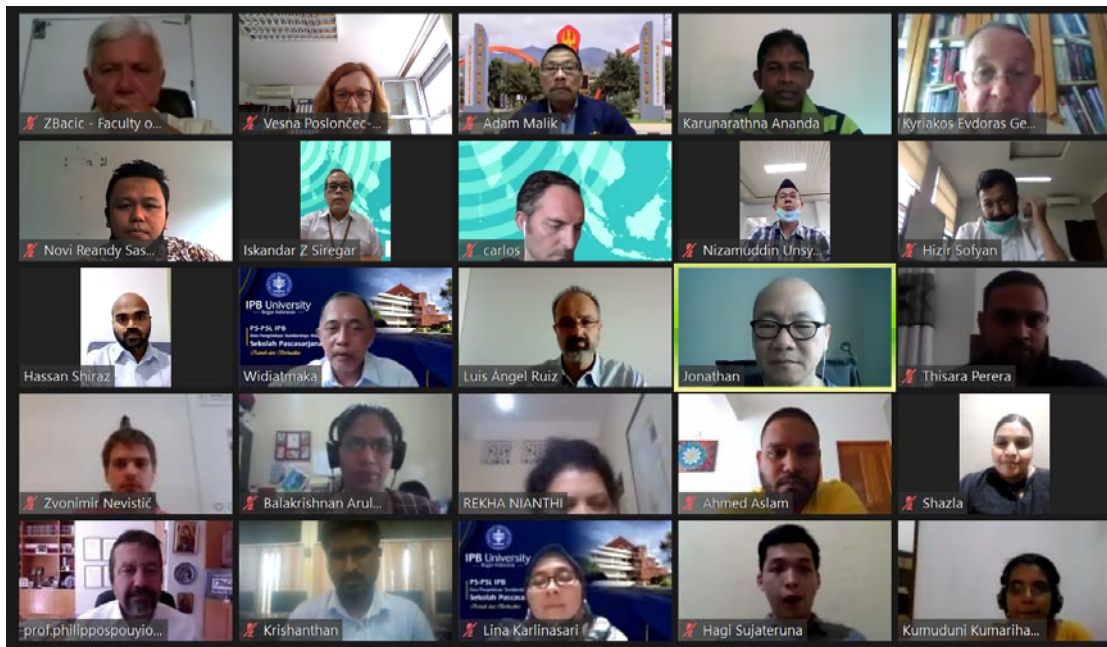


UN4DRR Online Workshop II Disaster Risk Reduction and Management, EU Best Practice (Cyprus)



29 June -2 July, 2020
Host – University of Nicosia

Executive Summary

The University of Nicosia organized a week long virtual workshop on Disaster Risk Reduction and Management with focus on Cyprus. The agenda included presentations from all the governmental departments involved in the management of crisis and disasters. Also the colleagues from the University of Nicosia gave a lectures (a) on the “Re-Engineering Academic Programs using ECTS and Learning Outcomes” outlining how academic programs are build and reengineered to fit the needs of the academic field and the market (b) on developing learning outcomes and (c) on the Dublin Descriptors and the European National Qualification Framework. Local researchers from two European research on Remote Sensing and GIS projects presented their projects and their findings.

In the last day of the workshop the partners talked about the way forth taking into consideration the needs analysis and the views of all the partners. The overall view is that the IOR partners should take the opportunity to think carefully about their needs and their programs and take advantage of this project to upgrade their offering.

It was proposed that IOR colleagues should start thinking in terms of the ECTS system and adopt the Bologna process framework within their existing programs as a parallel system. This will enable the transfer of students to IOR Universities from Europe and vice-a-versa within the context of the Erasmus program.

It was also suggested mentioned that revision on few existing courses might not be enough. New courses might need to be developed. Short professional courses/Certificate/ Diploma could also be included. In this context, the following modules and courses maybe considered. It is important for each IOR participating University to provide a table proposing modules or courses to be modernized or new modules or courses.

UN4DRR Modules and Courses

Disaster Risk Management	Disaster Management	Technology in Disaster: Geographic Information Systems	Technology in Disaster: Remote Sensing	Research in Disaster Management
15 ECTS	15 ECTS	15 ECTS	15 ECTS	15 ECTS
Disaster Risk Analysis, Assessment and Management	Introduction to Disaster Management	Fundamentals of Territorial Planning	Remote Sensing	Fundamental of Disasters
Disaster Risk Analysis, Assessment and Management: Country Case Study	Governance and Crisis Management in Disaster	Geographic Information Systems	Disaster Modeling and Simulation	Research Methodology
	Impacts of Disasters on Public Health, Economy and Development	Geodesy and Geoinformatics	Application of GIS & Remote Sensing in Disaster Management	Statistics for Disaster Management

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2. Agenda and presentations

The available material (agenda, presentations, participants, papers and recordings of sessions) for the virtual workshop may be found at the following Google Drive UN4DRR Project (https://drive.google.com/drive/folders/1WN0RT-0aVZ1HPaT_3bujAugeXqYXJDxC.)

