MSc Environment and Resource Management

Pieter van Beukering, Programme Director
Fujin Zhou, Programme Coordinator

IVM Institute for Environmental Studies
Organization of ERM

• Director: Pieter van Beukering (final responsible person)

• Coordinator: Fujin Zhou (day-to-day management)

• ERM student: Kate Negacz (alumni 2017-2019)
My name is Stijn Schep.
Hey, I'm Lisa and today we're at Sungevity.
The most important challenge in the world?
California’s Wildfire and Climate Change Warnings Are Still Too Conservative, Scientist Says

Another hot, dry year is fueling the state’s deadliest, most destructive wildfire. Scientists say wildfires here are consistently surpassing their projections.

Increase wildfires → new BAU?
2018: Obese people > hungry people

What Will the World Eat in the Next Decade?

By Agnieszka de Sousa, Alan Bjerga and Cindy Hoffman
August 22, 2018
Fors meer schade door wolvenoverlast

Nu de wolf weer terugkeert naar Nederland stijgt ook het aantal schadeclaims door schapenhouder.
ECONOMIC MINISTER: GRONINGEN GAS EXTRACTION A "GOVERNMENT FAILURE OF UN-DUTCH LIKE PROPORTIONS"

By Janene Pieters on November 23, 2017 - 10:14

Earthquakes → need to correct market failure
Wiebes verbiedt negen bedrijven na 2022 nog Gronings gas te gebruiken

Het wordt negen industriële bedrijven die veel gas uit Groningen gebruiken wettelijk verboden dat na 2022 nog te doen. De maatregel is ‘essentieel’ om de gaskraan in Groningen versneld dicht te draaien, schrijft minister Eric Wiebes aan de Tweede Kamer.

Jurre van den Berg 3 december 2018, 15:35

Effective policies → speed up stop gas extraction
The World Needs You!
Content

1. The Institute for Environmental Studies
2. Characteristics of ERM
3. Curriculum of ERM
4. Performance of ERM
5. Organization of ERM
6. Q&As
1. Institute for Environmental Studies (IVM)

- Created in **1971**

- **Mission**: to contribute to sustainable development through scientific research and teaching

- Around **100 people**:
  - 50 researchers/teachers
  - 50 PhDs

- Multi-disciplinary research & teaching in four **departments**
Interdisciplinary approach at IVM

- Political science
- Ecological & spatial science
- Economic science
- Biophysical science
- Biophysical science
- Environmental governance
- Water & climate
- Environmental economics
- Environmental geography
- Ecological & spatial science
2. Characteristics of ERM program

- The student
- The programme
- Employment & alumni
- Strength & challenges
The Student

Mission of ERM

Train the next generation of environmental leaders to work on the sustainability challenges of our time
Student numbers over time

ERM over time – number of students

+15%
Background of ERM students – mixed classroom

Disciplinary background

<table>
<thead>
<tr>
<th>Subject</th>
<th>Relative Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental sciences</td>
<td>2.5</td>
</tr>
<tr>
<td>Political science</td>
<td>2.0</td>
</tr>
<tr>
<td>International relations</td>
<td>2.0</td>
</tr>
<tr>
<td>Economics</td>
<td>2.0</td>
</tr>
<tr>
<td>Ecology/Biology</td>
<td>1.5</td>
</tr>
<tr>
<td>Business Administration</td>
<td>1.0</td>
</tr>
<tr>
<td>Mathematics/Physics</td>
<td>1.0</td>
</tr>
<tr>
<td>Anthropology</td>
<td>0.5</td>
</tr>
</tbody>
</table>

Work experience

- With relevant work experience: 53%
- Without relevant work experience: 47%
Nationality – gradual trend further internationalization

- 2014/2015 (#61): 52% The Netherlands, 39% European (non-NL), 8% Non-EU
- 2015/2016 (#57): 42% The Netherlands, 44% European (non-NL), 14% Non-EU
- 2016/2017 (#88): 39% The Netherlands, 47% European (non-NL), 15% Non-EU
The student should become ...

Skilled
Knowledgeable
Motivated
The programme

- Skilled
- Knowledgeable
- Motivated
- Quality
- Flexibility
- Interdisciplinary
- Impact
The programme
Skilled
Knowledgeable
Motivated

Four specializations
Teaching Researchers
Quality
Impact
Societal interaction
Interdisciplinary
Four departments
Flexibility
Broad & focussed
ERM Broad and in-depth knowledge

Core-courses

Specializations & Research project
# Main dynamic didactic principles

<table>
<thead>
<tr>
<th>Principle</th>
<th>From ...</th>
<th>To ...</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Focus</td>
<td>Problem</td>
<td>Solution</td>
</tr>
<tr>
<td>2. Abilities</td>
<td>Knowledge</td>
<td>Skills</td>
</tr>
<tr>
<td>3. Teamwork</td>
<td>Group</td>
<td>Individual</td>
</tr>
<tr>
<td>4. Assessment</td>
<td>Exam</td>
<td>Thesis</td>
</tr>
<tr>
<td>5. Discipline</td>
<td>Multi-disciplinary</td>
<td>Inter-disciplinary</td>
</tr>
</tbody>
</table>
## 3. Curriculum of the ERM programme

### Core courses
- Causes and consequences of env. change
- Environmental Economics
- Environmental Policy
- Research Methods
- Research Design
- Research Project

### Specialization courses
- Sustainable Energy Analysis
- Energy and Climate Governance
- Water Management
- Water Governance
- Valuation of Ecosystem Services
- Governance of Ecosystem Services

### Knowledge
- Energy and Climate
- Water and Society
- Ecosystem services and biodiversity

### Skills
- Environmental studies: combine 2 specialization courses of your interest

### Specialisations
- Sustainable Energy
- Energy and Climate Governance
- Water Management
- Water Governance
- Valuation of Ecosystem Services
- Governance of Ecosystem Services

