



**ITU Centres of Excellence Network for Arab Region**  
**Centre International des Technologies de l'Environnement de Tunis**  
**(CITET)**

**Online Training Course on**

**"Application of GIS in environmental management and resources protection (level 1)"**

**From 07 to 11 June 2021**

**COURSE OUTLINE**

**COURSE DESCRIPTION**

Title	<b>"Application of GIS in environmental management and resources protection (level 1)"</b>
Objectives	<ol style="list-style-type: none"><li>1. Comprehend fundamental concepts and practices of Geographic Information Systems (GIS)</li><li>2. Apply basic GIS functionalities.</li><li>3. Demonstrate organizational skills in file and database management.</li><li>4. Apply GIS analysis to address geospatial problems and/or research.</li><li>5. Demonstrate proficiency in the use of GIS tools to create maps.</li><li>6. Demonstrate confidence in undertaking new analysis using GIS</li><li>7. Give examples of interdisciplinary applications of Geospatial Information in relation with Environment.</li></ol>
Date	07 to 11 June 2021, 14:00-17:00 Tunis Time
Duration	05 Days (3 hours / day)
Registration deadline	01 June 2021
Training fees	360 TND

## DESCRIPTION OF THE TRAINING COURSE

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A Geographic Information System (GIS) enables organizational integration of data from different sources (geographic and non-geographic data). In other words, it is a system that collects, stores, analyzes and visualizes data. GIS provides us with decision-making support tools.

The Geographic Information System can be used to map areas suitable for the establishment of wind farms, to identify environments to be protected thanks to the various available information analyzes, to estimate the surface area of home ranges and even to carry out studies of the environment

## LEARNING OUTCOMES

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the use of GIS and Remote Sensing to organize and present spatial data in a way that allows effective environmental management planning. Decision makers and planners can use GIS to organize and present spatial data in a more effective way that frame with the ITU's vision and mission in the area of environmental sustainability and climate change.

## TARGET POPULATION

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[engineers, technicians, projects managers in the Ministries of Information Technology and Communications (ICT), Ministries of Environments, ICT regulators, private sector working in the environment issues. Other institutions and individuals who are interested in having an overview of Environmental Management System (EMS) are also welcome to participate in this training program.]

## ENTRY REQUIREMENTS

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You should have experience in project managements, have knowledge in informatics systems, data bases and should can manipulating mapping software, have competency in quality or safety or environment management.

## TRAINING COURSE CONTENTS

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This course will be divided into 4 main parts, namely:

- CHAP 1 : Introduction to GIS and remote sensing in Sensing in environmental management;
- CHAP 2 : Geospatial technologies and techniques for environmental mapping;
- CHAP 3 : GIS as a tool for spatial Analysis;

Chap 4 Use of GIS and Remote sensing to identify and analyze potential impacts.

## TUTORS/INSTRUCTORS

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NAME OF TUTOR(S)/INSTRUCTOR(S)	CONTACT DETAILS
Lotfi Lamti	Phone: + 216 22 789 705 Email: lotfi.lamti@gmail.com

