

**University of Latvia  
Faculty of Economics and Management  
Department of Environmental management:  
 Raiņa bulv.19**



# Department of Environmental Management (DoEM), University of Latvia

**DoEM for our TEAM in the time span of MORE THEN 16 YEARS is a new phase of INSTITUTIONAL development :**

**1- CESAMS - Centre for Environmental Science and Management Studies, created in 1993 in the framework of EU TEMPUS PHARE Programme project in order to promote development of the interdisciplinary :**

- environmental management education/training and
- socio-environmental research programmes.

**2- IESAM - Institute for Environmental Science and Management**

**3- DoEM – Department of Environmental Management - not anymore an independent institution, but now structured within one and biggest of the faculties - Faculty of Economics and Management**

DoEM has many years of **academic and applied experience** of working with national and international research and development projects both at tertiary level as Master studies programs and continuing education - training courses, interactive facilitation seminars, summer universities, distance learning courses etc. for different target groups.

# Department of Environmental Management, University of Latvia

- Main directions of work:
  - Higher education and professional training:  
two Master study programs in Environmental Management and Environmental Resources Management for post-experience specialists from environmental protection and municipal authorities, consultancies, others;
  - Research and development projects for environmental management and sustainable development: research schools, applied case study research, facilitation of Local sustainable development activities.
  - Development and production of different resources – proceedings, glossaries, handbooks etc.

# Department of Environmental Management, University of Latvia

Key issues Institute works with:

- Sustainable development and LA 21, with elaboration of different realization instruments - policies, planning and action programming, particularly for coastal areas in Latvia;
- Environmental communication – information, education, participation and environmental friendly behaviour towards awareness rising.
- Integrated coastal area management.

# DoEM staff

## Academic staff:

- Prof. Dr.hab.paed.* **Raimonds Ernšteins** - Director of the Department
- Asoc. prof., Dr.ing.* **Ivars Kudrenickis**
- Asoc. prof., Dr.biol.* **Roberts Jūrmalietis**
- Docent, Dr.chem.* **Juris Benders**
- Docent, Dr.phys.* **Rūta Bendere**

## Researchers and methodics staff:

- MPaed* Daiga Štelmahere
- MEnvEduc* Velga Matute
- MPaed* Diana Šulga
- MEnvSc* Valdis Antons
- PhD students

# Department of Environmental Management, University of Latvia

- DoEM experience in **international co-operation**

With universities, municipalities/reagions, NGO”s and other partners in the Nordic countries and further in Europe as well as running national and international projects e.g. - EU TEMPUS, LIFE, Phare, Interreg, 6 RTD Framework, Leonardo, Nordic Council of Ministers, Swedish Institute etc.

- **UNESCO Chair in Sustainable Coastal Development**

Status has been granted in 2002 – 2006 and now again 2009 - 2013 under the agreement between the UNESCO HQ, Paris and University of Latvia, aiming at development of methodologies and introduction of sustainable coastal development issues into studies, research, development of pilot and demo projects as well as networking.

# Coastal management projects 2005-2009

- Socio-environmental and sustainability research and development (R&D) projects – for municipalities, especially collaboration research and case study research (UNESCO, Interreg, Leonardo, Life, etc);
- group based and individual student fieldwork projects as well as master and doctoral research thesis - development of policies, planning and action programming, particularly for coastal areas.

# Coastal management projects 2005-2009

- Environmental Communication Policy Planning for Coastal Municipality: Ventspils Town , Partnership program, University of Latvia, 2008-2009.
- Evaluation Model for the Sustainable Development of European Coastal Zones - DEDUCE, EU Interreg IIIC programme, 2005-2007),
- Coastal Communication Action Program Guidelines for Liepaja City, Partnership program, University of Latvia, 2006-2007.
- Coastal Sustainability as a Challenge, COASTSUST, Baltic Sea Region EU Interreg IIIB programme, 2005-2007.
- Integrated Coastal Policy Planning for Pavilosta Municipality, Partnership program, Latvia University, 2006.



