the Extension (weekend) program will be offered in the sequence given in the course breakdown and tuition Fee for *Weekend Class Program will be 850 ETB per crhr at Jigjiga Center and 1000 ETB per credit hrs at outside of Jigjiga.*) And the course breakdown for extension program is indicated below

Year1 Semester I

S.No.	Course Description	Cost
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	Course Name	Course Code	Credit hrs.	Tuition fee
1	Fundamentals of Disaster Risk Management	DRMS 511	3	3*850=2,550
2	Sustainable Development Theories and Applications	DRMS512	3	3*850=2
3	Livelihood and Food security	DRMS513	3	3*850=2
Total			9	7,650

Year 1 Semester II

S.No	Course Description			Cost Tuition fee
	Course Name	Corse code	Credit hrs.	
1	Climate Change and Disaster Risk Reduction	DRMS 514	3	2,550
2	Research Methodology in DRM	DRMS 521	3	2,550
3	Community Based and Integrated Risk Management	DRMS 516	3	2,550
Total			9	7,650

Year2 Semesters I

S.No.	Course Description			Cost Tuition fee
	Course Name	Corse code	Credit hrs.	
1	Early Warning System	DRMS 522	3	2,550
2	Polices, Strategies and Institutions in DRM	DRMS 523	2	1,700
3	Pastoralism and Conflict Management in DRM	DRMS 515	3	2,550
4	Gender and Disaster Risk Management (DRM)	DRMS 524	2	1,700
Total credit			10	8,500

Year 2 Semester II

S.No.	Course Description			Cost Tuition fee
	Course Name	Corse code	Credit hrs.	
1	GIS and Remote sensing in DRM	DRMS 525	3	2,550
2	Polices, Strategies and Institutions in DRM	DRMS 523	2	1,600
Total credit			5	2,550

Year 3 Semester I

S.No.	Course Description			Cost Tuition fee
	Course Name	Corse code	Credit hrs.	

1	Thesis Writing	DRMS 611	6	5,100
			Administration cost	6,600
	Total Credit Hours		6	11,700

	Credit hrs.	Cost Tuition fee
Course Total	31	26,350
Thesis Writing	6	11,700
Program Total	37	38,050

13. Course Syllabuses

Jigjiga University
School of Graduate Studies
Disaster Risk Management and Sustainable Development Program

Course Title: Fundamentals of Disaster Risk Management

Course Code: DRM 511

Credit hours: 3

Course Description

The course focuses on conceptual foundations in disaster risk management, which enables students to master the fundamental concepts of the course. The course introduces various concepts related to disaster risk management such as terminologies in disaster risk management, and specific and transversal frameworks or movements of disaster risk management. It presents the theories of hazards, disaster and risks specifically relating to risk exposure, perception and disaster response. The course looks at disaster risk management models employed by various actors in managing disaster problems: continuum models, on/off models and the new discontinuum models. The course addresses disaster risk knowledge management issues such as principles, pre event knowledge management system and post event/shock information management endeavor. It also deals with terminologies and principles relating to shock and hazards, and different ways to describe and measure hazards and shocks and risk analysis. In sum, the course contains fundamental concepts that help students to build underpinning of knowledge and skill towards disaster risk management.

Course objectives

At the end of this course students will be able to:

- Understand different terminologies and frameworks of disaster risk management
- Analyze the theories relating to hazards, disasters and risks
- Understand disaster risk management models and contextualize them with the existing realities

- Understand how to manage disaster and risk related information and knowledge
- Describe, measure and analyze risks

Course Contents

Chapter 1: Introduction to Disaster Risk on the Global Scene and Disaster Risk Management

1.1. Transversal Frameworks or Movements

- 1.1.1. Environmentalism
- 1.1.2. Urbanization
- 1.1.3. Human Rights
- 1.1.4. Sustainable Development
- 1.1.5. Globalization
- 1.1.6. Climate Change
- 1.1.7. Poverty Alleviation/MDGs

1.2. Disaster Risk Management-Specific Frameworks or Movements (2 hrs.)

- 1.2.1. IDNDR / ISDR
- 1.2.2. Yokohama
- 1.2.3. Hyogo Framework

1.3. Concepts and Terminologies in Disaster Risk Management (2 hrs.)

- 1.3.1. Hazard/Shock/Trigger
- 1.3.2. Vulnerability, Risks, Disaster/Crisis/
- 1.3.3. Emergency/Responses

Chapter Two: Theories of Hazards, Disaster and Risk (12 hours Total)

2.1. Theories relating to Risk Exposure (3 hrs.)

- 2.1.1. Chaos Theory
- 2.1.2. Normal Accident Theory
- 2.1.3. Economic (Risk Theory and Risk Aversion)
- 2.1.4. Disaster Theory

2.2. Theories relating to Risk Perception (3 hrs.)

- 2.2.1. Cultural Theory of Risk
- 2.2.2. Psychometrics

2.3. Theories relating to Disaster Response

- 2.3.1. Adaptation Theory
- 2.3.2. Resilience Theory
- 2.3.3. Vertical/Horizontal Integration
- 2.3.4. Self-organization Theory
- 2.3.5. Escalation Theory
- 2.3.6. Arena Theory

Chapter Three: Disaster Risk Management Models

3.1. Continuum Models

- 3.1.1. Three Stage
- 3.1.2. Four Stage
- 3.1.3. Five Stage

3.2. On/Off Models

3.2.1. Contract/Expand Model (South Africa)

3.3. The New Dis-continuum Model (Moriniere)

Chapter Four: Disaster Risk Knowledge Management System

4.1. Principles (4 hrs.)

4.1.1. Information as Power

4.1.2. Data, information, knowledge, action

4.1.3. Contrasts: Analysis versus Assessment, Database versus System, Timely versus Accurate, Collected versus Used and High Tech versus Low Tech

4.2. . Risk and Disaster Knowledge Management Systems (R-DKMS) (2 hrs.)

4.2.1. PRE EVENT Baseline Analysis or Assessment

4.2.1.1 Hazard / Shock Analysis

4.2.1.2 Vulnerability and Capacity Analysis

4.2.1.3 Risk Analysis

4.2.1.4 Monitoring: Hazard / Shock Monitoring, Vulnerability Monitoring, Risk Monitoring, Ground Truthing / Spot Checking, Early Warning and Alert Systems

4.2.2. Post event (Post-Shock) Information Management

4.2.2.1. Damage Assessment (Over flight)

4.2.2.2. Needs Assessment

4.2.2.3. Classification of Survivors

4.2.2.4. Humanitarian-Aid-Management

Chapter Five: Shocks and Hazards

5.1. Terminology: Hazard, Shock, Frequency, Probability, Exposure, Exogenous, Predictability

5.2. Principles and Contrasts: All-Shock Approach, Primary/Secondary/Tertiary

5.3. P-CIST Typology: five main ways to describe and measure hazards/shocks

5.3.1. Predictability

5.3.2. Cause/ determinant

Geophysical/ geological / tectonic

Hydrologic / climatologic / atmospheric / meteorological

Biologic/epidemiologic

Technologic / industrial / chemical (man-made)

Socio-economic, societal / conflict (intentional)

5.3.3. Impact / consequence (includes aspects of intensity/severity)

Human and Societal

Physical / infrastructural

Economic

Environmental

5.3.4. Spatial/scale aspects

Magnitude: Global, Africa, Horn, Ethiopia

5.3.5. Temporal

Onset: Sudden, Slow

Duration: short-lived, long/protracted

Frequency of occurrence / revisit time

5.4. Risk Analysis: (3 hrs.)

Step 1: Hazard or Shock Identification / Inventory

Step 2: Hazard or Shock Profiling

Step 3: Hazard or Shock Evaluation

Step 4: Vulnerability Analysis and

Step 5: Overlay of Shock and Vulnerability are not discussed in this theme

5.5. Global hazards and shocks: an introduction

5.5.1. World Bank Hotspots

5.5.2. CRED EM-DAT

Teaching Methods: Lecture, Group discussion, Question and Answering, Producing term papers and Group Presentation

Assessment Methods: Assignment, Presentation, Case Analysis and Final exam

References

- Coppola, D. P. (2007). Chapter 1. Introduction to International Disaster Management. Butterworth-Heinemann. 28pp.
- NEW Darcy, J. (2008). MDGs and the Humanitarian-Development Divide. ODI. 2 pp.
- NEW Humanitarian Futures Group. Dimensions of Crisis Impacts: Humanitarian Needs by 2015. Read only Executive Summary, pp. 1-6.
- NEW Holloway, A. (2009). Crafting Disaster Risk Science: Environmental and geographical science sans frontiers. Gateways, Cape Town: International Journal of Community Research and Engagement, Vol 2: 98–118.
- Wisner, B. (2003). "Sustainable Suffering? Reflections on Development and Disaster Vulnerability in the Post-Johannesburg World." Regional Development Dialogue 24(1): 135–148.
- World Conference on Disaster Reduction (ISDR, 18-22 January 2005). Hyogo Framework for Action 2005-2015: International Strategy for Disaster Reduction. 22pp.