09:00 – 09:30 A general overview of the University – Rector, Prof Philippos Pouyioutas, University of Nicosia

The Rector welcomed everybody to the online meeting and gave a short, yet comprehensive, presentation to the University.

09:30 - 10:20 The Bologna Process and the European Tertiary Education Framework. Rector Prof Philippos Pouyioutas, University of Nicosia.

Following up the presentation the Rector, an expert on quality assurance and the Bologna Process, gave a lecture on the “Re-Engineering Academic Programs using ECTS and Learning Outcomes” outlining how academic programs are build and reengineered to fit the needs of the academic field and the market.

10:30 – 11:15 Designing Descriptors of Learning Outcomes for 21st Century HE Qualification, Dr Andri Vrioni, University of Nicosia

Following up from that Dr Andri Vrioni, Head of the Office of the Rector and Head of the Pedagogical Support Unit, gave an interactive presentation on how to develop descriptors of Learning Outcomes.

11:15 - 12:00 Dublin Descriptors and European National Qualification Framework – Showcase on Risk Disaster Management. Kyriakos E. Georgiou, University of Nicosia

Adding to the subject matter Kyriakos, Senior Administrator with the Office of the Vice Rector for Academic Affairs working on quality assurance and accreditation of Programs, Departments and the University itself, presented the European National Qualification Framework on education and gave practical examples from Risk Disaster Management on how to structure learning objectives.

Day 2 Tuesday 30 June

09:00 – 10:00 Presentation Civil Defence - Ministry of Interior

Dr Nicolas Paris, Senior Officer of Civil Defence

Dr Nicolas Paris, PhD in Risk Perceptions and Risk Policies, is a Senior Officer of Civil Defence with decades of experience on the management of disasters. His talk evolved around the work of the Department of Civil Defence and the National Risk Assessment Reports for Cyprus. (The most recent report is available on the google drive above and can serve as an excellent guide for other countries trying to build their own)

10:00 - 11:00 Presentation SFEDA Project (Forest Monitoring System for Early Fire Detection and Assessment in the Balkan-Med Area)

Dr George Georgiades, Cyprus Technical University

The project explores the potential of an early fire detection system composed of wide range stationery cameras and drones to monitor the area under study. It employs Remote Sensing Technologies and Geographic Information Systems.

11:00 - 12:00 Presentation Joint Rescue and Coordination Center – Ministry of Defence

Captain (AF) Andreas Zachariou

Captain Andreas Zachariou presented the work of the newly formed Joint Rescue and Coordination Center in Larnaca in providing coordination in rescue missions in the seawaters under the jurisdiction of the Republic of Cyprus. The Center is called upon to rescue ships, crew members in need of medical assistance and workers from sea drilling platforms

Day 3 Wednesday 01 July

09:00 – 09:30 Intelligent Information Acquisition and Representation for Marine and Maritime Applications.

Dr Ioannis Kyriakides, University of Nicosia Research Foundation and T. C. Geomatic Ltd

This a new project that will explore technologies to gather information through remote sensing technologies for marine and maritime applications. The presentations included an overview of the project, some technical considerations and a video from an early attempt to gather acoustic data from the seafront.

09:30 – 10:00 Presentation Cyprus Fire Service and EMAK (Short Video Presentation)

The presentation of Cyprus Fire Service was carried out through a series of videos from their work in the field in number of different missions posted on the Facebook page <https://www.facebook.com/FireServiceCyprus/>. Following the workshop in early August members of the rescue team (EMAK) of the Fire Service went to Beirut Lebanon to support the rescue effort after the two explosions that nearly destroyed the City.

10:00 – 11:00 Presentation Forestry Department on forest fires in Cyprus.