# Coastal management projects 2005-2009

- Sustainable Development Action Program Guidelines: Carnikava Coastal Municipality Case, Partnership project, University of Latvia, 2005-2006.
- Advanced Techniques for the Evaluation of Sustainability Assessment Tools - SustainabilityA-Test, EU 6th Framework, project No.505328, 2005-2006,
- Integration of spatial environmental information across different themes, scales, resolutions and uses: added value of facilitating mechanisms, EU LIFE-ENVIRONMENT, ENVIFACILITATE ,2005-2007.
- Multimedia Distance Training Programme on Integrated Coastal Zone Management, COASTLEARN, EU Leonardo da Vinci project ,2004-2005.
- Sustainable tourism destinations developemnt– Destilink, Baltic Sea Region IIIB programme, EU INTERREG project , 2005-2007.
- Green Coastal Region 21, EU LIFE project on sustainable coastal development and awareness raising among local stakeholders is coastal municipality, 2002-2005

# Study programmes and courses

## Master degree study programmes:

- „Environmental Management” from 1993 as **academic** programme –  
Environmental Science Master Degree in Environmental Management  
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- „Environmental Resource Management” from 2005  
as **professional** study programme –  
Professional Master Degree in Environmental Management  
and  
Professional Certificate of „Water and Waste Management Specialist”  
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- „Environmental Pedagogy” 1996 - 2002  
academic Master degree study programme  
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## Doctor Degree study programme

“Environmental Science” – Specialization on Environmental Management,  
\_realized together with faculty of Geography and Earth Science

Master degree study programme  
„Environmental Management”

*Director - Prof. Dr. Raimonds Ernsteins*

# Master degree study programme „Environmental Management”

Study programme started at 1993 and  
newly accredited

in 2004 till 2010

# *Aims and Objectives*

- **The aim :**
  - to prepare qualified, academically broad educated experts in environmental management,
  - to be able to use inter-disciplinary approach of environmental system-analysis in addressing problems of environmental quality management and
  - work in multi-disciplinary teams of environmental management.
- **The objectives :**
  - to ensure further mastering of previous diploma specialty or bachelor's studies in correspondence with the complex nature of environmental management and
  - to acquire new multi- and inter-disciplinary knowledge - interaction and integration of nature and engeneering, health and social sciences.

# Academic structure

Program is structured and based on mastering environmental management cycle - 4P :

- environmental problem-situation analysis and elaboration of solutions,
- environmental policies and
- planning development,
- environmental action programming, as well as realization of the resultant environmental administration.

# Modular structure – four semesters

## Interdisciplinary Environmental Inquiry and Management

Environmental Science and Management Paradigm

**1st Module.** Integrative Environmental Science

## Strategic Environmental Management

**2nd Module.** Environmental Policy and Planning

**3rd Module.** Theory and Administration of Environmental Management

## Applied Environmental Management

**4th Module.** Nature Resource Management and Environmental Technologies

## Interdisciplinary Research in Environmental Management

**5th Module.** Academic Master Thesis

# MSc study programme

## „Environmental management”

The paradigm of Environmental Science and Management **A**

- **I module. Integrative Environmental Science (18 cr.)**

Nature sciences in Environmental studies **A**

Economic and management sciences in Environmental studies **A**

Cultural sciences in Environmental studies **A**

Behaviour sciences in Environmental studies **A**

*Strategic Environmental management*

- **II module. Environmental policy and planning (16 cr.)**

Environmental policy and sustainable development **A**

Environmental planning and municipal development **A**

Environmental information **B**

Economic and finance tools **B**

Environmental legislation **B**

Public participation **B**

System dynamics **B**

Demography and environment **B**



MSc study programme  
„Environmental management”