Jigjiga University
School of Graduate Studies
Disaster Risk Management and Sustainable Development Program

Course Title: Sustainable Development Theories and Applications
Course Code: DRM 512
Credit hours: 3

Course Description

Sustainable Development Theories and Applications is an essential course dealing with some fundamentals issues of sustainable development and globalization. The course initially introduces students with the concepts of poverty, and theories of poverty and anti-poverty programmes for community development. Different theories will be presented and examined with respect to key concepts, perspectives and key challenges in achieving sustainable development, and other post development discourses. It will discuss the meaning of sustainability, the various components of sustainable development, developing and developed countries, community participation and good governance, among others.

Course Objectives

At the end of this course students will be able to:

- Discuss the various theories of Poverty and program against poverty
- Understand the different theories of development
- Identify factors contributing towards unsustainable development
- Debate on theories that are suitable to developing countries

Course Contents

Chapter One: The Concept and Theories of Poverty

- 1.1. The Meaning of Poverty
- 1.2. The Dynamics of Poverty
- 1.3. Classifications of Poverty
- 1.4. Dimensions of Poverty
- 1.5. Measurements of Poverty
- 1.6. Theories of Poverty
- 1.7. The Essence of Development
- 1.8. Developing vs Developed Countries
- 1.9. Measurement of Development

Chapter Two: Theories of Development

- 2.1. Modernization Theory
- 2.2. Dependency Theory
- 2.3. World Systems Theory
- 2.4. Neo-Liberalism Theory
- 2.5. Post-Development Theory

2.6. Contemporary Thinking of Development

Chapter Three: The Meaning and Concept of Sustainable Development

- 3.1. Origin and Evolution of Sustainable Development
- 3.2. Definition and Concept of Sustainable Development
- 3.3. Principles and dimensions of Sustainable development
- 3.4. Need for Sustainable Development
- 3.5. Views on the Concept of Sustainable Development
- 3.6. Challenges of Sustainable Development
- 3.7. Overview of Policy Shifts and Implications
- 3.8. Millennium Development Challenges and Success

Chapter Four: Participatory Development

- 4.1. Origin and Meaning of Participatory Development
- 4.2. The Purpose of Participatory Development
- 4.3. Classifications of Participatory Development
- 4.4. Participatory Development Approaches
- 4.5. Factors Influence Participatory Development

Teaching Methods: Lecture, Group discussion, Case Analysis and presentation, Reading, Producing term papers and Group Presentation

Assessment Methods: Assignment, Presentation, Case Analysis and Final exam

References

- Agarwal, Anil 1992. "What is Sustainable Development," Down to Earth, June 15th: 50-51
- Fisher W.F. 1997. "Development and Resistance in the Narmada Valley". In Fisher W.F.(ed)
- Toward Sustainable Development – Struggling over India's Narmada River. Rawat Publications:
- New Delhi Salunkhe, S.A. 2003. "The Concept of Sustainable Development: Root, Connotations and Critical Evaluation", Social Change Vol. 33, No. 1, pp. 67-80
- Dube S.C. 1988. Modernisation and Development. Vistaar publications: New Delhi Ritzer, George 2000.
- Modern Sociological Theory. 5th edition. McGraw Hill Higher Education Singh, Y. 1977. Modernisation of Indian Tradition. Thomson. Faridabad
- SinghaRoy, D.K. 2003. Social Development and the Empowerment of the Marginalised Groups: Perspectives and Strategies. Sage Publication: New Delhi
- Desai, A.R. (ed.) 1971. Essays on Modernisation of Underdeveloped Societies. Vol 1. Thacker

- and Co. Ltd.: Mumbai Dube, S.C. 1988. Modernisation and Development. Sage Publication: New Delhi
- Cowen, M. P. and R. W. Shenton. 1996. Doctrines of Development. Routledge: London Dean, Mitchell 2001.
- “Michel Foucault: ‘A Man in Danger’”, in George Ritzer and Barry Smart (eds.) Handbook of Social Theory. Sage Publications: London
- Frank, A. G. 1973. “The Development of Underdevelopment” In Cockcroft, James P. (etal) (eds.) Dependence and Underdevelopment. Anchor Books: New York
- Lall, S.1975. Is Dependency a Useful Concept in Analysing Underdevelopment?’ World Development Vol. Human Development Report 1990. Oxford University Press: New Delhi
- Human Development Report 2004. Oxford University Press: New Delhi
- Haq, Mahbub ul 1998. Reflections on Human Development. Oxford University Press: New Delhi

School of Graduate Studies
Disaster Risk Management and Sustainable Development Program

Course Title: Livelihood and Food Security

Course code: DRM 513

Credit hours: 3

Course Description

This course focuses on introducing the wider concept of livelihood and food security in relation with disaster risk management. The course covers topics which include the definitions and concepts of livelihoods, food security/insecurity and human vulnerability to various forms of risks. Emphasis will be given to livelihood assets and coping strategies of poor households in developing countries and the influence on the state of different facets of livelihoods and food insecurity. It introduces different approaches used in the analysis of livelihood including sustainable livelihoods frameworks and household economy approach. Different up-to-date techniques of food security analysis will also be covered.

Course Objectives

At the end of this course students will be able to,

- Understand the concepts of livelihood and food security
- Discuss how people vulnerable to livelihood and food insecurity problem manage the scenario
- Identify what causes are contributed to livelihood and food insecurity
- Understand the different techniques used in the analysis of livelihood and food security

Course Contents

Chapter One: Introduction to Livelihoods

- 1.1. The Origin and Concept of Livelihood, and food security
- 1.2. Sustainable Livelihoods and Food security
- 1.3. Sustainable Livelihood Approaches and Food security

Chapter Two: Components and Approaches of Livelihoods

- 2.1. Assets
- 2.2. Capabilities/Entitlements
- 2.3. Activities

Chapter Three: Sustainable Livelihoods Framework

- 3.1. Livelihood Assets
- 3.2. Vulnerability Context
- 3.3. Livelihood Strategies

- 3.4. Policies, Institutions and Processes
- 3.5. Livelihood Outcomes
- 3.6. Links to Other Development Approaches
- 3.7. Sustainable Livelihoods and Rights-Based Approaches
- 3.8. SLA and Food Security

Chapter Four: Food Security

- 4.1. The Concept of Food Security and Insecurity
- 4.2. Paradigm Shifts in Conceptual Understandings and Definitions of Food Security
- 4.3. Pillars of Food Security
- 4.4. Focus on Household Food Security
- 4.5. Focus on Nutritional Security
- 4.6. Focus on Household Livelihood Security
- 4.7. Quantitative indicators for determining food insecurity
- 4.8. Concepts Related to Food Security
 - Hunger and Famine
 - Food System and Food Chain
 - The Food System Activities
 - The Food System Outcomes and Their Determinants
 - Integrity of Livelihoods and Food Security

