

Bridging ICTs and Environment - Spatial Planning and Environmental Assessment for Decision Making in Europe

Course Syllabus

Monday, 7 July

Topic	Overview and introduction to the topics of the week
Faculty member	Armen Saghatelyan Shushanik Asmaryan Nicolas Ray Yaniss Guigoz Zorica Nedovic-Budic
Number of hours	5 (5*45)
Teaching mode	Lecture
Goal of the day	We will be introduced to the subjects of spatial planning and Spatial Data Infrastructures (SDI), discussing the importance of the latter for data sharing and interoperability. Through the presentation of an on-going European project involving all faculty members, we will see how spatial planning and SDI are important tools to build capacities in Armenia.

Tuesday, 8 July

Topic	Environmental modeling and ICT to support decision making European applications / best practices
Faculty member	Nicolas Ray Zorica Nedovic-Budic Shushanik Asmaryan Mamuka Gvilava (invited speaker, Georgia, <i>tbc</i>)
Number of hours	5 (5*45)
Teaching mode	Lecture
Goal of the day	Part of the day will be a joint session with the UNEP track. In the morning, we will learn from various speakers (Google, UNEP, etc.) how decision-making can be effectively supported by state-of-the art modelling and ICT tools. In the afternoon, three large-scale European projects will be presented and discussed, with an emphasis on how ICT tools were instrumental to improve decision-making. We will also discuss the lessons learnt in this project, and try to understand how the cultural and scientific contexts of these project influence the way we should approach the issues.

Wednesday, 9 July

Topic	(Bio)geochemical investigations as a tool for environmental assessment and spatial planning
Faculty member	Armen Saghatelyan Lilit Sahakyan Vera Slaveykova (invited speaker, Switzerland)
Number of hours	5 (5*45)
Teaching mode	Lecture Student presentations Round table discussion
Goal of the day	This day will be dedicated to understanding the chain of studies that start with field-based biogeochemical investigations, and continuing with environmental assessments a basis for sound spatial planning. A large part of the day will be dedicated to brief presentations from participant students that will have the opportunity to present and discuss their research work related to the topic of the day. We will finish with a roundtable discussion with the aim to understand how the participant research work can be improved with what they have learnt so far during the week.

Thursday, 10 July

Topic	Sustainable land use & ICT, with hands-on session on open-source GIS (QGIS)
Faculty member	Shushanik Asmaryan Harutyun Shahumyan Zorica Nedovic-Budic
Number of hours	4 (4*45) + hands-on session
Teaching mode	Lecture and student presentations Hands-on technical session
Goal of the day	The morning of this day will be dedicated to understanding how various ICT tools and methodologies can benefit sound sustainable land use management. We will understand why GIS and SDI are key tools to achieving this. Several presentations from participant students will complement the lectures from faculty members. The afternoon will be a hands-on session in which participants will learn the basics for using the open-source software Quantum GIS (QGIS), with example of analysis that are in link with land use management

Friday, 11 July

Topic	Funding opportunities & strategies for collaboration
Faculty member	Shushanik Asmaryan Nicolas Ray Andrey Girenko (invited external speaker, Germany, <i>tbc</i>)
Number of hours	3 (3*45)
Teaching mode	Lecture PhD student presentations, group discussions
Goal of the day	The goal of this last morning session is to initiate potential collaborations between all research groups represented. How participant students could benefit from the expertise of other participants will also be discussed. A dedicated session on European funding opportunities will be given, with the goal of understanding the possible avenues for financing future collaborations.