Mr Theodoros Christaki, Officer

The presenter is the person in charge of monitoring forest fires in Cyprus and working from the Command Center to manage the effort to fight forest fires all over Cyprus. In his presentation it outlined the dangers that Cyprus faces in terms of forest fires and explained how the Department in collaboration with other organizations like the Fire Service, the army, the police, the Game Fund and volunteers fight forest fires. Most fires in Cyprus are the result of human

11:00 – 12:00 Presentation Cyprus Crisis Management Center – Ministry of Foreign Affairs

Christoforos Chadjittofis and Petros Samoutis

The Cyprus Crisis Management Center is brand new Center under the Ministry of Foreign Affairs, Its main objective is to be liaison between Cyprus and other countries in the case of emergencies, and crises. It also offers support to foreign nationals in Cyprus as well to Cypriots abroad in case of crises. In its liaison role it coordinates the role of local institutions in the case of regional and European crises. During the critical period of the local lockdown period in March – May 2020 they worked around the clock to help Cypriots abroad and foreign nationals stranded in Cyprus.

Day 4 Thursday 02 July WP1.4

9.00 – 12.00 Continuation of WP1.3 and Preparation for WP2. Identification of courses/program IOR partners will renew. UNIC & UNIZG

See below in the section 3. Workshop Discussion the work carried out on the day. The colleagues from the University of Zagreb presented once more the main results of the needs analysis survey. This along with the feedback from the IOR partners on their needs and the perspective of the European partners form the body of the discussion presented below.

3. Workshop Discussion

The fourth day of the workshop was allocated to two tasks (a) a short presentation on the main findings of the needs analysis and (b) discussing the way forth in terms of developing new or revised curriculum for the IOR partner universities.

Following the presentation of the needs analysis from the colleagues at Zagreb University, fully presented in the document for the 1st virtual workshop, the colleagues from the University of Nicosia talked about the aims of the project and the risk profile of the three IOR countries as an introduction to the discussion.

UN4DRR is designed to address urgent needs of three neighbourhood countries (Maldives, Sri Lanka, Indonesia), with most vulnerable geographical locations to natural disasters, to enhance capacity in Disaster Risk Management DRM and in particular curriculum development focusing on exploitation of latest RS/GIS technologies.

Some of the institutes have already disaster risk reduction related courses and programs, and are already integrated with national centres/agencies for natural disasters. The aim of the project is to strengthen DRM concepts and training in both undergraduate and graduate programs providing the latest space technologies in RS and GIS, as well as fostering new dynamic DRM network across the region among academia, national agencies and private technology companies.

The overall aim of the UN4DRR project is to modernize the courses related to Disaster Risk Reduction and Management (DRRM) integrating geographic information systems (GIS) / Remote Sensing (RS) applications as part of the course content. The long-term effect will be to educate future experts for prevention and management of natural and human-made disasters (e.g. fires) in the Indian Ocean Rim supporting national and EU policies.

The project encourages the cooperation with national authorities, public and private sector offering joint DRRM initiatives and access to short courses for use of GIS/RS via online/offline modes.

The specific objectives of the project are related to the preparation and design of appropriate train-the-trainer programs for curriculum development on use of GIS/RS for DRRM following Bologna standards and comparability with ECTS.

The Partner HEIs will be equipped with modernised GIS/RS laboratories with the latest hardware and software equipment for risk mapping, simulations and assessments of disasters, where the students will gain practical knowledge that can be immediately applied.

The course content will serve to improve the research and practical skills of graduate and postgraduate students making use of state-of-the-art GIS/RS methods for DRRM. Likewise, short modules will be accessible for public and private sector.

The project attempts to embed a culture of quality to the project, its outputs and outcomes from the beginning with adequate management tools (quality plan, dissemination plan, risk assessment, management plan) for the correct implementation of the project.

Maldives Disaster Risk Profile

Maldives are vulnerable to tsunami, earthquakes, effects of wind, rain and surge hazards from storms, and sea-level rise. Indian Ocean tsunami on December 26th, 2004 was the only recorded tsunami that the Maldives has experienced and were one of the countries that was severely affected.

Minor earthquakes and seismic activity occurrences in the country have been mostly contained in the southern atolls. Northern atolls experience more significant risks of cyclonic winds and storm surges. Sea-level rise due to climate change remained a uniform hazard across the country.

Bleaching diminish the coping capacity of the corals and their ability to keep up their growth against sea-level rise due to the El-Niño events and higher temperatures each year. Since the UNDP's 2006 disaster risk profile, no updated disaster risk profile exists for the whole country.

Sri Lanka Disaster Risk Profile

Sri Lanka is vulnerable to the intensity and frequency of natural and manmade disasters have been increasing recently at the global and local levels. Among the natural disasters, droughts, floods, landslides, tornados, cyclones, windstorms surge, tsunami and coastal erosion are significant in Sri Lanka.