Chapter Five: Food Security Programming in Ethiopia

- 5.1. Historical Perspectives of Food Security Program In Ethiopia
- 5.2. Productive Safety Net Program (PSNP)
- 5.3. Household Asset Building Program (HABP)
- 5.4. Resettlement Program

Teaching Methods: Lectures, Case Analysis, readings, assignments, individual and /or group works and presentation

Assessment Methods: Assignment, Presentation, Case Analysis and Final exam

References

Degefa Tolossa (2002). Household Seasonal Food Insecurity: Causes. Social Science Research Report Series No. 26. Addis Ababa: OSREA

Degefa Tolossa (2003). Issues of Land Tenure and Food Security: The Case of Three Communities of Munessa

Woreda, South Central Ethiopia. In Norwegian Journal of Geography Vol. 57, pp. 9-19. Taylor & Francis Group

Degefa Tolossa (2005). Rural livelihoods, poverty and food insecurity in Ethiopia. A case study at Erenssa and Garbi communities in Oromiya Zone, Amhara National Regional State. PhD Thesis

2005 Department of Geography Faculty of Social Sciences and Technology Management
Norwegian University of Science and Technology, NTNU: Trondheim

DegefaTolossa (2007). The Role of Local Institutions and Social Capital in Household Food Security: A Case Study of Two Rural Communities in Oromiya Zone, Amhara Region. In Ethiopian Journal of the Social Sciences and Humanities. AAU

Dessalegn R. (1991). Famine and Survival Strategies. A Case Study from Northeast Ethiopia. SIAS: Uppsala

Haidar, M. (2009). Sustainable Livelihood Approaches: The Framework, Lessons Learnt from practice and Policy Recommendations. Expert Group Meeting on Adopting the Sustainable Livelihoods Approach for Promoting Rural Development in the ESCWA Region. December 21-22, 2009. Beirut

Maxwell, D. and Richard Caldwell (2003). The Coping Strategies Index: A Tool for Rapidly Measuring Food Security and the Impact of Food Aid Programs in Emergencies. CARE/UNWFP, Nairobi: Eastern and Central Africa Regional Managing Unit

Maxwell, D. and Richard Caldwell (2008). The Coping Strategies Index: A Tool for Rapid Measurement of Household Food Security and the Impact of Food Aid Programs in Humanitarian Emergencies, Field Methods Manual, 2nd Edition. Nairobi: CARE

Maxwell, S. and Smith, M. (1992). Household Food Security: A Conceptual Review. Institute of Development Studies. Brighton: University of Sussex

MessayMulugeta (2001). Rural Household Food Security Status: A Case from KuyuWoreda, North Shewa Zone of Oromiya National Regional State. MA Thesis, Addis Ababa University: Addis Ababa

MessayMulugeta (2009a). Food Security Attainment Role of Urban Agriculture: The Case of Adama Town. In the Ethiopian Journal of Business and Economics, Addis Ababa University

MessayMulugeta (2009b). Causes of Rural Household Food Insecurity: A Case from Kuyu District, Central Ethiopia. In Journal of Sustainable Development in Africa, Volume 11, No.4. Clarion University of Pennsylvania, USA

MessayMulugeta (2012). Resettlement and Food Security Nexus in Ethiopia: Case Studies from Nonno District, Oromiya Region. PhD Thesis, AAU

MesfinWolde Mariam (1986). Rural Vulnerability to Famine in Ethiopia, 1958-1977.

Jigjiga University
School of Graduate Studies
Disaster Risk Management and Sustainable Development Program

Course Title: Climate Change and Disaster Risk Reduction

Course code: DRM 514

Credit hours: 3

Instructor:

Course Description

This course introduces students with climate change concepts, facts, international conventions, coping up, mitigation and adaptation strategies; and the harmonization of climate change adaptation and disaster risk reduction. It equips students with knowledge and skills to identify the link between climate change and disaster risks. It also enables students to understand the formulation and application of appropriate CCA and DRR policy framework by integrating disaster risk reduction and climate change adaptation strategies.

Course objective

At the end of this course students will be able to:

- Understand the general conditions of the climate science
- Know something of the way various human activities are increasing emissions of the natural greenhouse gases
- Understand concepts related to climate change and its management
- Understand the physical basis of the natural greenhouse effect, including the meaning of the term radiative forcing
- Discuss climate variability, change, causes and its effects
- Understand the difference between climate change coping up, adaptation and mitigation strategies
- Compare and contrast the similarities and differences between CCA and DRR
- Know the importance of main streaming of climate changeadaptation

Course Contents

Unit One: Climate Basics and Change

- 1.1.An Overview of Climate Science
- 1.2.Global warming & greenhouse gases
- 1.3.Measurement of elements of climate
- 1.4.Observed Climate Variability and Change
- 1.5. Climate change debates
- 1.6.Causes of Climate Change
- 1.7.Climate change Induced Hazards
- 1.8.Effects of Climate Change

Unit two: Climate Change Mitigation and Adaptation

- 2.1. Concepts of Climate Change Mitigation and Adaptation
- 2.2. Types of Climate Change Adaptation
- 2.3. Climate Change Adaptation and Mitigation
- 2.4. Carbon pools and Carbon sequestration
- 2.5. CCA and Other Development Sectors

Chapter Three: Climate Change Adaptation and Disaster Risk Reduction

- 3.1. International Conventions
- 3.2. International Community Progress in CCA
- 3.3. DRR Strategies
 - 3.4. Financial mechanisms and services for risk reduction
 - 3.5. DRR monitoring frameworks and the enabling environment
- 3.4. Similarities and Differences between CCA and DRR

Chapter Four: Mainstreaming Climate Change Adaptation

- 4.1. Defining mainstreaming of adaptation
- 4.2. Objectives of main streaming
- 4.3. Outcome of main streaming
- 4.4. Why main stream climate change?
- 4.5. Priority mainstreaming measures

Chapter Five: Global and Regional Climate policies

Teaching Methods: Lectures, climate videos, field study visits, readings, assignments, individual and /or group works and presentations.

Assessment Methods: Assignment, Presentation, debates and Final exam

References

United Nations Conference on Environment and Development (UNCED), (1992) in Rio de Janeiro (known by its popular title, the Earth Summit).

Drake, Frances, 2000. Global warming : The science of climate change, New York : Published in the United States of America by Oxford University Press, 2000

Spencer R. Weart 2008, The Discovery of Global Warming

Joseph F.C. Dimento, 2007. Climate Change Cambridge, Mass. : MIT Press, c2007.

George Philander. S. 2012, Encyclopedia of global warming and climate change

Intergovernmental Panel on Climate Change (IPCC) (2011). Special Report on Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation (SREX). Summary for Policy Makers, Kampala: IPCC.

Kyoto Protocol, 1997.

Paris Agreement, 2015.

Standards and Normative Mechanisms For Disaster Risk Reduction, (2015). Global Assessment Report on Disaster Risk Reduction.

UNISDR (United Nations Office for Disaster Risk Reduction). (2013c). Proposed Elements for Consideration in the Post-2015 Framework for Disaster Risk Reduction by the UN Special Representative of the Secretary-General (SRSG) for Disaster Risk Reduction.

GNDR (Global Network of Civil Society Organizations for Disaster Reduction). (2014). “Joint Civil Society Position on Post-2015 Framework for Disaster Risk Reduction”. Teddington, UK.

ADPC (Asian Disaster Preparedness Center). (2013). Integrating Disaster Risk Management into the Development Process. Disaster Risk Management Practitioner’s Handbook Series, Bangkok, Thailand.

National workshop on disaster and climate change law, Vientiane, Lao PDR, July (2015).

Wiggins, M. (2012). CEDRA – Climate change and Environmental Degradation Risk and adaptation Assessment. Tearfund.

Suarez, P., Bachofen, C., van Aalst, M., Huq, S., Dupar, M. and Juichiro, S. (2013). Development & Climate Days at COP 18: Meeting Report. Climate and Development 5 (2): 182-185.