## TRAINING SCHEDULE AND CONTENTS / AGENDA

Week / Session	Topic	Exercises and interactions
<b>07 June 2021</b> <b>From 14h00 to 17h00</b>	<ul style="list-style-type: none"> <li>• Brief welcome and overview of the session</li> <li>• Team presentation</li> <li>• CHAP 1 : Introduction to GIS and remote sensing in Sensing in environmental management</li> <li>- Knowledge recap: environmental sustainability and GIS.</li> </ul>	<ul style="list-style-type: none"> <li>- Course materials and practical examples and role plays</li> <li>- Introduction to GIS software (Open Source, Desktop and Web based)</li> </ul>
<b>08 June 2021</b> <b>From 14h00 to 17h00</b>	<ul style="list-style-type: none"> <li>• CHAP 2 : Geospatial technologies and techniques for environmental mapping</li> <li>- Components of GIS</li> <li>- GIS Data sources for environmental management,</li> <li>- Projection and coordinate system</li> </ul>	<ul style="list-style-type: none"> <li>- Working with GIS data</li> <li>- Rasterization and vectorization</li> <li>- GIS data collection using mobile devices</li> <li>- GPS data collection for environmental management</li> </ul>
<b>09 June 2021</b> <b>From 14h00 to 17h00</b>	<ul style="list-style-type: none"> <li>• Chap3: GIS as a tool for spatial Analysis</li> <li>- Basic GIS functionalities requesting data</li> </ul>	<ul style="list-style-type: none"> <li>- Site location</li> <li>- Land use/Land Suitability analysis</li> <li>- Distance to areas of population</li> <li>- Local area demographics/ Proximity to transport and road infrastructure</li> </ul>
<b>10 June 2021</b> <b>From 14h00 to 17h00</b>	<ul style="list-style-type: none"> <li>• Chap3: GIS as a tool for spatial Analysis</li> <li>- Environmentally sensitive areas</li> <li>• Chap 4 Use of GIS and Remote sensing to identify and analyze potential impacts</li> <li>- Spatial Multi-Criteria Decision Analysis using GIS Software</li> </ul>	<ul style="list-style-type: none"> <li>- Methodological steps in MCA and Spatial Analysis</li> <li>- Introduction to monitoring and change detection</li> </ul>
<b>11 June 2021</b> <b>From 14h00 to 17h00</b>	<ul style="list-style-type: none"> <li>• Chap 4 Use of GIS and Remote sensing to identify and analyze potential impacts</li> <li>- Geographic Data for Environmental Modelling and Assessment</li> </ul>	<ul style="list-style-type: none"> <li>- Exercises and case studies will be presented about Open Source web based resources such for decision support in environmental management</li> </ul>

## METHODOLOGY

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Academic	Practical
<b>70 %</b>	<b>30 %</b>

## EVALUATION

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There will be a pre-assessment test to evaluate the prior knowledge of the participants (30 Minutes test).

There will be daily short quizzes (10 minutes – 10 questions) at the end of each day to measure the progress of knowledge acquisition.

There will be a final test (MCQ of 50 different questions – 1 hour).

## COURSE COORDINATION

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<b><u>TRAINING COORDINATOR</u></b>  <b>Mr. Jawhar Abdelkrim</b> CITET Tel: +216 71 206 766 Mobile: +216 51 489 942 Fax: +216 71 206 642 Email: <a href="mailto:financement@citnet.nat.tn">financement@citnet.nat.tn</a> <a href="mailto:formation@citnet.nat.tn">formation@citnet.nat.tn</a>	<b><u>ITU COORDINATOR</u></b>  <b>Eng. Mustafa Al Mahdi</b> Programme Officer Arab Regional Office-ITU Tel: +202 35371777 Mobile: +20114 1177573 Fax: +202 35371888 Email: <a href="mailto:mustafa-ahmed.al-mahdi@itu.int">mustafa-ahmed.al-mahdi@itu.int</a>
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## REGISTRATION AND PAYMENT

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### ITU Academy portal account

Registration and payment should be made online at the ITU Academy portal.

To be able to register for the course you MUST first create an account in the ITU Academy portal at the following address:

<https://academy.itu.int/index.php/user/register>

### Training registration

When you have an existing account or created a new account, you can register for the course online at the following link: <https://academy.itu.int/training-courses/full-catalogue/environmental-impact-assessment>

You can also register by finding your desired course in our training catalogue <https://academy.itu.int/index.php/training-courses/full-catalogue>

### Payment

To can register, I invite you to choose between two payment method:

#### 1. On-line payment

A training fee of **USD 120** per participant is applied for this training. Payments should be made via the online system using the link mentioned above for training registration at <https://academy.itu.int/training-courses/full-catalogue/environmental-impact-assessment>

## 2. Payment by bank transfer

Where it is not possible to make payment via the online system, if due to national regulations, there are restrictions that do not allow the payment to be made using options 1 above, you can pay by bank transfer, to the CITET bank account shown below.

Then send the proof of payment / copy of bank transfer slip to the course coordinator [financement@citet.nat.tn](mailto:financement@citet.nat.tn) and [copy formation@citet.nat.tn](mailto:copy formation@citet.nat.tn).

### **CITET BANK ACCOUNT DETAILS:**

Name and Address of Bank:	ATB Berge du Lac Immeuble Regency 1081 Tunis Tunisie
Beneficiary:	Tunis International Centre for Environmental Technologies
Account number:	01 902 047 1106000286 96 (TND)
Amount:	TND 360
Payment Reference:	"Payement Formation SIG1"