Human activities have aggravated the vulnerability of the natural phenomena to human settlements. Disasters resulting from direct initiation of man are terrorism, civil conflicts, explosions, industrial accidents, epidemics, fires and deforestation that affect the people of the country. Landslides are the most regular geological vulnerabilities in central mountain regions. Sri Lanka has been ranked second among the countries most affected by extreme weather events in 20 years since 1998 by

the Global Climate Risk Index 2019. These indicators show that the importance of training the stakeholders of disaster management in the country

Indonesia Disaster Risk Profile

Indonesia has an integrated land- and ocean-based climate change adaptation and mitigation is needed to reduce the risk in food, water and energy susceptible to climate change. To fight global warming, Indonesia has committed to reduce GHG emission by 29% compared to the business as usual scenario by 2030. GIS and remote sensing are essential technology to close the gaps on providing spatial data and information for MRV on carbon accounting, land use changes, and social-economic dynamics.

Ananda Karunarathne presented a report from Department of Geography, University of Colombo, Sri Lanka. proposed 2 new Master degree courses:

- (1) Natural Hazards and Disaster Management (3 ECTS)
- (2) Geographical Information Systems (3 ECTS)

The University of Colombo also proposed 2 Bachelor degree courses to be modernized:

- (1) Introduction to GIS (3 ECTS)
- (2) Disaster management and Preparedness (3 ECTS)

Rekha Nianthi presented report from Faculty of Arts, University of Peradeniya, Sri Lanka. proposed a new Certificate Course (GIS/RS in DRR). This would be a 3-month course.

University of Peradeniya was also in the process of preparing a new Diploma programme.

Widiatmaka presented report from IPB, Indonesia and proposed 7 new Master and Doctoral degree courses:

- (1) Spatial Modeling of natural resources and the environment
- (2) Global Environmental Change and Disaster Mitigation
- (3) Climate Change and Disaster Risk Management
- (4) Regional Physical Resources
- (5) Natural Disaster and Mitigation
- (6) Disaster Risk Management
- (7) Vulnerability and Social Disaster Capacity

Nizamuddin presented report from Syiah Kuala University, Indonesia proposed 4 Master degree courses to be modernized:

- (1) Hazard Assessment, Vulnerability and Disaster Risk Evaluation (5 ECTS)
- (2) Disaster Risk Communication (5 ECTS)
- (3) GIS Application in Disaster Mitigation (3 ECTS)
- (4) Remote Sensing (3 ECTS)

Shazla Mohamed presented report from Maldives National University, Maldives and proposed 1 Bachelor degree course to be modernized:

- (1) GIS/RS or Geospatial Technologies (6 ECTS)

Maldives National University also proposed 3 new Professional Short Courses / MOOCs:

- (1) Crises and Disaster Management in Maldives
- (2) GIS/RS in DRRM
- (3) Climate Change/Coral Reefs

Kyriakos Georgiou mentioned that revision on existing courses might not be enough. New courses might need to be developed. Short professional courses/Certificate/ Diploma could also be included. He proposed the following modules and courses for consideration and suggested that each IOR participating University needs to provide a table explaining modules or courses to be modernized or new modules or courses.

UN4DRR Modules and Courses

Disaster Risk Management	Disaster Management	Technology in Disaster: Geographic Information Systems	Technology in Disaster: Remote Sensing	Research in Disaster Management
15 ECTS	15 ECTS	15 ECTS	15 ECTS	15 ECTS
Disaster Risk Analysis, Assessment and Management	Introduction to Disaster Management	Fundamentals of Territorial Planning	Remote Sensing	Fundamental of Disasters
Disaster Risk Analysis, Assessment and Management: Country Case Study	Governance and Crisis Management in Disaster	Geographic Information Systems	Disaster Modeling and Simulation	Research Methodology
	Impacts of Disasters on Public Health, Economy and Development	Geodesy and Geoinformatics	Application of GIS & Remote Sensing in Disaster Management	Statistics for Disaster Management

Zeljko Bacic reminded that there would be variations, so it might be necessary to create a database of courses. Support would be given in form of generic materials, methodologies and training. In the end it would be up to the participants on how to tailor the course.

Jonathan Chan C-W urged participants to propose more courses and Carlos Machado pointed out that introducing a new course took time, but modifying existing courses would be faster.

Luis Angel Ruiz reminded that proposed courses should have more technical content because it will involve buying some instrument. Each country would have different need. Courses for Undergraduate and Doctorate program are also acceptable. Short courses/MOOCs are very interesting because they can be useful for professional and can be used by everybody in the world.