Mitchell, T. & van Aalst, M. (2008). Convergence of Disaster Risk Reduction and Climate Change Adaptation. Review for DFID, 2008.

United Nations Climate Change Conference, (2016). The Paris Agreement.

UNISDR website (www.unisdr.org)

Website: UNFCCC, www.preventionweb.net

IPCC (2013). Climate Change 2013. The Physical Science Basis - Summary for Policymakers.

UNEP & UNDP (2011). Mainstreaming Climate Change Adaptation into Development Planning: A Guide for Practitioners.

Cambridge University (2013). Climate Change: Action, Trends and Implications for Business.

The weather makers(2005) : How man is changing the climate and what it means for life on Earth
New York : Atlantic Monthly Press, c2005.

Jigjiga University

School of Graduate Studies

Disaster Risk Management and Sustainable Development Program

Course Title: Pastoralism and **Conflict Management in DRM**

Course Code: DRM 515

Credit hours: 3

Course Description

This course provides an introduction to the theory and analysis of conflict. It covers theoretical perspectives on pastoralism and conflict; analytical tools for identifying the causes and dynamics of deep-rooted conflict; and mediation and negotiations as means of resolving conflict. This course also deals with the skills in relevance to analyzing Vulnerability and Disaster management in Pastoralist context is a key for DRM to deal the issues of migration, changing herd composition, Predation and Theft, Drought and the management of climatic change, Early warning systems, Security in pastoral zones are the key issues to address the problem to find a solution. Further this course discusses the climate change is the major threat to the pastoral communities in Horn of Africa, hence the course also analyze the nexus of Climate Change and Vulnerability, Climate Change and Pastoral Conflicts, Management strategies in adapting climate change in pastoral communities and coping methods. Finally, this course deals with Risk reduction strategies in pastoral communities such as recovery, Structural features, land tenure, Restocking Livestock and economic diversification in pastoral regions could be discussed. The course also focuses on social and political conflict (i.e. conflict between groups and between the state and groups of people), with an emphasis on large-scale violent conflict. It does not focus on inter-personal or family conflict. Nor will we examine the impact and costs of violent conflict. The course is structured around five themes: theories of violent conflict; conflict in Africa; conflict analysis; resources, geography and conflict; and mediation and negotiations.

Furthermore, the course will equip the students with the knowledge and skills in conflict management, conflict prevalence and trends, types, causes, effects, and the traditional and modern conflict resolution mechanisms. Moreover, the students will be exposed to the knowledge of conflict in the context of natural resources management and governance.

Course objective

At the end of the course students should be able to:

- enhance students' knowledge and deepen their understanding of conflict and its resolution; become familiar with the relevant literature and approaches;
- Understand the basic concept of pastoralism in relevance to DRM.
- Acquire the skills of assessing the Vulnerability of pastoralists in relevance to Disaster Risk management.
- develop skills and insights for analyzing conflict; and
- Stimulate critical thinking about conflict.
- Understand The dynamics of conflict and its resolution
- Improve your skills in self-reflection and self-awareness in the face of conflict
- Understand the processes of negotiation, mediation, facilitation, and consensus building
- Conduct a conflict analysis
- Understand the traditional pastoral conflict resolution mechanisms

Course Contents

Chapter 1: Pastoralism: An Overview

1.1.Pastoralism: definitions and Forms

1.2.Origin and History of Pastoralism

1.3. Distribution of contemporary pastoralism : Global, Africa, and Ethiopia

1.4.Identity and structure of Pastoralism

1.5.Markets, commodity chains and economic valuation in pastoral areas

1.6.Land and property and resources in pastoral areas

1.7.Misconception of Pastoralism: Tragedy of the Commons and East African Cattle Complex Theories

Chapter 2: Pastoralism and disaster risk management

2.1.Pastoralism and Mobility

2.2.Class dynamics, social differences and social relations in pastoral areas

2.3.Poverty, livelihood vulnerability and disasters in pastoral areas

2.4.Pastoral livestock production, feeding and disease

2.5.Pastoralism, Environment, and Climate Change

2.6.Economic and Environmental Contribution of Pastoralism

2.7.Coping mechanisms and responses among pastoral communities

Chapter 3: The future of Pastoralism

3.1 Pastoralism as a way of life

3.2 Factors affecting pastoralism in the 21st Century

3.3 Debating pastoral development: National and Institutional and Political Challenges to DRM in Pastoral Areas

3.4 Commercial Pastoralism

Chapter 4: Definition and Concept of Conflict

3. Definition of Conflict

3.1.Life cycle of Conflict

3.2. Different Conflict Curves

3.3. Types of Conflicts

3.4. Nature and Styles Of Conflict

3.5. Theories of conflict

3.6. A Framework for Analyzing the Dimension of Conflict

3.7. Conflict analysis Models

3.8. Steps in analysis of conflict

Chapter 5: Conflict and governance in pastoral frontiers

5.1 Pastoralism and Conflict

5.2 Factors contributing to conflict involving pastoralists in the Horn of Africa (HoA)

5.2.1. Government policies

5.2.2. Socio-economic and political marginalization

5.2.3. Weakened traditional governance in pastoral areas

5.2.4. Insecurities and inadequate resources

5.3 Ecological Resources and Pastoral Conflicts

5.4 Pastoral Traditional Institution and their role in Conflict Resolution

5.5 The Role of Natural Resources and Environment in Peace Building

Chapter 6e: Conflict handling and resolution approaches

6.1 Conflict Management techniques and strategies

6.2 Pastoral Conflict Management Strategies

6.3 Cooperative Problem-Solving

6.3.1. Mediation

6.3.2. Negotiation

6.3.3. Facilitation

6.3.4. Arbitration

Teaching Methods: Lecture, Group discussion, Question and Answering, Producing term papers and Group Presentation

Assessment Methods: Assignment, Presentation, Case Analysis and Final exam

References

- Bush, R. A. B. ,&Folger, J. P. (2005). The promise of mediation: The transformative approach to conflict (Rev.ed.). San Francisco: Jossey-Bass
- Donohue, W. A. (2006). Managing interpersonal conflict: The mediation promise. In J. G. Oetzel, ed. & S. Ting- Toomey (Eds.), The SAGE handbook of conflict communication: Integrating theory, research, **and** practice .Thousand Oaks, CA: Sage
- Ellis, D. G. (2006). Transforming conflict: Communication **and** ethnopolitical conflict. Lanham, MD: Rowman& Littlefield
- Folger, J. P. , Poole, M. S. , &Stutman, R. K. (2005). Working through conflict: Strategies for relationships, groups, **and** organizations (5th ed.). Boston: Pearson
- LeBaron, M. and Carstarphen, N. Negotiating intractable

- Donohue, W. A. (2006). Managing interpersonal conflict: The mediation promise. In J. G. Oetzel, ed. & S. Ting-Toomey (Eds.), *The SAGE handbook of conflict communication: Integrating theory, research, and practice* Thousand Oaks, CA: Sage
- Ellis, D. G. (2006). *Transforming conflict: Communication and ethno-political conflict*. Lanham, MD: Rowman & Littlefield
- Folger, J. P. , Poole, M. S. , & Stutman, R. K. (2005). *Working through conflict: Strategies for relationships, groups, and organizations* (5th ed.). Boston: Pearson
- Folger, J. P. , Poole, M. S. , & Stutman, R. K. (2005). *Working through conflict: Strategies for relationships, groups, and organizations* (5th ed.). Boston: Pearson
- Magda Nassef with Mulugeta Belayhun (2012), *Water Development in Ethiopia's Pastoral Areas: A synthesis of existing knowledge and experience* ,Save the Children USA and Overseas Development Institute.
- LeBaron, M. and Carstarphen, N. *Negotiating intractable conflict: The common ground dialogue process and*
- *abortion*. *Negotiation Journal* vol. 13 pp. 341–361. (1997).
- Pearce, W. B. ,& Littlejohn, S. W. (1997). *Moral conflict: When social worlds collide*. Thousand Oaks, CA: Sage
- Putnam, L. L. (2008). Exploring the role of communication in transforming conflict situations. In W. Leeds-
- Hurwitz, ed. & G. J. Galanes (Eds.), *Socially constructing communication* (pp. 189–209). Cresskill, NJ: Hampton
- Press
- Walton, R. E. ,& McKersie, R. B. (1965). *A behavioral theory of labor negotiations: An analysis of a social*
- *interaction system*. New York: McGraw-Hill
- Wilmot, W. W. ,& Hocker, J. E. (2001). *Interpersonal conflict* (6th ed.). New York: McGraw-Hill
- Mulugeta Gebrehiwot Berhe and Jean-Bosco Butera (Eds.) (2012) *Institute for Peace and Security Studies and University for Peace*, Addis Ababa, Ethiopia.

