

Course Description

ENVIRONMENTAL SYSTEMS ANALYSIS AND MANAGEMENT

– Advanced and Inter-disciplinary Course

Course target group

This advanced and inter-disciplinary course on *Environmental Systems Analysis and Management* is prepared by the Somali Institute of Water & Environment (SIWE) to contribute to the capacity development primarily for following target groups:

- (i) university lectures and researchers in the field of environmental sciences, natural resources management, economics, energy, agricultural sciences, livestock, geography, geology, civil engineering, water resources, development studies;
- (ii) government staff at relevant line ministries, agencies, directorates and departments and practitioners in the field of environmental management and related subject areas;
- (iii) development workers from the international and local organizations;
- (iv) graduates from environmental sciences, agriculture, civil engineering, economics, geography, water resources, development studies, natural resources management, public administration etc.
- (v) private sector staff who are interested to increase their knowledge in the field of environmental management and sustainable development;
- (vi) participants studying relevant subjects at all universities in Mogadishu who are in their last year of the university.

Course Goal

The course intends to give the participants deeper understanding about different perspectives and methods in the field of *environmental systems analysis*:

...tools, techniques and approaches for the study of interactions between technical, economic, social and ecological systems, and for assessment of different activities, processes and products in technical, economic and social systems from environmental and sustainability points of view,

and its use in different *environmental management* contexts (i.e., environmental decision-making settings).



The course participants will get a broader and deeper knowledge of the field, both regarding basic theories, concepts and approaches in environmental systems analysis, and the use of methods for environmental systems analysis in strategic and operational environmental management practice in society and different organisations. The course participants are supposed to be able to assess the strengths and weaknesses of different methods and approaches for environmental systems analysis, and thus their usefulness in different environmental decision-making settings.

Course Outline and Contents

The course takes the form of a literature and seminar course in two parts, a literature part providing the theories of environmental systems analysis and management (part 1), and a 'practice' part with own (group) work to provide a more practical understanding of environmental systems analysis and management (part 2). During the first part, seven different themes, presenting different perspectives and methods for environmental systems analysis, are studied by means of reading and discussing the course literature. The literature is read by each student and discussed together in the seminars, which take place at seminar occasions once a week. In this part, the collective discussions are emphasised, aiming for a deeper intellectual treatment of the basic views upon environmental and sustainability problems and decision-making and, the meaning and main contributions of the related approaches and tools for environmental systems analysis, related to each theme presented in the literature. Each participant is required to care for a one-day seminar on a specific theme together with one or two other participants at the end of the course. This includes formulating specific questions for the discussion and giving a short (30 minutes) introduction to the theme at the beginning of the seminar. Each theme is divided in two parts (perspectives and methods respectively, between which the relation is illustrated in the course documents, making it advisable to discuss perspectives in the first session of the seminar and methods in the second session at each one-day seminar. The course examiner will give a lecture in the first session of the seminar at each day. The themes included are:

1. Environmental management and decision-making
2. Systems theory, systems thinking and systems analysis
3. Ecological perspectives and methods
4. Physical/chemical perspectives and methods
5. Economic perspectives and methods
6. Institutional and integrated perspectives and methods
7. Organisational perspectives and methods

In the second part of the course, the participants are doing own work (in a group of 5 – 6 persons) on environmental systems analysis and management. Each group will submit a report describing what they discussed at the end of the day. At the end of the course, the group will submit an essay that is to be presented and discussed at a final seminar. This part of the course wants to give the participants better understanding of the preconditions (i.e., specific systems characteristics) for analysing the interactions between technical, economic, social and ecological systems and, of how these preconditions (systems characteristics) are dealt with in different approaches and methods for environmental systems analysis, and thus are presented in the related information support for decision-making. Here, the fact that different systems operate on different temporal as well as spatial scales, and thus that environmental changes and problems occur at different scales, is to be emphasised. By this, the intention is to broaden as well as deepen the discussion on when and how different approaches and methods for environmental systems analysis can be used in environmental management.



Course period and fee

The course period will be 10 weeks during months of August and October, 2021. The course will be given during three hours in Fridays after Jum'a Prayer (Salatu Jum'a) in a suitable venue in Mogadishu. The first day of the course will be 6th August 2021. Participants could register the course during July, 2021. The course participants will be charged a reasonable fee for attending the course.

Requirements

In order to pass the course and get the course certificate, each course participant must:

- read the literature (papers assigned for each student and group);
- participate actively in the seminars (at least 8 out of 10 seminars must be attended)
- participate actively in the group work;
- write and distribute minutes/summary (2–3 pages) from the discussions related to the theme in question at each seminar-day;
- write an essay as a group and present it at the last days' seminars (this includes also opposition on another essay).

More course details and schedule will be given to the course participants after they registered.

Course management and examiner

The course will be managed by Mr. Hussein Yusuf Ali, BA, MA
Mr. Hussein is the course manager and coordinator for SIWE.
Email: info@siwe.so and mobile +252 61 273 2811

If you are interested in participating and registering for the course, kindly contact to Mr. Hussein.

Prof. Abdullahi Elmi Mohamed, PhD, senior water and environmental expert, is the examiner of the course.
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