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**IVM Institute for Environmental Studies**
## ERM Program

<table>
<thead>
<tr>
<th>Period</th>
<th>Topics</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Sept/Oct</td>
<td>Causes and consequences of env. change</td>
</tr>
<tr>
<td></td>
<td>Environmental Economics</td>
</tr>
<tr>
<td></td>
<td>Environmental Policy</td>
</tr>
<tr>
<td>2 Nov/Dec</td>
<td>Sustainable Energy Analysis</td>
</tr>
<tr>
<td></td>
<td>Water Management</td>
</tr>
<tr>
<td></td>
<td>Value Ecosystem Services</td>
</tr>
<tr>
<td>3 Jan</td>
<td>Research Methods</td>
</tr>
<tr>
<td></td>
<td>Research Design</td>
</tr>
<tr>
<td></td>
<td>Research Project</td>
</tr>
<tr>
<td>4 Feb/March</td>
<td>Energy and Climate Governance</td>
</tr>
<tr>
<td></td>
<td>Water Governance</td>
</tr>
<tr>
<td>5+6 April/June</td>
<td>Governance of Ecosystem Services</td>
</tr>
</tbody>
</table>
4. Performance of ERM program

Accreditation every 6 years – last summers assessment resulted in **GOOD!**

5. Overview of assessments

<table>
<thead>
<tr>
<th>Standard</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard 1. Intended learning outcomes</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>Standard 2: Teaching-learning environment</td>
<td>Good</td>
</tr>
<tr>
<td>Standard 3: Student assessment</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>Standard 4: Achieved learning outcomes</td>
<td>Good</td>
</tr>
<tr>
<td>Programme</td>
<td>Good</td>
</tr>
</tbody>
</table>
Research projects categories (last 3 years / N=204)

Themes & Topics

- Climate: 21%
- Energy: 20%
- Food: 15%
- Water: 14%
- Ecosystems: 13%
- Other: 17%

Department & Disciplines

- Env. Economics: 45%
- Env. Policy Analysis: 26%
- Water & Climate Risks: 16%
- Env. Geography: 13%

IVM Institute for Environmental Studies
Grades and failures

- Average grade per course varies between 6.5 and 7.2;

- On average 15-20% of the students fail the exam at the first attempt;

- But, ultimately, the majority of the students finish ERM within the scheduled period;

- And 5-7% of the students complete ERM with a cum laude.

Cum Laude criteria

- **All results**: 7.0 or higher
- **Weighted average**: 8.0 or higher (excl. extra-curricular courses)
- **Thesis / Research Project**: 8.0 or higher
- **Exemptions**: max. 50% of total points
A one-year programme
ERM over time – graduation performance

Share graduation in 1 year

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

Employment & alumni

ERM launching your “green” career

- Stimulate awareness of ambitions
- Help you finding “internship” position
- Broker - Supply: scout talents
- Broker - Demand: huge employers network
- Advertise job offers in ERM alumni LinkedIn
- Be reference in job application procedures
Employment - Career prospects

- Private sector:
  - Corporation: 34%
  - Consultancy: 7%
  - Entrepreneurs: 5%
- Public sector:
  - Local: 23%
  - Regional: 4%
  - National: 4%
  - International: 7%
- Civil society:
  - Local organisation: 7%
  - National organisation: 4%
  - International organisation: 3%
- Research:
  - Research Institute: 4%
  - University: 4%

IVM Institute for Environmental Studies
Career prospects

- 72% finds a job within 5 months
- 12% work at a research institute or university
- International organizations, national government, NGO, private sector
World-wide network of 1,000 ERM-leaders in Sustainability
5. Admission to the ERM program
Admission – 4 criteria

1. **Academic results**
   - Bachelor degree at university level (all disciplinary backgrounds)
   - Grade point average 7 (2ND upper class)

2. **Basic knowledge or affinity with environmental topics**
   - Previous study program, course work, thesis
   - Relevant work experience (volunteer work counts as well)

3. **English proficiency**
   - IELTS: minimum total score 6.5
   - TOEFL: minimum total score 92-93, minimum sub score writing 23

4. **Motivation**
   - Motivation letter & CV
Application

<table>
<thead>
<tr>
<th>Students</th>
<th>Deadline</th>
</tr>
</thead>
<tbody>
<tr>
<td>International students who wish to apply for a VUFP grant</td>
<td>1 February</td>
</tr>
<tr>
<td>International students who need 1) visa and/or 2) housing*</td>
<td>1 April</td>
</tr>
<tr>
<td>Dutch students and EU students</td>
<td>1 June</td>
</tr>
</tbody>
</table>

*Although we can only guarantee accommodation for EU students who applied before 1 April, there is still a good chance of being offered accommodation if you apply before the 1 June deadline.

- Apply through studielink → app.studielink.nl
Premaster

- Duration of the programme: ½ year
- 5 courses - 30 credits
- To be completed within one academic year, no second chances
- Period: 1 September – 1 February

Admission requirements:
- Open to all HBO students
- Average grade 7.5
- Clear motivation (letter + cv)
- English proficiency
Premaster = minor

PEOPLE, PLANET, PROSPERITY

Sustainability is the grand challenge of our time. This grand challenge urgently calls for the next generation of leaders that move beyond the classical focus on biophysical, economic or societal limits towards interdisciplinary and solution-oriented knowledge, providing realistic, context-specific pathways to a sustainable future. This minor aims to engage students from all backgrounds in issues of sustainability by making them acquainted to the three dimensions of sustainability (i.e. People. Planet. Prosperity) and challenging them to design and develop solutions within their own
Thank you for your attention: any further questions?