- Carol Kerveti(Eds)2003, PROSPECTS FOR PASTORALISM IN KAZAKSTAN AND TURKMENISTAN, RoudedgeCurzo, New York.
- A.MohamedSalih, Ton Dietz ,AbdelGhaffar Mohamed Ahmed (Eds)(2001)African Pastoralism:Conflict, Institutions and Government, Pluto Press, London.
- Keith Smith and David N. Petley (1991),ENVIRONMENTAL HAZARDS :Assessing risk and reducing disaster FIFTH EDITION , Routledge, New York.
- The World Bank (2006) Hazards of Nature, Risks to Development: An IEG Evaluation of World Bank Assistance for Natural Disasters, Washington, D.C. Independent Evaluation Group.
- Federal Democratic Republic of Ethiopia Ministry of Agriculture and Rural Development(2008),National Guidelines for Livestock Relief Interventions in Pastoralist Areas of Ethiopia,Addis Ababa.
- Pastoralism and policy training: addressing misconceptions and improving knowledge, 2019, International Institute for Environment and Development.
- Dong, S., 2016. Overview: Pastoralism in the World. In book: Building Resilience of Human-Natural Systems of Pastoralism in the Developing World. Available from
(5) (PDF) An Overview of Mobile Pastoralism in Andhra Pradesh and Telangana States of the Deccan Plateau Region of India. Available from:
https://www.researchgate.net/publication/341741189_An_Overview_of_Mobile_Pastoralism_in_Andhra_Pradesh_and_Telangana_States_of_the_Deccan_Plateau_Region_of_India [accessed Aug 27 2020]

Jigjiga University
School of Graduate Studies
Disaster Risk Management and Sustainable Development Program

Course Title: Community Based and Integrated Risk Management

Course Code: DRM 516

Credit hours: 3

Course description

The course provides an opportunity for students to learn essential skills and knowledge in community based and integrated risk management to address implementation challenges in a systematic manner. It help students to acquire tools and obtain knowledge on “how to” design and implement programs for reducing disaster risks and vulnerability and building community capacity to promote a ‘culture of safety.’ It also introduces key aspects of Integrated Risk Management (IRM), which puts Disaster Risk Reduction in a context where risks for communities because of natural hazards are assessed (and addressed) by also taking into account the effects of climate (change).

The course explores the principles and practices in Community Based Disaster Risk Management; rationale for participation; rights and participatory development; stakeholder analysis; facilitation and training; community participation and disaster risk reduction; community based disaster risk management, problems of participatory disaster risk management, community mobilization, community organization, team building, and facilitation, leadership and exit strategies. The course also deals with the characteristics, elements, principles and frameworks of Integrated Risk Management.

Course objectives

At the end of the course students should be able to:

- Understand the basic concepts, features and processes of Community Based Disaster Management
- Describe community based risk assessment methods and community based disaster management planning, implementation, monitoring and evaluation processes
- Design and conduct community based disaster risk assessment;
- Comprehend the basic concept of Integrated Risk Management

- Acquire the skills for applying Integrated Risk Management approach into practice

Course Contents

Chapter One: Introduction toCommunity Based Disaster Management (CBDM)

- Definition of basic concepts
- The need for community involvement
- Traditional Vs CMDRM Approach
- Key Features of CBDM approach
- The CBDM Process
- Potential Challenges

Chapter Two: Community Risk, Needs, and Damage Assessment

- Community Risk Assessment
- Communication Need
- Damage, Loss and Need Assessment
- Community Risk Assessment Tools

Chapter Three: Community Based Disaster Reduction Planning

- Concepts of Planning
- Characteristics of Good Plan
- Concept of Community Disaster Risk Reduction Planning
- Steps in Community Disaster Reduction Planning
 - Visioning
 - Discussion
 - Identifying risk reduction measure
 - Identifying resource requirements
 - Responsibility and schedule

Chapter Four: Community-Managed Implementation

- Community Organizing
- Community Training
- Community Disaster Information Center
- Community Disaster Reduction Fund

Chapter Five: Monitoring and Evaluation

- Monitoring
- Evaluation

Chapter Six: Integrated Risk Management (IRM)

- The concept of integrated risk management
- Components of IRM: Disaster Risk Reduction, Climate Change Adaptation, Ecosystem Management and Restoration
- Elements of IRM
- Principles of IRM
- IRM Good Programming Principles
- IRM Theory of Change: Rationale and Domains

Chapter Seven: International and Regional Frameworks for IRM

- The Sendai Framework for Disaster Risk Reduction
- The Paris Agreement
- The Sustainable Development Goals
- Africa regional Strategy for Disaster Risk Reduction

Mode of Delivery

An interactive teaching method with a focus on student-to-student and instructor-to-student learning will be adopted. Learners are expected to actively participate in class discussions, individual and group assignment papers and presentations. In additions to this, learners are also required to enrich their understanding about the course through independent learning and reading besides an involvement in scholarly debates and dialogs.

Mode of Evaluation

- Individual Assignment = 20%
- Group Assignment and Presentation = 30%
- Final Exam = 50%

References

Abarquez, I & Murshed, Z. (2004), CBDRM Field Practitioners Handbook, Asian Disaster Preparedness Centre (ADPC).

Asian Disaster Preparedness Center .2001. Community Based Disaster Management: Course Participant Work Book, Partnership for Disaster Reduction South East Asia Program.

Care (2017). Integrated Risk Management explained. Published by the Partners for Resilience programme, in partnership with the Netherlands Ministry of Foreign Affairs.

Federal Office for Civil Protection (FOCP) (2014). Integrated Risk Management: Its importance in protecting people and their livelihoods. Bern, Switzerland.

ISDR, 2004. Living with Risk: A global review of Disaster Risk Reduction Initiatives. 2004 Version, Vol. 1

Natural Disasters Organization. 1992. Australian Emergency Manual: Community Emergency Planning Guide, 2nd ed., Canberra.

Okowa, Duncan (2018). Towards Integrated Risk Management in the Horn of Africa: A Gap Analysis of Regional Frameworks for Integrated Risk Management. Prepared for Red Cross Red Crescent Climate Centre (RCRCCC).

Twigg, J. 2004. Good Practice Review: Disaster Risk Reduction –Mitigation and preparedness in development and emergency planning. London, HPN

Vitoria, L.P. 2003. Community Based Disaster Management in the Philippines Making a Difference in People's Lives, Asian Center for Disaster Preparedness.

WHO. 1999. Community Emergency Preparedness: A Manual for Managers and Policy Makers, 141p.

JIGJIGA UNIVERSITY
SCHOOL OF GRADUATE STUDIES

Disaster Risk Management and Sustainable Development Program

Course Title: Research Methodology in DRM

Course Code: DRM 521

Cr.hr: 3

Course Instructor:

Course Description:

The main purpose of this course is to introduce the basic concepts and principles of Research Design and Methodology in Disaster Risk Management and Sustainable Development. It will equip the students with advanced analytical and technical skills that help them to conduct empirical research. The course covers issues as nature of research; statement of a research problem and the preparation of research proposal; literature review; research design; sampling techniques; data collection, processing, analysis (both Qualitative and Quantitative Approaches) and interpretation; and report writing. This course will provide students with the intellectual foundations of the scientific method and the principles of applied research. Students will acquire the necessary skills to identify significant research questions and to design a research project. It will provide the basic elements of research, such as design and sampling and develop skills in the essential data gathering techniques like Survey, focus Group Discussion, Interview, Observation, etc. The course introduces a methodological framework for applied research in the area of disaster risk management and sustainable development.