**III module Environmental management  
theory (10 cr.)**

Environmental management systems **A**

Environmental assessment **B**

Management theory **B**

Project management and development **B**

Cleaner technologies and production **B**

Environmental communication **B**

Education for sustainable development **B**

Ecotourism development and management **B**

# MSc study programme „Environmental management”

## *Applied Environmental management*

- **IV module Nature resource management and Environmental technologies (6 cr.)**

Nature resource management A

Environmental management: Energy resource management and air protection B

Environmental management : Waste management B

Environmental management: Water management B

Environmental management: Biodiversity and Nature protection B

Environmental management: Integrated coastal management B

Environmental management: Innovation for society B

## *Interdisciplinary research*

- **V module MSc Thesis (30 cr.)**

Interdisciplinary research methodology (Seminars) A

Environmental system analysis (Seminars) A

MSc Thesis A

# Professional master study programme „Environmental Resource Management”

*Director - docent, Dr.chem. Juris Benders*

Professional master study programme  
„Environmental resource management”

Study programme established and licensed at  
2005 and accredited for 2007 till 2013

## Aim:

- to prepare highly qualified experts in management of environmental resources with appropriate level of theoretical and practical knowledge and skills, in order
- to provide successful accomplishment of high-level responsibilities within such definite sectors of management of environmental resources as water and waste management.

# Professional master study programme „Environmental resource management”

- **I module**

## **Strategic Environmental management (14 cr.)**

Disciplinary Environmental Science A

Environmental policy A

Environmental planning and management systems A

Environmental resources and their management A

Environmental information and communication B

Environmental legislation B

Project management and development B

# Professional master study programme „Environmental resource management”

- **II module**

## **Applied Environmental management : assessment and entrepreneurship (10 cr.)**

Environmental applied research A

Mathematic methods in Environmental management B

Environmental analysis methods B

Environmental assessment B

Management theory A

Entrepreneurship and Environment B

Management psychology B

Cleaner production and producers responsibility B

# Professional master study programme „Environmental resource management”

- **III module**

- **Environmental resources and technologies (10 cr.)**

- Water supply and sewage A

- Waste management A

- Pollution prevention technologies B

- Drinking water production B

- Waste water treatment B

- Waste collection, transportation and treatment B

- Waste recycling B

- Waste disposal B



# Professional master study programme „Environmental resource management”

- **IV module**

## **Practice for professional qualification (26 credits)**

- I. Project management at enterprise A
- II. Environmental management at enterprise A
- III. Water and waste management technologies A

## **Master Thesis (20 credits) A**

# Bachalour Courses at the University of latvia

Optional courses for Faculties of University of Latvia (2 cp):

- Introduction to Environmental Science
- Basics of Environmental Management and Policy
- Environmental Education and Public Awareness
- Environment and Technology

e.g. Realised projects:

## **Environmental Management and Sustainable Development at municipalities**

Aims to develop capacity building for employees and decision makers in Latvian municipalities

In partnership with Institute for Environment and Sustainability Communication (University of Lueneburg), Union of Local and Regional Governments of Latvia.

One year distance learning study programme and development of teaching resources for 12 modules with participation of 122 participants (four groups). Graduates received certificate with equivalence of 26 cr.

Subsidised by German Environmental Foundation and Latvian Environmental Protection Fund.

e.g. Realised projects:

**“Livonian Green Coastal Region – 21”**

EU LIFE Environment Programme (2001 – 2004)

Partnership with municipalities.

Aims to facilitate sustainable development in North Kurzeme covering the environmental, economic, cultural spheres.

Short term objective : to create AGENDA-21 planning, implementation and supervision system along the coast of North Kurzeme (in Kolka, Dundaga and Roja municipalities).

e.g. Realised projects:

**SustainabilityA-Test :**

**Advanced Techniques for Evaluation of  
Sustainability Assessment Tools**

EU Sixth Framework Programme

In partnership with 18 universities and centres.

The project aims at

describing, assessing and comparing tools that can  
be used to measure or assess Sustainable Development.

