



**MODULE:
CLEWS GLOBAL
MODEL: A
LEARNING GUIDE**

Climate, Land, Energy and
Water Systems

**Understanding the Contribution of
Modelling Tools to Sustainable De-
velopment**

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INTRODUCTION

The 2030 Agenda for Sustainable Development endorsed by UN Member States in September 2015 calls for transformative and integrated policies leading towards a sustainable development path. Realizing the vision of the 2030 Agenda requires better informed policy decision-making in all three dimensions of sustainable development along with dedicated attention to their interlinkages. Policies need to support a complex balancing of global goals with national development aspirations while also balancing trade-offs across sectors, goals and targets. Science-informed policymaking will help unveil policy and investment opportunities in all three dimensions. It will also help to define interlinkages that will lead countries towards sustainable development.

This **outreach hands-on training course** aims to enhance understanding of how modelling tools can be used to unveil interlinkages across different policy areas, and how they can inform policy decision-making. The course is a practical guide on the principles of five modelling tools and the insights they can offer to policy decision-making. It is targeted to policy decision makers and development practitioners who want to gain understanding about a selected number of modelling tools available for evidence-based decision-making for sustainable development.

This module helps understand how selected global policies, including a carbon tax, result in different emissions paths, use of water and land, and energy costs and investments. The module provides insights into global sustainability as it relates to national sustainable development policies.

After a succinct explanation of how climate, land, energy and water (CLEWS) are inter-linked, participants will discuss the caveats of planning a sustainable development path. A second session is programmed to demonstrate how integrated assessment can be done with the [global CLEWS tool](#).

MODULE: CLEWS GLOBAL MODEL

LEARNING OBJECTIVES

- Identify and quantify the interlinkages among climate, land, energy and water at a global scale.
- Describe sustainability trade-offs and synergies of alternative global development scenarios.
- Demonstrate how integrated assessment models arrive at results.

WORKSHOP SCHEDULE

Key	Session and learning objective	Resources	Time
1.1	The CLEWS global model <ul style="list-style-type: none"> • Identify and quantify the interlinkages among climate, land, energy and water at a global scale. 	Eight slides	20 minutes
1.2	Group discussion A: Individual reading <ul style="list-style-type: none"> • Describe sustainability trade-offs and synergies of alternative global development scenarios. 	Individual reading: “Integrated Assessment and National Sustainable Development Policies” (from the 2030 Agenda - Reader)	10 minutes
1.3	Group discussion A	Guiding questions	30 minutes
2.1	The global CLEWS online demonstration tool <ul style="list-style-type: none"> • Demonstrate how integrated assessment models arrive at results. 	10 slides	20 minutes
2.2	Group discussion B	Guiding questions and the online tool	50 minutes
2.3	Group report and plenary session	Group reports	20 minutes
Total time			Two and a half hours

REFERENCES

MODULE CLEWS Global Learning Guide

Amro, F., W. Lubega and W. Hickman (2016). "Opportunities for energy-water nexus management in the Middle East & North Africa." *Elementa. Science of the Anthropocene*: 1-17.

King Abdullah Petroleum Studies and Research Center (2016). *Emerging Issues Facing the Water-Energy-Food Nexus in the Middle East and Asia*. Riyadh.

Stockholm Environment Institute (2014). *Managing Environmental Systems: the water-energy-food nexus*. Research Synthesis Brief. Stockholm.