Course Objectives:

The general objective of this course is to enhance skills needed to collect, analyze, and interpret data and hence undertake research. The course objectives include:

- ✓ Introduce the essential principles of research methodology that constitute the foundation for applied research
- ✓ Introduce the range of quantitative and qualitative research tools commonly used to design

- and carry out professional research projects
- ✓ Give students an opportunity to design their individual research projects

Course Contents:

Chapter One: Introduction

- 1.1. Meaning of Research
- 1.2. Objectives of Research
- 1.3. Motivation in research
- 1.4 Types of Research
- 1.5 The Research Process
- 1.6 Research Philosophy
 - Philosophical world views
 - Ontological assumptions: Objectivism, Constructionism, and Pragmatism
 - Epistemological assumptions: Positivism, Interpretivism, and Pluralism
 - Research Approaches and Methodologies
- 1.6. The Role of research in DRM
- 1.7. Timeframes for Conducting Research in the Disaster Cycle

Chapter Two: Research Problem

- 2.1 What is research problem?
- 2.2 Selecting Research Problem
- 2.3. Necessity of defining Problems
- 2.4. Techniques Involved in Defining a problem

Chapter Three: Research Proposal

- 3.1 What is a research proposal?
- 3.2 Importance of a research proposal
- 3.3 Developing a proposal

3.4. Components of the Research Proposal

Chapter Four: Review of Related Literature

4.1. Introduction

4.2. Need of Review of Literature

4.3. Objectives of Literature review

4.4. Steps in conducting literature review

4.5. Sources of Review of literature

Chapter Five: Research Design

5.1. What is Research design?

5.2. Importance of Research Design

5.3. Features of a Good Research Design

5.4. Types of study design

Chapter Six: Sampling Design

6.1 Census and Sample Survey

6.2. Steps in sample design

6.3. Characteristics of a Good Sample Design

6.4. Classification of Sampling Methods

Chapter Seven: Data Collection Methods

7.1. Collection of Primary Data

7.2. Collection of Secondary Data

7.3. Selection of Appropriate method of data collection

Chapter Eight: Data Analysis and Interpretation

8.1. Qualitative Data analysis

8.2. Quantitative Data analysis

Chapter Nine: Reporting Writing

Mode of Evaluation

- Article Review -----10%

- Proposal Writing and Presentation -----40%
- Final Exam -----50%

References

- Bhattacharjee, A. (2012). Social science research: Principles, methods, and practices. Textbooks Collection. Book 3. http://scholarcommons.usf.edu/oa_textbooks/3
- Creswell J.W. (2014). Research Design: Qualitative, Quantitative and Mixed Method Approach. 4th ed. SAGE Publications, Inc.
- Elizabeth et al. (n.d.). Designing Research in DISASTER-Affected Settings. A training guide informed by the Study on Adolescent Resilience after Disasters.
- Kothari C. R. and Garg G. (2014). Research Methodology: Methods and techniques. New age international (P) limited, New Delhi
- Kumar, R. (2011). Research methodology: A step-by-step guide for beginners (3rded.). New Delhi, India: Sage Publications.
- Ruane, J. M. (2005). Essentials of research methods: A guide to social science research. Blackwell publishing Ltd

Jigjiga University
School of Graduate Studies
Disaster Risk Management and Sustainable Development Program

Course Title: Early Warning Systems

Course Code: DRM 522

Credit hours: 3

Course Description

This course introduces students to the concepts, types, elements, principles and historical perspectives of the early warning systems. Billions of dollars have been spending each year for emergency responses, relief and early recovery. The vast majority of these efforts are directed to reducing the impact on people and property after a disaster has occurred. Although natural phenomena cannot be prevented, their human, socioeconomic, and environmental impacts can and should be minimized through efficient preparedness and early warning. However, very little effort has made to mitigate disasters before their impact. We know from experience that while some material losses seem to be unavoidable, especially in the case of very large and infrequent events, such as floods and earthquakes, in some cases the loss of human lives could have been avoided if safety measures and efficient early warning systems had been in place.

Course objectives

At the end of the course students should be able to:

- Understand the different concept and types of early warning systems in DRM
- Understand the nexus between EWS and governance
- Identify EW indicators
- Understand drought and flood early warning system
- Assess the guiding principles of early warning systems in DRM
- Evaluate different disasters that are acquiring in the world with the special reference to early warning system.
- Analyze the DRM early warning approaches for effective implementation of EWS..
- Design an affective early warning system with spatial reference to DRR and DRM.

Course Contents

Chapter One: The Basics of Early Warning Systems (EWS)

- Concept of EWS
 - Historical Perspective of EWS
 - Types of EWS
 - Elements and principles of EWS

Chapter Two: EWS and Governance

- Communication infrastructure and EWS
 - EWS and Policy
 - EWS and Livelihoods
 - Indigenous Knowledge and EWS
 - Early warning information and Contingency planning
 - Communication of early warning information
 - EW information and Emergency Responses

Chapter Three: EWS of Ethiopia

- History of EWS in Ethiopia
- EW indicators and assessment Methods
- EW Information sources and systems
- Institutional arrangements of EWS
- Challenges and Opportunities of EWS of Ethiopia

Chapter Four: Climate Change Induced Hazards and EWS

- Drought Early warning system
 - Flood early warning system

Mode of Delivery

The mode of the delivery of the course combines lectures, tutorial, discussion, questioning and answering, readings, assignments, individual and /or group works and presentation.

Assessment Methods

Evaluation will be carried out based on continuous assessment which comprises:

- Individual presentation
- Group presentation
- Report writing
- Mid exam
- Final exam

Grading: As per the university's regulation

Course Policy

All students are expected to abide by the university's code of conduct of students throughout this course. Academic dishonesty, including cheating, fabrication, and plagiarism will not be

tolerated and will be reported to concerned bodies for action. Class activities will vary day to day, ranging from lectures to discussions. Students will be active participants in the course. You need to ask questions and raise issues. You are expected to do all the assignments submit and present you are supposed to accomplish. You are expected to attend class regularly. If you miss more than 25% of the class attendance you will not sit for final exams. Please try to be on time for class. Cell phones **MUST** be turned off before entering the class as they are disruptive and annoying to all of us in the class. You are responsible for all class announcements and changes.

Modes of delivery of course: Face-to-face

Lecture: 50 percent

Discussions, presentation, practical and field study activities: 50 percent

Jigjiga University
School of Graduate Studies

Disaster Risk Management and Sustainable Development Program

Course Title: Policies, Strategies and Institutions in DRM

Course Code: DRM 523

Credit hours: 2

Course Description

This course lays the foundation for students on understanding of policy, strategies and institutions in the DRM and humanitarian arena. It includes concepts and theories, types, statements, policy practices, humanitarian actors involved in DRM, funding sources and mechanisms. The course will also elucidate historical perspectives of Ethiopian DRM policies, strategies and institutions. It gives emphases to global policies, strategies, standards and institutions. The course includes the concepts and definitions of policy, strategy and institutions; type of policies, strategies and institutions in DRM, policy statements and instruments that influence Humanitarian Sectors.

Course objectives:

The goal of the course is therefore to equip students with the breadth and depth knowledge of policies, strategies and institutions involved in DRM and their roles, funding sources and mechanisms.

