

ENVIRONMENTAL SYSTEM ANALYSIS

Offices & Laboratories:

University of Bologna
Ravenna Campus
Laboratori "R. Sartori"
Via S. Alberto 163
48123 Ravenna
Italy

Contact Person:

Dr. Diego Marazza
Ph.D. Environmental Sciences

Tel: +390544937334
diego.marazza@unibo.it

Responsible:

Prof. Andrea Contin
andrea.contin@unibo.it

tel: +390544937311
fax: +390544937411

Web site: www.emrg.it

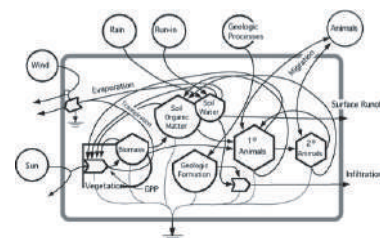
Improve knowledge to improve decision processes

Environmental Systems Analysis aims at:

- analyzing, interpreting, simulating and communicating complex environmental problems from different perspectives;
- analyzing and assessing environmental consequences of technical, economic and social activities;
- improving environmental decision-making in companies and other organisations.

Tools like Environmental Impact Assessment (EIA) and Strategic Environmental Assessment (SEA) can be used e.g. by companies applying for development of waste management facilities and by public authorities preparing plans and programmes. Within these procedural tools, analytical tools providing relevant information could be used, e.g. Risk Assessment (RA), Life Cycle Assessment (LCA), Substance Flow Analysis (SFA) or Material Input Per unit Service (MIPS).

The Environmental Management Research Group of the University of Bologna develops and applies methods and means to identify, assess, address and solve issues ranging from climate change and pollution to social, behavioural and policy problems.



Ecosystem's energy flux analysis

Keywords:

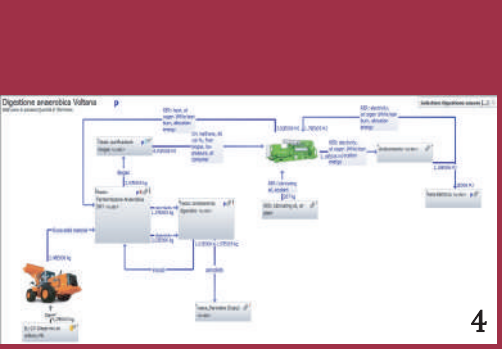
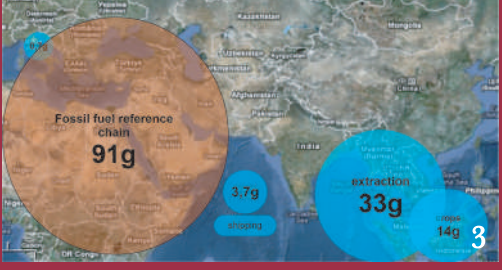
- Life Cycle Thinking
- Pollution prevention
- Decision support
- Geographic Information Systems
- Environmental impacts
- GHG emissions

Target groups

- Manufacturing plants
- Waste treatment companies
- Public Organizations

DPSIR System applied to the Lamone River

1



1. Indicator classification and display
 2. Oil Palm trees (*Elaeis guineensis*) and fruits
 3. Geographical distribution of the GHGs budget figures for the palm oil supply chain - gCO₂eq/MJ
 4. Waste anaerobic digestion - system diagram for LCA calculations
- (Gabi6® software)

Services and equipments:

- GHG Projections and Mitigation Analysis (BioGrace EU standard)
- Emission inventory
- Environmental externalities
- Water management
- Water footprint
- Environmental and Land Planning
- Geographic Information System (GIS) applications
- LCA Gabi5® software
- Relational Data Base Systems
- Data analysis

Your benefits:

- To let customers know the environmental consequences of products and services they buy
- To extend market share or reach new markets by making products and services environmentally sound
- To revamp processes and infrastructures in order to reduce use of resources and costs

References:

- Water management (Lamone river, InterReg IIC project)
- Biomass sustainability certification (GHG emissions according to RED Directive)
- LCA of waste treatment plants