Project will lead to overview and evaluation framework of  
methodologies, models, approaches (the toolbox) and how  
to apply these tools.

e.g. Realised projects:

**Evaluation Model for the Sustainable  
Development of European Coastal zones**  
DEDUCE Project Interreg IIC – South

Aims to improve tools and the information systems necessary for optimum decision making about the coastal zones (indicators, GIS, models,)

Based on 28 indicators set up by the WG-ID and organises a process of calculation, validation and analysis of the findings at all decision making

levels: European, national, regional and local.

# EMgt Principles and Approaches

Particularly practical long term experience in academic and municipal training/education as well as results of EMgt project implementations in Latvia do allow to formulate following principles and approaches for environmental management training/education, esp. for further/distance/adult progr. e.g. which shall be :

1. Planned and realised in close interlinkage and mandatory integration with **territorial /regional development** requirements / interests.
2. Particularly with emphasizing, facilitating and spin-off developing of **Local Agenda 21 action programmes** and sustainable development concept in general, (especially sustainable development for coastal municipalities / sub- and interregional territories).
3. Targeted very precise towards following **main municipal target groups** – politicians and elected municipal councilors; senior specialists, especially executive directors and planners as well as co-ordinators and administrators of municipal associations; environmental specialists from municipalities and regional environmental boards; municipal employees; municipal interest groups e.g. NGOs, entrepreneurs, media, education, culture and health institutions, etc.; teachers and students; specialised municipal interest groups (land and forest owners, renters of municipal services, etc.); general public (youth, women and retired persons, etc.).
- 4. Designed and implemented in co-ordination with existing environmental and municipal training programmes and institutions, including **incorporation within** developed/developing different education and communication strategies etc. (e.g. National Environmental Communication and education Strategy by Env. Min. etc.)

# EMgt Principles and Approaches

5. Practical development oriented for local conditions – based on **using best available practices** and applying / developing **local case studies** in Latvia (including guidelines, questionnaires, block schemes, etc.)
6. Designed and implemented with appropriate proportion of:
  - **academic** (analysis, system-thinking etc.) and professional / practical content development,
  - combination of traditional and modern **methods and technologies** e.g. interactive seminars, brochures and distance education tools,
  - local and central **geographical location**,
  - region / territory or free application based.
7. Particularly prepared taking into account local traditions / background in general terminology (titles etc.) and specialised marketing.
8. Designed for implementation with home / self-dependent task performance requirement to be based on local problem / situation analysis and **eventual project development** (e.g. project ideas, descriptions, particular elaboration etc.).



# EMgt Principles and Approaches

9. Taking into account (when using regional training approach) **particular differences** of urban, semi-urban and rural conditions, production / services and nature protection specialisation of territories as well as records of already realised training courses / programmes / projects and ongoing current activities.
10. Considering **training content and methods specifications** when approaching specialised professional training according to the former (initial or transactional and practice based) education background of participants.
11. Grounded on environmental management training / education **basic principles and approaches e.g. :**
  - **complexity and wholity of spectrum** for environmental management content, particularly nature and social environment interaction,
  - **interlinkage** of biotic, abiotic, anthropological and communicational structures,
  - **complimentarily** of state / public, household and municipal and corporate, as well as regional and international environmental management dimensions,
  - **functionality** of strategic / policy and planning, programming and projecting **(4P) levels** of environmental management,
  - **disciplinarily and integrativity** of environmental management realisations,
  - necessity of **environmental awareness** development of specialists and public through environmental communication - information, education, participation and environmentally friendly behaviour,
  - applicability of monitoring, evaluation, planning and decision making **realisation functions** of environmental management.

# EMgt Principles and Approaches

12. Finally, of course, it should be summarised, that **all 11 conclusions** above shall be considered as **coherent whole** and realised into practice when approaching new training developments.

These conclusions are prepared for further training developments, esp. in municipalities, but could be also easily adapted for **adult education in general** for such a country-in-transition.