At the end of the course students should be able to:-

- Understand concepts and theories of policies and strategies
- Identify institutions and understand their roles in DRM
- Criticize DRM policies and strategies
- Appreciate the role of institutions in DRM

Course Contents

Chapter One: The Concept of policy

- 1.1. Concepts and Definitions of Policy and Strategy
- 1.2. The process of Policy making
- 1.2 Type of Policies and Strategies in DRM
- 1.4. Policy Statements
- 1.5. Policy Instruments

Chapter Two: Theories and Approaches of Policy

2. Theories of policies
 - 2.1. Political System Theory
 - 2.2. Group Theory
 - 2.3. Elite Theory
 - 2.4. Rational Choice Theory
 - 2.5. Institutionalism
 - 2.6. Game Theory
 - 2.7. Policy Synthesis

Chapter Three: Principles, Ethics, and Standards and Humanitarian Actors in DRM

- 3.1 Humanitarian, Principles, Ethics, and Standards
- 3.2 Standards and Neutral Principles and Processes
- 3.3 Standards Applied and Proposed in DRM
- 3.4 Humanitarian Giants
- 3.5 Role of the United Nations and NGOS
- 3.6 Role of the UN and NGOs in Ethiopia
- 3.7 Interaction between UN and NGOs
- 3.8 Major Funding Institutions in DRM
- 3.9 Bilateral Donors and Their Roles
- 3.10 Multilateral Donors and Their Roles
- 3.11 Funding Sources in DRM
- 3.12 Funding Mechanisms in DRM

Chapter Four: Legal and Institutional Frameworks in DRM

- 4.1 Global Policy and Legal Frameworks in DRM
- 4.2 Institutions in DRM
- 4.3 Classification of Institutions in DRM
- 4.4 Role of Institutions, the Opportunities and Constraints in Collaboration
- 4.5 Institutional Gaps in DRM Actors

Chapter Five: DRM Policies and Strategies in Ethiopia

- 5.1 National Policy and Strategy on Disaster Risk Management in Ethiopia
- 5.2 Disasters and Disaster Risk Management Practices in Ethiopia
- 5.3 Disaster Risk management Policy Framework
- 5.4 National Durable Solutions Initiative
 - 5.4.1 Somali Region Durable Solutions Strategy
 - 5.4.2 National Comprehensive Refugee and Response Framework
 - 5.4.3 Somali Region CRRF strategy
- 5.5 Overview of Pastoral development policies and strategies

Mode of Delivery

The mode of the delivery of the course combines lectures, laboratory practical activities, discussion, questioning and answering, readings, assignments, individual and /or group works and presentation.

Assessment Methods

Evaluation will be carried out based on continuous assessment which comprises:

- Individual presentation
- Group presentation
- Practical report
- Mid exam
- Final exam

Grading: As per the university's regulation

Course Policy

All students are expected to abide by the university's code of conduct of students throughout this course. Academic dishonesty, including cheating, fabrication, and plagiarism will not be tolerated and will be reported to concerned bodies for action. Class activities will vary day to day, ranging from lectures to discussions. Students will be active participants in the course. You need to ask questions and raise issues. You are expected to do all the assignments submit and present you are supposed to accomplish. You are expected to attend class regularly. If you miss more than 85% of the class attendance you will not sit for final exams. Please try to be on time for class. Cell phones MUST be turned off before entering the class as they are disruptive and annoying to all of us in the class. You are responsible for all class announcements and changes.

Jigjiga University
School of Graduate Studies
Disaster Risk Management and Sustainable Development Program

Course Title: Gender and DRM

Course Code: DRM 524

Credit hours: 2

Course Description

This course provides students with knowledge about the gender differences in terms of vulnerability, capacity and the possible impacts of disasters. It also covers how gender relations shape the practices in disaster response, recovery, coping and adaptation mechanisms, as well as risk reduction planning. Existing theories of gender together with their historical background, tenets and major goals/objectives will be well discussed by this courses.

Course objectives

At the end of his course students should be able to:

- Realize difference between sex and gender
- Understand and criticize feminist theory and its varieties
- Understand the links of gender with disaster and development
- Understand gender mainstreaming
- Understand concepts and tools for gender analysis and mainstreaming

Chapter One: Introduction to Pastoralism and Related Concepts/Terms

- 1.1 The Meaning Gender and Related Concepts
- 1.2 The Social Construction of Gender
- 1.3 Gender Roles and Stereotypes
- 1.4 Gender Analysis
- 1.5 Gender-Based Inequalities
- 1.6 Gender Dimension
- 1.7 **Introduction to Feminist Theory**

Chapter Two: Gender and Disaster

- 2.1 Why Gender matters in DRM?
- 2.2 Gendered' Vulnerability to Disaster
- 2.3 Gender Equality and Disaster Risk Reduction
- 2.4 Social Construction of Vulnerability

2.5 . Impacts of Disasters on Gender (on Women, Men, boys and Girls)

2.6 Women Empowerment in DRM Measures and Activities

2.7 A Gender-Sensitive Risk Assessment

Chapter Three: Gender and Emergency

3.1 Why Gender in Emergency?

3.2 Gender and Vulnerability Assessments: Identifying Women at Increased Risk

3.3 Gender and Livelihoods: Gender based differences in Food and Nutritional security during emergencies

3.4 Mainstreaming Gender in Emergencies

Chapter Four : Gender Mainstreaming

4.1 Gender Mainstreaming: Concepts and Approaches

4.2 Methods and Tools for Gender Mainstreaming

4.3 Gender Mainstreaming Strategies

Chapter Five: Chapter Five: International Instruments and Mechanisms for Protecting Women's Rights

5.1 UN Convention on Elimination of All Forms of Discrimination against Women

5.2 Specific Implications for Women

5.3 UN Convention on the Political Rights of Women

5.4 Conventions of the International Labor Organization

5.5 UN Millennium Development Goals

5.6 Beijing Declaration and Platform for Action, Fourth World Conference on Women

5.7 Men as Agents of Gender Equality in Disasters

Mode of Delivery

The mode of the delivery of the course combines lectures, tutorial, discussion, questioning and answering, readings, assignments, individual and /or group works and presentation.

Assessment Methods

Evaluation will be carried out based on continuous assessment which comprises:

- Individual assignment and presentation ----- 20%
- Group assignment and presentation ----- 25%
- Class Attendance and Participation -----10%
- Final exam -----50%

Grading: As per the university's regulation

Course Policy

All students are expected to abide by the university's code of conduct of students throughout this course. Academic dishonesty, including cheating, fabrication, and plagiarism will not be tolerated and will be reported to concerned bodies for action. Class activities will vary day to day, ranging from lectures to discussions. Students will be active participants in the course. You need to ask questions and raise issues. You are expected to do all the assignments submit and present you are supposed to accomplish. You are expected to attend class regularly. If you miss more than 85% of the class attendance you will not sit for final exams. Please try to be on time for class. Cell phones MUST be turned off before entering the class as they are disruptive and annoying to all of us in the class. You are responsible for all class announcements and changes.

REFERENCES

- UNDP: Gender and Disaster Risk Reduction (2010); Information Brochure
- Elaine Enarson P. G. Dhar Chakrabarti (Editor). (2009) Women, Gender and Disaster: Global Issues and Initiatives
- Making Disaster Risk Reduction Gender-Sensitive Policy and Practical Guidelines, UNISDR, UNDP and IUCN. Geneva, Switzerland, June 2009
- UN. Gender Responsive Disaster Risk Reduction : A contribution by the United Nations to the consultation leading to the Third UN World Conference on Disaster Risk Reduction VERSION 2
- Ikeda, K., 'Gender Differences in Human Loss and Vulnerability in Natural Disasters: A Case Study from Bangladesh', Indian Journal of Gender Studies, 2:2: 171–93, New Delhi: Sage Publications, 1995.
- Women, girls and Disasters , A review for DFID by Sarah Badshaw and Maureen Fordham, 2013
- Climate Change Connections :Women at the Forefront UNFPA, WEDO 2009, www.preventionweb.net/files/12053_climateconnections1overview1.pdf
- The World Bank: MAINSTREAMING GENDER INTO DISASTER RISK MANAGEMENT POLICIES; GUIDANCE NOTES on GENDER and Disaster Risk Management. Guidance Note 2
- World Bank, Gender and Climate Change: Three Things You Should Know, 2011, p. 5.
- Oxfam, The Tsunami's Impact on Women, Briefing Note, 2005.
- UNISDR, 2011 Global Assessment Report on Disaster Risk Reduction. Revealing Risk: Redefining Development. Summary and Main Findings, p. 10,

www.preventionweb.net/english/hyogo/gar/2011/en/home/executive.html

- Umbima, J., c.2010. Gender Mainstreaming in Disaster Risk Reduction. [online]. [Viewed 13/05/2013]. Available from: <http://www.secretariat.thecommonwealth.org/> Gender Mainstreaming in Disaster Risk Reduction.
- Oxfam, 'Gender, Disaster Risk Reduction, and Climate Change Adaptation: A Learning Companion,' 2010, available at: <http://www.gdnonline.org/resources/OxfamGender&ARR.pdf>.

Jigjiga University
School of Graduate Studies
Disaster Risk Management and Sustainable Development Program

Course Title: GIS & Remote Sensing in Disaster Risk Management

Course code: DRM 525

Credit hours: 3

Course Description

Through lectures and laboratory exercises, this course is designed to illustrate the fundamental concepts of GIS and Remote Sensing technologies in the context of DRM. The course includes the basics of GIS and Remote Sensing with practical exercises. Hands-on computer laboratory sessions will re-enforce critical concepts. The course not only reveals what spatial data is and how it is collected, but also emphasize on the use of spatial data during pre- and post-disaster risk management (during early warning, hazard, vulnerability and risk assessment, damage assessment, as well as in the design of risk reduction measures). The course ultimately contributes towards the utilization of scientific advancement for better DRM.

Course objective

At the end of this course students will be able to:

- Apply GIS and RS for designing implementations of large scale early warning systems
- Use participatory GIS (PGIS) at community level
- Apply GIS/remote sensing in hazard, vulnerability and risk assessment.
- Application of remote sensing data and image processing techniques to monitor hazardous events and assess damage
- Visualize hazard and risk information
- Examine the advantages of using remote sensing image data in managing disaster risk

Course Contents

Chapter One: Definition and Basic Concepts of GIS

- 1.1. Definition and Basic Concepts
- 1.2. Components of GIS
- 1.3. Application of GIS
- 1.4. Spatial Data Models
- 1.5. Vector Data Model
- 1.6. Raster Data Model
- 1.7. TIN Data Model

1.8. Advantages and Disadvantages of GIS Data Models

1.9. GIS Data Sources

- Primary Data Sources
- Secondary Data
- Data Collection in GIS

Chapter Two: Map Projections

Chapter Three: Creating and Editing Spatial Data

3.1. Digitizing

3.2. Geo-database Concept

3.3. Editing Spatial and Attribute Data

3.4. Geo-referencing

Chapter Four: Data Analysis

4.1. Data Query

4.2. Overlay Analysis

4.3. Buffering For DRM

4.4. Watershed Delineation

4.5. Interpolation

Chapter Five: Global Positioning System (GPS)

5.1. Introduction to GPS

5.2. Importing GPS Data in to Arc GIS

5.3. Risk Mapping Using GPS

Chapter Six: Basic Concepts of Remote Sensing

6.1. Definition

6.2. Nature of Electromagnetic Radiation

6.3. Energy Interaction with the

6.4. Atmosphere and the Earth Surface

6.5. Spectral Reflectance Curve

Chapter Seven: Image Processing and Its Application in DRM

7.1. Classification, Supervised & Unsupervised

7.2. NDVI Generation

7.3. Drought Risk Assessment Using

7.4. Time Series Data

Teaching Methods: Lectures, Practical work, Group work and presentation

Assessment Methods: Tests, Individual Assignment, Group Project work and Final Exam

References

School of Graduate Studies

Disaster Risk Management and Sustainable Development Program

Course Title: **Pastoralism and DRM and Conflict Management**

Course code: DRM 526

Credit hours: 2

Course Objectives:

At end of the course student able to

- Understand the basic concept of pastoralism in relevance to DRM.
- Explore the role of biophysical hazards in DRM with reference to Pastoral communities.
- Acquire the skills of assessing the Vulnerability of pastoralists in relevance to Disaster Risk management.
- Acquire the skills to maintain equilibrium among climate change adaptation, pastoralism and DRM for sustainable development.
- Develop a DRM strategy/Policy for sustainable Pastoral activities.
- **Comprehend the concept of conflict and its management system**
- **Understand the major institutions of pastoral societies and their indigenous conflict resolution mechanisms**

Course description and content:

This course will deal with the topics of Principles for sustainable livestock farming, Strategies for Pastoral development, and challenges in Pastoral development with gender sensitive livestock farming, the pastoral communities are vulnerable to biophysical hazards both the livestock and pastoralists themselves understanding such issues are in disaster risk management. This course also deals with the skills in relevance to analyzing Vulnerability and Disaster management in Pastoralist context is a key for DRM to deal the issues of migration, changing herd composition, Predation and Theft, Drought and the management of climatic change, Early warning systems, Security in pastoral zones are the key issues to address the problem to find a solution. Further this course discusses the climate change is the major threat to the pastoral communities in Horn of Africa, hence the course also analyze the nexus of Climate Change and Vulnerability, Climate Change and Pastoral Conflicts, Management strategies in adapting climate change in pastoral communities and coping methods. Finally, this course deals with Risk reduction strategies in pastoral communities such as recovery, Structural features, land tenure, Restocking Livestock and economic diversification in pastoral regions could be discussed.

Methods of Teaching: Lecture (50%), group work and exercises (30%), and fieldworks (20%)

Evaluation technique: Term-papers to be presented and submitted (40%) & Final-exam (60%)

Course Contents

Chapter 1: AN OVER VIEW OF PASTORAL PRODUCTION SYSTEM

1.1 Meaning of pastoralism

1.2 Key characteristics common to different pastoral systems

1.3 Common preconceptions of pastoralism

1.4 Pastoral and Agro-Pastoral Areas in Ethiopia

1.5 Social and Cultural Institutions of Pastoralism

1.6 Classifying Pastoral Societies

Chapter 2: Natural Resources, Livestock, and Management Strategies in Pastoral Areas

2.1 Natural Pasture and its Management

2.2 Water and its Management

2.3 Livestock and Management Strategy

Chapter 3: Climate Change, Environment, and Pastoralist

1.1 The Meaning of Climate Change (Green House Gas, GHGs) and the role of human being

1.2 The Effects of Climate Change on Pastoral Societies

1.3 The Three pillars Interacting in Pastoral Areas (Human, livestock, and Environment)

1.4 Environmental Contribution of Livestock

Chapter 4:

References:

MulugetaGebrehiwotBerhe and Jean-BoscoButera(Eds)(2012) Institute for Peace and Security Studies and University for Peace, ,Addis Ababa, Ethiopia.

Carol Kerveti(Eds)2003, PROSPECTS FOR PASTORALISM IN KAZAKSTAN AND TURKMENISTAN, RoudedgeCurzo, New York.

A.MohamedSalih, Ton Dietz ,AbdelGhaffar Mohamed Ahmed (Eds)(2001)African Pastoralism:Conflict, Institutions and Government, Pluto Press, London.

Keith Smith and David N. Petley (1991),ENVIRONMENTAL HAZARDS :Assessing risk and reducing disaster FIFTH EDITION , Routledge, New York.

The World Bank (2006) Hazards of Nature, Risks to Development: An IEG Evaluation of World Bank Assistance for Natural Disasters, Washington, D.C. Independent Evaluation Group.

Federal Democratic Republic of Ethiopia Ministry of Agriculture and Rural Development(2008),National Guidelines for Livestock Relief Interventions in Pastoralist Areas of Ethiopia,Addis Ababa.

Magda Nassef with MulugetaBelayhun (2012),Water Development in Ethiopia's Pastoral Areas: A synthesis of existing knowledge and experience ,Save the Children USA and Overseas Development Institute.